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FRONTISPÍCIO DE APÓLICE SEGURO GARANTIA

DADOS DA SEGURADORA: JUNTO SEGUROS S.A

CNPJ: 84.948.157/0001-33, registro SUSEP 05436, com sede na Rua Visconde de Nácar, 1440 – Centro - Curitiba - PR

Data de Emissão: **17/07/2024 17:28:44**

Nº Apólice Seguro Garantia: **01-0775-0482214**

Proposta: **4656545**

Controle Interno (Código Controle): **394090699**

Nº de Registro SUSEP: **054362024000107750482214**

DADOS DO SEGURADO: PREFEITURA MUNICIPAL DE RECREIO

CPF/CNPJ: 17.735.754/0001-92 RUA PREFEITO JOSÉ ANTONIO Nº 126, RECREIO - MG

DADOS DO TOMADOR:

DADOS DA CORRETORA:

000002.0.201335-4 J MALUCELLI CORRETORA DE SEGUROS LTDA

Documento eletrônico digitalmente assinado por:

ICP
Brasil
Assinado digitalmente por:

Roque Jr. de H. Melo

ICP
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Eduardo de O. Nobrega

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FRONTISPÍCIO DE APÓLICE SEGURO GARANTIA

Garantia Contratada

Modalidade	Limite Máximo de Garantia (LMG)	Ramo
Licitante	R\$ 23.439,00	0775 - GARANTIA SEGURADO - SETOR PÚBLICO

Descrição da Garantia: Coberturas, valores e prazos previstos na Apólice:

Modalidade e Cobertura Adicional	Limite Máximo de Indenização (LMI)	Vigência	
		Início	Término
Licitante	R\$ 23.439,00	18/07/2024	18/07/2025
Multas e Penalidades	R\$ 23.439,00	18/07/2024	18/07/2025

Demonstrativo de Prêmio:

Prêmio Líquido Licitante	R\$ 234,39
Adicional de Fracionamento	R\$ 0,00
I.O.F	R\$ 0,00
Prêmio Total	R\$ 234,39

Condições de Pagamento:	Parcela	Vencimento	Nº Carnê	Valor(R\$)
	1	18/07/2024	22196088	R\$ 234,39

Em atendimento à Lei 12.741/12 informamos que incidem as alíquotas de 0,65% de PIS/Pasep e de 4% de COFINS sobre os prêmios de seguros, deduzidos do estabelecido em legislação específica. O(s) valor(es) acima descrito(s), é(são) devido(s) no cenário desta contratação de cobertura(s). Pode(m) sofrer alteração(ões) quando contratada(s) isoladamente ou em outra composição



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FRONTISPÍCIO DE APÓLICE SEGURO GARANTIA

Objeto da Garantia

Esta Apólice de riscos declarados garante Indenização, até o valor do Limite Máximo de Garantia, pelos Prejuízos decorrentes da recusa do Tomador adjudicatário em assinar o contrato administrativo licitado, conforme termos e condições descritos no **Edital Edital 30/2024**.

Ademais, esta Apólice de riscos declarados garante Indenização, até Limite Máximo de Garantia, pelos Prejuízos decorrentes do inadimplemento de multas e penalidades administrativas impostas pelo Segurado ao Tomador, e não adimplidas no prazo definido no Contrato Principal ou notificação realizada ao Tomador.

O presente documento é emitido em consonância com a Circular SUSEP 662, de 11 de abril de 2022.

ESTA APÓLICE NÃO PODERÁ SER UTILIZADA COMO COMPLEMENTO OU ENDOSSO DE APÓLICE ANTERIORMENTE FORNECIDA POR ESTA SEGURADORA REFERENTE AO MESMO EDITAL E/OU CONTRATO OBJETO DESTE SEGURO.



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CONDIÇÕES CONTRATUAIS

LICITANTE

PROCESSO SUSEP n.º 15414.636371/2022-53.

1. OBJETIVO DO SEGURO – RISCOS COBERTOS

1.1. Este contrato de seguro garante Indenização, até o valor do Limite Máximo de Garantia, pelos Prejuízos decorrentes da recusa do Tomador adjudicatário em assinar o contrato administrativo licitado, ou demais inadimplementos elencados nos termos e condições descritos no Edital os quais levem à execução da garantia de oferta.

2. RISCOS EXCLUÍDOS

2.1. Não estão incluídos na cobertura quaisquer prejuízos ocasionados direta ou indiretamente e ocorridos em consequência de:

- a) obrigações trabalhistas e previdenciárias;
- b) riscos cobertos por outros ramos ou modalidades de seguro, tais como, mas não se limitando a seguro de responsabilidade civil, lucros cessantes e eventos e riscos de natureza ambiental;
- c) eventos de caso fortuito ou força maior, nos termos do Código Civil;
- d) inadimplência de obrigações garantidas, decorrentes de atos ou fatos de responsabilidade do Segurado, que tenham contribuído de forma determinante para ocorrência do Sinistro;
- e) inadimplência de obrigações do Edital que não sejam de responsabilidade do Tomador;
- f) penalidades decorrentes do atraso do Tomador na apresentação desta Apólice e seus Endossos, ou da inadequação da Apólice para garantia do Edital;
- g) atos de terrorismo conforme definido por legislação ou regulamentação aplicável;
- h) atos de hostilidade, guerra, rebelião, insurreição, revolução, confisco, destruição ou requisição decorrentes de qualquer ato de autoridade de fato ou de direito, civil ou militar e, em geral, todo ou qualquer ato ou consequência dessas ocorrências, bem como atos praticados por qualquer pessoa agindo ou em ligação com qualquer organização cujas atividades visem a derrubar pela força o governo ou instigar a sua queda, pela perturbação da ordem política e social do país por meio de atos de terrorismo, guerra, revolução, subversão e guerrilhas;
- i) quaisquer perdas, destruição ou danos, de quaisquer bens materiais, prejuízos e despesas emergentes ou consequentes de qualquer forma de radiação, contaminação, resíduo ou fissão, inclusive, mas não se limitando, às nucleares e ionizantes;
- j) obrigações que não estejam expressamente garantidas e previstas no Objeto da presente Apólice;
- k) quaisquer Prejuízos, perdas e/ou demais penalidades decorrentes da violação de normas anticorrupção perpetradas com participação dolosa do Segurado e/ou seus representantes;
- l) quaisquer prejuízos decorrentes da alteração da obrigação garantida por esta Apólice que tenha sido acordada entre Segurado e Tomador, sem anuência prévia da Seguradora por meio da emissão de Endosso.

3. PRÊMIO

3.1. O Tomador é responsável pelo pagamento do Prêmio correspondente a Apólice, assim como de todos seus Endossos.



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3.2. Esta Apólice continuará em vigor mesmo quando o Tomador não pagar o Prêmio nas datas convencionadas.

3.3. A presente modalidade de Seguro garantia não contempla a hipótese de devolução de Prêmio em caso de cancelamento.

4. ALTERAÇÕES, RENOVAÇÕES E ATUALIZAÇÕES

4.1. A Apólice acompanhará as modificações já previstas no Edital subscrito, mediante emissão de Endosso ou nova Apólice.

4.2. Para alterações posteriores efetuadas no Edital, em virtude das quais se faça necessária a modificação da Apólice, esta poderá acompanhar tais modificações, desde que solicitado e haja o respectivo aceite pela Seguradora, por meio da emissão de Endosso ou nova Apólice.

4.3. As alterações, renovações e atualizações não se presumem e serão precedidas de pedido do Segurado, acompanhado dos documentos que as demonstrem, inclusive para a atualização monetária do LMG pelo índice constante do Edital.

4.4. Ao aceitar a presente Apólice, Segurado e Tomador reconhecem o seu dever em comunicar à Seguradora, em prazo razoável, nunca superior a 10 (dez) dias úteis após o fato, de alterações ocorridas ao Edital ou da obrigação constante do Objeto da Garantia que influenciem o risco subscrito pela Seguradora, sendo, ou não, tais alterações formalizadas contratualmente.

4.5. A não observância pelo Segurado das obrigações constantes no item 4.4. importam em Perda de Direitos, conforme item 7, abaixo, desde que (i) disso resulte agravamento do risco coberto; e (ii) isso tenha relação com o Sinistro ou esteja comprovado, pela Seguradora, que o Segurado silenciou de má-fé.

5. RECLAMAÇÃO E CARACTERIZAÇÃO DE SINISTRO

5.1. Reclamação de Sinistro: não sanado o inadimplemento e não assinado o contrato administrativo licitado, a Reclamação de Sinistro poderá ser realizada pelo Segurado, mediante envio de comunicação à Seguradora, ao “canal de sinistro” constante do sítio eletrônico da Seguradora, informando-a acerca da conclusão do processo administrativo para apuração de Prejuízos.

5.2. Caracterização do Sinistro: o Sinistro restará caracterizado quando da exigibilidade dos Prejuízos causados ao Segurado, por culpa ou dolo do Tomador, desde que acompanhado dos documentos listados abaixo.

5.3. Para a Reclamação de Sinistro será necessária a apresentação dos seguintes documentos:

- a) cópia do Edital de licitação e seus anexos;
- b) cópia integral do processo licitatório correspondente ao Edital;
- c) cópia da notificação do Tomador para assinatura do contrato administrativo licitado;
- d) cópia do processo administrativo que documentou a inadimplência do Tomador e culminou na aplicação de multas e/ou apuração de Prejuízos ao Segurado;
- e) planilha, relatório e/ou correspondências informando os Prejuízos sofridos;
- f) planilha, relatório e/ou correspondências informando da existência de valores retidos;
- g) cópia de atas, notificações, contranotificações, documentos, correspondências, inclusive e-mails, trocados entre Segurado e Tomador, relacionados à inadimplência do Tomador;
- h) cópia do novo contrato firmado pelo Segurado com o Licitante Substituto, quando aplicável.

5.4. Regulação do Sinistro: a Seguradora deverá apresentar Relatório Final de Regulação do Sinistro em até 30 (trinta) dias corridos, contados do recebimento da Reclamação de Sinistro



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devidamente acompanhada dos documentos acima listados.

5.4.1. A Seguradora poderá solicitar, ao Segurado, outros documentos e/ou informações complementares para a análise de cobertura da Reclamação de Sinistro apresentada, hipótese na qual o prazo previsto no item 5.4. será suspenso, voltando a correr sua contagem a partir do dia útil subsequente àquele em que forem completamente atendidas as exigências da Seguradora.

5.4.2. Em caso de decisão judicial, ou arbitral, que impeça ou de alguma forma influencie na possibilidade de execução da garantia pelo Segurado, ou suspenda os efeitos da Reclamação de Sinistro comunicada à Seguradora, o prazo de 30 (trinta) dias constante do item 5.4. será suspenso, voltando a correr sua contagem a partir do primeiro dia útil subsequente a revogação da decisão, ou ausência de efeito suspensivo ao recurso.

6. INDENIZAÇÃO E SUB-ROGAÇÃO

6.1. Caracterizado o Sinistro, a Seguradora indenizará o Segurado, ou o Beneficiário mediante pagamento em dinheiro dos Prejuízos ocasionados em razão da inadimplência do Tomador.

6.1.1. O cálculo da Indenização corresponderá ao valor das multas aplicadas ao Tomador, conforme disposto no Edital.

6.1.2. Em complemento ao cálculo descrito no item 6.1.1 acima, na ocorrência de Sinistro, os eventuais saldos de créditos do Tomador apurados junto ao Segurado, serão utilizados para amortização do valor da indenização, sem prejuízo de seu pagamento no prazo devido.

6.2. Caso o pagamento da Indenização aconteça antes da apuração dos saldos de créditos do Tomador, o Segurado devolverá à Seguradora os valores por ela pagos em excesso.

6.3. O pagamento da Indenização deverá ocorrer dentro do prazo máximo de 30 (trinta) dias, devendo o Segurado colaborar com a assinatura do termo de quitação ou do termo de retomada, conforme o caso.

6.3.1. O não pagamento da Indenização no prazo previsto sujeitará a Seguradora ao pagamento de juros de mora e correção monetária, a partir daquela data, nos termos do Edital e sua legislação específica.

6.4. Paga a Indenização, a Seguradora se sub-rogará nos direitos e poderes do Segurado contra o Tomador e/ou terceiros cujos atos ou fatos tenham dado causa ao Sinistro.

6.4.1. É ineficaz qualquer ato do Segurado que diminua ou extinga, em prejuízo da Seguradora, os direitos de sub-rogação.

7. PERDA DE DIREITOS

7.1. O Segurado perderá o direito à Indenização na ocorrência de uma ou mais das seguintes hipóteses:

I. Atos ilícitos dolosos ou por culpa grave equiparável ao dolo comprovadamente praticados pelo Segurado, ou ainda pelo seu representante legal;

II. Se o Segurado agravar intencionalmente o risco coberto pela Apólice;

III. Descumprimento de obrigações do Tomador decorrentes de atos ou fatos de responsabilidade do Segurado que tenham contribuído de forma determinante para a ocorrência do Sinistro;

IV. Se o Segurado não cumprir integralmente quaisquer obrigações previstas nas presentes Condições Contratuais desta Apólice;

V. Se o Segurado ou seu representante fizer declarações inexatas ou omitir de má-fé circunstâncias de seu conhecimento que configurem agravamento de risco de inadimplência do Tomador ou que possam influenciar na aceitação da proposta;

VI. Se for realizada alteração no Contrato Principal sem anuência prévia da Seguradora, desde



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que: (i) disso resulte agravamento do risco coberto; e (ii) tal situação tenha relação com o Sinistro ou reste comprovado que o Segurado silenciou de má-fé;

VII. Ausência ou intempestividade da comunicação da Expectativa de Sinistro na forma do item 5.1 destas Condições Contratuais, caso configure agravamento do risco e impeça a Seguradora de adotar as medidas de mitigação de risco;

VIII. Se o Segurado deixar de tomar as providências para evitar ou minorar as consequências do Sinistro.

7.2 O Segurado está ciente das hipóteses de perda de direito quanto a descumprimentos de suas obrigações, ônus, encargos, desembolsos e despesas de sua responsabilidade, assumidos e acordados no âmbito do Contrato Principal e/ou desta Apólice.

7.3. Ao aceitar a presente Apólice / Endosso o Segurado declara à Seguradora que até a data de emissão da presente Apólice / Endossos não há nenhuma circunstância, evento ou inadimplemento do Tomador referente a(s) obrigação(ões) constante do Objeto da Garantia, que tenha gerado ou venha a gerar uma Expectativa de Sinistro, um aviso de Sinistro ou que caracterize a ocorrência de um Sinistro.

8. EXTINÇÃO DA COBERTURA

8.1. A responsabilidade da Seguradora extinguir-se-á, de pleno direito, quando ocorrer uma das seguintes situações abaixo:

- a) o contrato administrativo decorrente do Edital garantido pela Apólice for definitivamente assinado entre Segurado e Tomador;
- b) quando a Seguradora e o Segurado assim o acordarem;
- c) quando o pagamento da Indenização ao Segurado atingir o LMG da Apólice;
- d) quando o Objeto da Garantia for extinto; ou
- e) término da vigência prevista na Apólice ou Endosso.

8.2. A responsabilidade da Seguradora está limitada aos Prejuízos decorrentes dos eventos de inadimplemento ocorridos durante a Vigência da Apólice, observado o prazo prescricional de 1 (um) ano aplicável ao contrato de seguro para sua caracterização e comunicação à Seguradora.

9. CONCORRÊNCIA DE APÓLICES E GARANTIAS

9.1. É vedada a utilização de mais de um Seguro garantia na mesma modalidade para cobrir o mesmo objeto, salvo no caso de apólices complementares.

9.2. No caso de existirem duas ou mais garantias distintas cobrindo as mesmas obrigações do Objeto da Garantia, a Indenização deverá ser dividida proporcionalmente entre as garantias apresentadas ao Edital, de modo a não resultar em auferição de lucro ao Segurado.

10. CONTROVÉRSIAS

10.1. Eventuais controvérsias entre Seguradora e Segurado serão processadas no foro do domicílio do Segurado.

11. ACEITAÇÃO

11.1. A contratação da Apólice somente poderá ser feita mediante proposta assinada pelo proponente, seu representante ou por corretor de seguros habilitado. A proposta escrita deverá conter os elementos essenciais ao exame e aceitação do risco.



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11.2. A Seguradora terá o prazo de 15 (quinze) dias para se manifestar sobre a aceitação ou não da proposta, contados da data de seu recebimento.

11.2.1. A solicitação de documentos complementares poderá ocorrer mais de uma vez, durante o prazo previsto no item 11.2. Nesta hipótese, o prazo de 15 (quinze) dias previsto no item 11.2 ficará suspenso, voltando a correr a partir da data em que se der a entrega da documentação.

11.3. No caso de não aceitação da proposta, a Seguradora comunicará o fato ao proponente por e-mail, via plataforma eletrônica ou qualquer outro meio escrito válido. A ausência de manifestação, por escrito, da Seguradora, no prazo acima aludido, não caracterizará a aceitação tácita do seguro.

11.4. Caso a aceitação da proposta dependa de contratação ou alteração de resseguro facultativo, o prazo aludido no item 11.2. será suspenso até que o ressegurador se manifeste formalmente, comunicando a Seguradora, por escrito, ao proponente, tal eventualidade, ressaltando a consequente inexistência de cobertura enquanto perdurar a suspensão.

11.5. A emissão da Apólice ou do endosso será feita em até 15 (quinze) dias, a partir da data de aceitação da proposta.

11.6. A aceitação da proposta de seguro está sujeita à análise do risco.

12. DISPOSIÇÕES GERAIS

12.1. No tocante à alocação dos riscos previstos nesta garantia, havendo contrariedade e/ou divergência entre as disposições previstas na presente Apólice/Endosso e no contrato e/ou aditivos garantidos, prevalecerão sempre as disposições da presente Apólice/Endosso.

12.2. Cabe ao Tomador e ao Segurado a conferência das condições e termos desta Apólice e/ou Endosso, estando de pleno acordo que a Seguradora a preste e cumpra, tal como disposto em suas Condições Contratuais.

12.3. Tomador e Segurado reconhecem que a validade do presente negócio jurídico e a eficácia do contrato de seguro é vinculada à aceitação do Segurado da presente Apólice ou Endosso em sua integralidade.

12.4. Esta Apólice é inalienável e irrevogável.

12.5. Considera-se como âmbito geográfico de cobertura todo o território nacional.

12.6. A presente Apólice não conta com franquias, participações obrigatórias do Segurado, carência de qualquer tipo, assim como não permite a reintegração do seu Limite Máximo de Garantia.

12.7. Este seguro é contratado a primeiro risco absoluto.

12.8. O registro do produto é automático e não representa aprovação ou recomendação por parte da SUSEP.

12.9. O Segurado poderá consultar a situação cadastral do corretor de seguros e da sociedade seguradora no sítio eletrônico <https://www.gov.br/susep>.

13. DEFINIÇÕES

13.1. Em acréscimo aos termos definidos constantes das Condições Contratuais, aplicam-se também a esta Apólice, as seguintes definições:

I. Apólice: documento, emitido e assinado pela Seguradora, que representa formalmente o contrato de Seguro garantia.

II. Beneficiário: pessoa jurídica, a qual possui interesse legítimo no Objeto da Garantia e que pode incorrer, direta ou indiretamente, em Prejuízos decorrentes do inadimplemento contratual do Tomador.

III. Condições Particulares: conjunto de cláusulas que complementam ou alteram as Condições Contratuais.

IV. Edital: ato indicado no Objeto da Garantia, por intermédio do qual o Segurado faz público seu propósito de licitar um objeto determinado, estabelece os requisitos exigidos dos proponentes e das



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propostas, regula os termos segundo os quais os avaliará e fixa as cláusulas do eventual contrato a ser firmado, contemplando o instrumento de sua publicação, seus anexos, manuais, resumos, projetos e demais informações disponibilizadas pelo Segurado para elaboração de propostas pelos licitantes.

V. Endosso: documento emitido pela Seguradora por meio do qual são formalizadas alterações da Apólice.

VI. Indenização: contraprestação da Seguradora perante o Segurado relativa aos Prejuízos causados pelo Tomador em razão do inadimplemento das obrigações cobertas pelo seguro, a qual poderá se dar por meio de pagamento em dinheiro dos Prejuízos apurados no âmbito dos Prejuízos cobertos pelo seguro.

VII. Limite Máximo de Garantia (LMG): valor máximo de Indenização garantido pela Seguradora considerando uma ou mais coberturas previstas na Apólice.

VIII. Prejuízos: multas e penalidades aplicadas pelo Segurado ao Tomador, em decorrência da não assinatura do contrato administrativo, conforme definido no Edital, as quais não tenham sido adimplidas no prazo definido no Edital ou notificação ao Tomador.

IX. Prêmio: importância devida pelo Tomador à Seguradora, como contraprestação da cobertura de seguro contratada.

X. Prêmio Mínimo: a parcela do Prêmio não reembolsável e devido à Seguradora a título de remuneração mínima a partir do momento da emissão do seguro, em razão do consumo de capacidade e seu custo de oportunidade, bem como pela própria garantia securitária prestada desde o momento da emissão da Apólice.

XI. Relatório Final de Regulação de Sinistro: documento no qual a Seguradora comunica existência de cobertura ou, conforme o caso, as razões técnico-legais para eventual negativa de cobertura ou extinção de cobertura/responsabilidade da Seguradora.

XII. Segurado: ente da Administração Pública que publica o Edital, nos termos da legislação.

XIII. Seguradora: é a Junto Seguros S/A.

XIV. Seguro garantia: seguro que garante o fiel cumprimento das obrigações assumidas pelo Tomador perante o Segurado, conforme Condições Contratuais da Apólice.

XV. Tomador: pessoa jurídica participante de processo licitatório correspondente ao Edital.

XVI. Vigência: as Apólices e Endossos terão seu início e término de Vigência às 23:59hs das datas para tal fim neles indicadas.

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Os Displays Interativos da Quinyx podem ser usados em ambientes educacionais, corporativos, shoppings, hotéis, congressos e eventos diversos.

Seu poder de adaptação permite que vários acessórios e configurações sejam utilizados e diversos softwares sejam transformados em *touchscreen*.

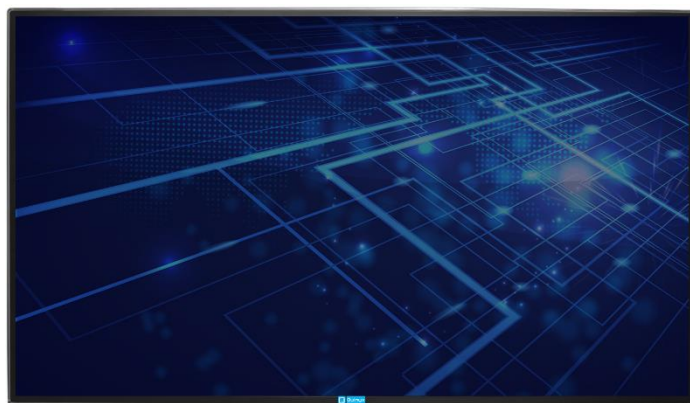


Foto ilustrativa

- Resolução 4k;
- Multi-Toque;
- Multiusuário;
- Produto tipo "All In One" pré-configurado e pronto para usar; só ligar na tomada;
- Opção para 16 línguas, incluindo Português (Brasil).
- Acionamento centralizado: Único botão para ligar todo equipamento.
- Sistema operacional duplo; Alterne entre Android e Windows com um botão.

Quinyx Display Interativo

Veja suas apresentações ganharem vida. Sistema único e integrado com design sofisticado. Prospecção de conteúdo multimídia.

Deixe-se envolver por uma imagem incrível

Com muito mais detalhes e livre de oscilações (Flicker-Free), a reprodução de qualquer conteúdo terá a maior fidelidade de cores.

Interação em grande estilo

Toques precisos e rápidos fazem de você um apresentador profissional.

Diversas possibilidades

Com o Display Interativo Quinyx sua imaginação é o limite.

Catálogo

Display Interativo QTD-Series X-ZA9C



Foto Meramente Ilustrativa



Foto Meramente Ilustrativa

Modelo	QTD-6520X-ZA9C	QTD-7520X-ZA9C	QTD-8620X-ZA9C
Área Ativa	65"	75"	86"
Dimensões (cm)*	149 x 94 x 9	171 x 102 x 9	199 x 121 x 10
Tela*	60 Hz; 4K (3840x2160); A-Si TFT com DLED (Backlight Direto); Ângulo de visão H x V 178°; Paineis VA/IPS; Tempo de Resposta típico: 8ms (G a G); 10 bits; Vidro de proteção Temperado anti-reflexo 4mm de Alta Resistência de 7 MOHS, sem espaços perceptíveis entre o vidro e o painel; Película AG; Widescreen (16:9) ou opcionalmente na posição vertical***. Opcional: Revestimento antigêrme.		
Brilho	350 cd/m² com proteção;		
Contraste	4.000:1. Opção de contraste a partir de 1.200:1 ou Ultra High Range.		
Digitalização**	Touchscreen Multitoque e Multiusuário; Infravermelho óptico; Até 20 toques simultâneos e escrita, pelo dedo, caneta, próteses e outros objetos não transparentes. Velocidade do cursor: 300 PPS (pontos por segundo).		
Precisão	1mm		
Resposta de toque	6 ms (Android e Windows)		
Sistema de Som**	2x15W RMS; Opções até 40W RMS com subwoofer.		
Display**	CPU: Processador ARM Cortex OctaCore; 8GB RAM; 64GB Armazenamento; Android 8 ou superior; Conexões: 3x HDMI 2.0 In, 1x HDMI 2.0 Out, 1x RJ-45 Gigabit In, 1x RJ-45 Gigabit Out, 1x SPDIF, 1x TX24 para conexão de OPS, 1x USB-A 2.0, 4x USB-A 3.0, 1x USB-C, 2x USB Touch, Wi-Fi b/g/n/ac WCT2GM2511 Integrado 2,4GHz + 5,8GHz homologado pela ANATEL, Webcam FullHD com microfone embutida; Opcionais frontais: USB-C 3.0. Opcionais traseiros: antena Wi-Fi integrada, memória superior, Armazenamento superior, AV In/Out, Coaxial/RF, Display Port, Fone de Ouvido P2, HDMI In/Out adicionais, RCA, RJ45 In/Out Gigabit adicionais, RS232, SPDIF, USB-C 3.0, USB Touch adicionais, USB 2.0/3.0 adicionais, VGA In/Audio In; Outros opcionais: Bluetooth 4.2 ou superior, Segurança por Biometria. Botões frontais abaixo da tela com liga/desliga, modo eco, fonte de sinal, troca Android/Windows, volume e mais; Funções: Acesso a Play Store; Hotspot Wi-Fi e access point; Função lousa; Gerenciamento APKs; Seleção Entradas de Vídeo e Saída Touch; Permite ao menos 2 dispositivos adicionais na função touch; Ajustes de Imagem (Brilho, Contraste, Controle de Volume, Cor e Temperatura); Armazenamento em nuvem sem custos adicionais; Espelhamento de tela sem cabos para até 8 dispositivos simultâneos, compatível com Windows, Linux, Android, MacOS e com funções de segurança; Função de proteção ocular; Inicialização personalizada; Browser de Internet; Restrição de acesso a Apps por código PIN. Compatibilidade com: 3GP, AVI, MP4, DOC, XLS, PPT, DOCX, XLSX, PPTX, PDF, MPEG1, MPEG2, MPEG4, MOV, MJPEG, VC1, FLV, MP3, JPG, BMP, PNG, WMV, TIFF, TXT, entre outros; Comunicação entre portas USB do Display e OPS; Gerenciamento remoto de dispositivo e plataforma de gestão de recursos (Controle do equipamento, configuração de rotinas de utilização, mensagens remotas, localização, entre outros) com licenciamento por 36 meses.		
OPS**	Opção de OPS (Open Pluggable Specification). Para mais informações, consulte a série QUINYX QPS.		
Controle Remoto**	Sem fio para controles de liga/desliga, da tela, volume (+/- e mudo) e brilho, sinal de entrada, configurações do sistema. Controles Expandidos: Paginação Up/Down, movimento do cursor, acesso a menu de contexto, atalhos especiais (Alt+Tab, Alt+F4...), seleção e controle do Sistema Operacional, entre outros.		
Software** (opcional)	Controla as funções do Display e OPS, bem como interage com seus programas; Funções: Lousa digital, anotações sobre a tela e qualquer programa, apagar com a palma da mão, Borracha, Google Earth, Biblioteca de imagens com Imagens 3D e atividades participativas sobre os temas: Física, Química, Matemática, Biologia e Ciências, Calculadora, Compartilhamento online por QR Code, Envio fácil, Jogos e Atividades, Escrita de 2 cores simultâneas, Cortina, Cores, tipos e espessuras Diversas de caneta, Desenho, Formas geométricas, Rotação de tela, Temporizador, Holofote, Acesso à webcam, Destaque (marca texto), Traços e espessura de traço, Ferramentas Geométricas intuitivas, Incluir imagens, Palheta de Cores, Régua, Esquadro, Transferidor, Compasso, Recorte de Tela, Salvar tela, Transparência, Criação ilimitada de quadros brancos, entre outras; Aberto a todos os usuários. Atualizações automáticas, ilimitadas e gratuitas. Permite utilização em outras máquinas.		
Sistema Operacional**	Compatível com Android, Linux, MAC OSX e Windows 10 ou superior.		
Estrutura e Acabamento	Gabinete Único. Com estrutura em Aço com alças e acabamento em Alumínio, sem frestas visíveis entre os componentes do equipamento. Pintura eletroestática EPÓXI.		
Instalação	Em parede por Suporte VESA, suporte e ferragens inclusas; Opção: Instalação em suporte móvel com rodízios.		
Acessórios**	2 Canetas passivas sem bateria; Software; Manuais; Mídias de restauração; Cabo de energia (NBR 14136); Controle Remoto; Cabo HDMI 4k 3m; Cabo USB A x B (Touch) 3m; Suporte de parede Quinyx com todas as ferragens necessárias. Opcional: Suporte Móvel; Canetas adicionais; Ponteira retrátil 21-99 cm de ponta macia; Adaptador RF-S/PDIF; Cabo HDMI diversas metragens; Cabo USB diversas metragens; Suporte para canetas e controle remoto expandido com as funções: F1 até F12; Menu de contexto; atalhos especiais; seleção do sistema operacional.		
Energia*	< 180W	< 270W	< 320W
Vida Útil	Fonte de alimentação única para toda a solução; Auto volt 100-240V 50/60Hz; Consumo em Standby 0,5W; Função Energy Saving. Conexões elétricas com acesso isolado.		
Garantia**	Até 5 anos (Legal + Fábrica) sob contrato. Garantia padrão: 12 Meses (Legal + Fábrica).		
Instalação e Treinamento**	Instalação e treinamento do equipamento sob condições e exigências de contrato.		

* Grandezas numéricas podem ter variações de até +/- 5% ou 5 unidades

** Itens customizáveis de acordo com o pedido do cliente

*** Posição vertical compatível no sistema Windows.

Nossos produtos e processos são certificados de acordo com a legislação vigente. Em conformidade com as principais agências mundiais dentre elas Anatel, FCC, IEC, Inmetro/ABNT, ISO, RoHS. Assim, você cliente, pode ter a certeza de estar adquirindo produtos de excelente qualidade, de alto desempenho e adequados às normas e padronizações de rígido controle.

Quinyx QTD-SERIES X-ZA9C

www.quinyxcompany.com

www.quinyxcompany.com/download/touch/QTD7520171SWIXXX30XIAEXXX24G16.pdf



Acessórios Display Interativo QTD Séries X-ZA9C



Personalize o seu Display Quinyx com uma variedade de acessórios perfeitamente compatíveis! Amplie o seu potencial interativo com a adição de sistema operacional Windows com transição rápida, utilizando padrões internacionais de conectividade.



Foto Ilustrativa

- Multi-Toque;
- Multiusuário;
- Alimentação conjunta: Não precisa de tomadas adicionais.
- Opção para 16 línguas, incluindo Português (Brasil).
- Customizável: Personalize os seus acessórios com componentes padrão do mercado!

Quinyx Display Interativo

Veja suas apresentações ganharem vida. Sistema único e integrado com design sofisticado.

Deixe-se envolver por uma imagem incrível

Com muito mais detalhes, a reprodução de qualquer conteúdo terá a maior fidelidade de cores.

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Datasheet

Quinyx QPS-I5440-ZA9C



Antena Opcional



Imagem meramente ilustrativa

TIPO	OPS (Open Pluggable Specification).
CPU	Intel Core i5 64 bit i5-1240P; Tecnologia de monitoramento térmico; Opcional: Processador com desempenho superior.**
Memória*	16GB DDR4 3200MHz; com possibilidade de expansão até 32gb.
Armazenamento*	SSD 240 GB nVME; Opção para expansão até 512GB; Slot SATA III disponível.
Processamento Vídeo	Integrada; mínimo de memória compartilhada 1 GB;
Conexões*	1x HDMI Out 2.0; Display Port Out; 4x USB 3.0; 1x USB Tipo-C; Mic In 3.5mm; RJ-45 Gigabit In; Fone de Ouvido P2 3.5mm; Botões power, reset, trava Kensington e leds indicadores de status.
Conexões Opcionais	Display Port; RS232; VGA.
Rede*	Wifi 802.11ax (2.4GHZ/5GHZ) homologado pela ANATEL, com até 2 antenas integradas; RJ45 10/100/1000; Bluetooth 5.2.
Alimentação	Energia e Dados por conexão TX24. Integração sem cabos ao Display Interativo Quinyx. Opção: Fonte externa DC 12~19V.
Sistema Operacional e Aplicativos*	Windows 11 Pro licenciado; Licença Microsoft Office 2021 vitalícia; Software educacional licenciado.
Compatibilidade	Quinyx QTD Séries e outros produtos Quinyx;
Garantia*	Até 5 anos (Legal + Fábrica) sob contrato. Garantia padrão: 12 Meses (Legal + Fábrica).

* Item pode ser customizado
* Desempenho baseado na pontuação de Benchmark do CPUBenchmark.net

Nossos produtos e processos são certificados de acordo com a legislação vigente. Em conformidade com as principais agências mundiais dentre elas Anatel, FCC, IEC, Inmetro/ABNT, ISO, RoHS. Assim, você cliente, pode ter a certeza de estar adquirindo produtos de excelente qualidade, de alto desempenho e adequados às normas e padronizações de rígido controle.





WIFI+BT Module

IEEE 802.11 a/b/g/n/ac 2T/2R

Model Number: WCT2GM2511

Product Description

The WCT2GM2511 is a complete dual-band(2.4GHz and 5GHz)WIFI 2×2 MIMO module. This module provides a high level of integration with a dual-stream IEEE 802.11ac MAC/ base band /radio and Bluetooth 5.1.The WLAN operation supports 20MHz,40MHz and 80MHz channels for data rates up to 866.7Mbps. It fully complies with IEEE 802.11 a/b/g/n/ac feature rich wireless connectivity at high standards,delivers reliable,cost-effective, throughput from an extended distance.

Product Features

- ◆ Complies with IEEE 802.11b/g/n for 2.4GHz and IEEE 802.11a/n/ac 5GHz Wireless LAN.
- ◆ Bluetooth v5.1
- ◆ Two transmit and Two receive path(2T2R)
- ◆ Works with all existing network infrastructure.
- ◆ Capable of up to 128-Bit WEP Encryption.
- ◆ Freedom to roam while staying connected.
- ◆ UP to 866.7 Mbps High-Speed Transfer Rate in 802.11ac mode of operation.
- ◆ Operating Systems: Linux,Win7, Win8, Win10,XP
- ◆ Low power consumption.
- ◆ Easy to install and configure.
- ◆ High speed USB 2.0 interface

Product Specification

Model	WIFI+BT Module
Product Name	WCT2GM2511
Standard	802.11 a /b/g/n/ac
Interface	USB
Data Transfer Rate	1,2,5,5,6,11,12,18,22,24,30,36,48,54,60,90,120 and maximum of 866.7Mbps
Modulation Method	GFSK,n/4-DQPSK,8DPSK(bluetooth) DQPSK,DBPSK,CCK(802.11b) QPSK,BPSK,16QAM,64QAM with OFDM (802.11g) QPSK,BPSK,16QAM,64QAM with OFDM (802.11n) QPSK,BPSK,16QAM,64QAM with OFDM (802.11a) QPSK,BPSK,16QAM,64QAM,256QAM with OFDM (802.11ac)
Frequency Band	BLUETOOTH 2402~2480 MHz WIFI 2.4G: 2412~2462 MHz 5G: 5150~5350MHz,5470~5725MHz,5725~5850MHz
Operation Mode	Infrastructure
Security	WEP, TKIP, AES, WPA, WPA2
Operating Voltage	5V±10%
Current Consumption	<1000mA
Antenna Type	PCB
Operating Temperature	0 ~ 70°C ambient temperature
Storage Temperature	-40 ~ 80°C ambient temperature
Humidity	5 to 95 % maximum (non-condensing)



NOTICE:

- ◆please keep this product and accessories attached to the places which children can't touch;
- ◆do not splash water or other liquid onto this product, otherwise it may cause damage;
- ◆do not put this product near the heat source or direct sunlight, otherwise it may cause deformation or malfunction;
- ◆please keep this product away from flammable or naked flame;
- ◆please do not repair this product by yourself. Only qualified personnel can be repaired.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Please notice that if the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains FCC ID:2AC23-WCT2G" any similar wording that expresses the same meaning may be used.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The module is limited to OEM installation ONLY.

The OEM integrator is responsible for ensuring that the end-user has no manual instruction to remove or install module.



The module is limited to installation in mobile application.

A separate approval is required for all other operating configurations, including portable configurations with respect to Part 2.1093 and difference antenna configurations.

There is requirement that the grantee provide guidance to the host manufacturer for compliance with Part 15B requirements.

The module complies with FCC Part 15.247 / Part 15.407 and apply for Single module approval.

Trace antenna designs: Not applicable.

Antennas:

2.4G	5G
PCB antenna & 3 dBi	PCB antenna & 4 dBi

BT Antenna:

BRAND	TYPE	GAIN
GSD	PCB antenna	2 dBi

The antenna is permanently attached, can't be replaced.

Canada Statement

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d' Industrie Canada applicables aux appareils radio exempts de licence. L' exploitation est autorisée aux deux conditions suivantes :

- (1) l' appareil ne doit pas produire de brouillage;
- (2) l' utilisateur de l' appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d' en compromettre le fonctionnement.

Please notice that if the ISED certification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains IC:12290A-WCT2G" any similar wording that expresses the same meaning may be used.

l' appareil hôte doit porter une étiquette donnant le numéro de certification du module d' Industrie Canada, précédé des mots « Contient un module d' émission », du mot « IC:12290A-WCT2G » ou d' une formulation similaire exprimant le même sens, comme suit

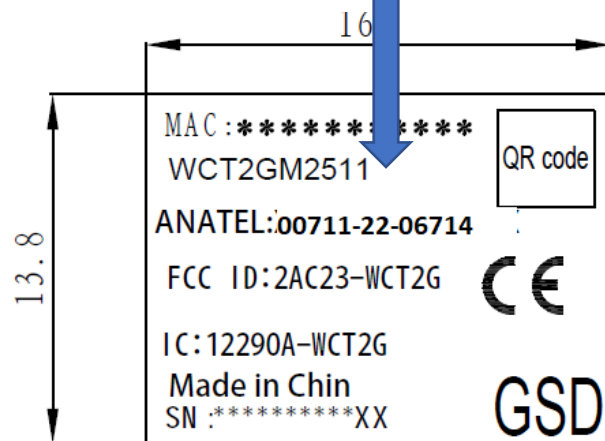


The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725–5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate.

Les dispositifs fonctionnant dans la bande 5150–5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux; pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5 725 à 5 850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée, selon le cas;

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados

SELO ANATEL 00711-22-06714



MANUAL

de la p.i.r.e. spécifiée, selon le cas;

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados

CERTIFICADO DE CONFORMIDADE

CERTIFICATE OF CONFORMITY

Certificado No. / Certificate No. **UL-BR 22.0225**

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Solicitante / Applicant **ITC- INTELLIGENT TELECOM CERTIFICATION LTDA**
Av.da Emancipação, 3770 Bloco D
Jardim Santa Clara do Lago I – Hortolândia – São Paulo
CNPJ 23.786.165/0001-36

Produto Certificado / Certified Product **Transceptor de Radiação Restrita**

Modelo - Tipo / Model – Type **WCT2GM2511**

Lote ou No. de série / Lot or Serial number **N/A**

Categoria / Category **Certificação - definição de tipo de produto conforme LISTA DE REFERÊNCIA DE PRODUTOS PARA TELECOMUNICAÇÕES**

Tipo de Serviço / Service Type **Radiocomunicação de Radiação Restrita.**

Programa e versão / Software and version **N/A**

Avaliado segundo a(s) Norma(s) /
Evaluated according to: **Resolução 680 de 27/06/2017 e Ato 14448 de 02/01/2018,
Resolution 680 of 06/27/2017 and Act 14448 of 01/02/2018**

Relatório de Avaliação da Conformidade Técnica (RACT) #
/ Conformity Assessment Report # **BR4325 / Vol. 1 / Sec. 13 / 2022**

Emissão / Date of issue **16/02/2022**

Revisão / Revision date **11/07/2022**

Validade / Expire date **15/02/2024**

Original assinado por / Original signed by

Pedro Mottola
Program Owner

A UL do Brasil Certificações sendo um Organismo de Certificação Designado junto à ANATEL, segundo o Ato de Designação No 44.313, confirma que o produto está em conformidade com a(s) norma(s) acima descrita(s).

UL do Brasil Certificações as a Product Certification Organization Designated by ANATEL according to the register No.: 44.313, confirms that the product is in compliance with the standard(s) above mentioned.



Organismo de Certificação /
Certification Body

UL do Brasil Certificações
Av. Engenheiro Luís Carlos Berrini, 105 – 24º Andar
04571-010 – São Paulo – SP – Brasil
T: 55 11 30498300 / W: brazil.ul.com

41-IC-F0035 Rev. 7.0

CERTIFICADO DE CONFORMIDADE

CERTIFICATE OF CONFORMITY

Certificado No. / Certificate No. UL-BR 22.0225

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Apêndice / Appendix

ESTE CERTIFICADO É APLICÁVEL A / THIS CERTIFICATE APPLIES TO:

Fabricante / Manufacturer HUIZHOU GAOSHENGDA TECHNOLOGY CO.,LTD.
NO.2,JIN-DA ROAD,HUINAN HIGH-TECH INDUSTRIAL
PARK,HUI-AO AVENUE,HUIZHOU CITY,GUANGDONG,CHINA

Unidade Fabril / Factory Unit HUIZHOU GAOSHENGDA TECHNOLOGY CO.,LTD
NO.2,JIN-DA ROAD,HUINAN HIGH-TECH INDUSTRIAL
PARK,HUI-AO AVENUE,HUIZHOU CITY,GUANGDONG,CHINA

UNIVERSAL ELECTRONICS DO BRASIL LTDA.
AVENIDA TORQUATO TAPAJÓS, 4010 - GALPÃO 04
COLÔNIA SANTO ANTÔNIO - MANAUS - AM - 69093-018
BRASIL

CARACTERÍSTICAS TÉCNICAS BÁSICAS / BASIC TECHNICAL CHARACTERISTICS

O produto é um módulo de rádio-frequência com as seguintes características técnicas:

WiFi 2400-2483,5 MHz, 5725-5850 MHz e BT EDR + LE

Faixa de Frequências (MHz)	Potência Máxima de Saída (W)	Designação de Emissões	Tecnologias	Tipo de Modulação	Velocidade de Transmissão (Mbps)	Padrão
2400 - 2483,5	0,2217	8M8X9D	Sequência Direta	CCK, DQPSK, DBPSK	11	802.11b
2400- 2483,5	0,7461	16M2X9D	OFDM	BPSK, QPSK, 16/64 QAM	54	802.11g
2400 - 2483,5	0,6562	16M9X9D	OFDM	BPSK, QPSK, 16/64 QAM	144,4	802.11n 20 MHz
2400 - 2483,5	0,7621	36M1X9D	OFDM	BPSK, QPSK, 16/64 QAM	300	802.11n 40 MHz
5725 - 5850	0,5856	15M3X9D	OFDM	BPSK, QPSK, 16/64 QAM	54	802.11a
5725 - 5850	0,5102	15M4X9D	OFDM	BPSK, QPSK, 16/64 QAM	144,4	802.11n 20 MHz
5725 - 5850	0,5218	35M1X9D	OFDM	BPSK, QPSK, 16/64 QAM	300	802.11n 40 MHz
5725 - 5850	0,6459	16M6X9D	OFDM	BPSK, QPSK, 16/64 QAM	173,3	802.11ac (BW 20 MHz)
5725 - 5850	0,6043	35M1X9D	OFDM	BPSK, QPSK, 16/64 QAM	400	802.11ac (BW 40 MHz)
5725 - 5850	0,4344	75M4X9D	OFDM	BPSK, QPSK, 16/64/256 QAM	866,7	802.11ac (BW 80 MHz)
2400 - 2483,5	0,0062	730kF1D	Salto em frequência	GFSK	3	BT EDR
2400 - 2483,5	0,0042	1M2F1D	Salto em frequência	8DPSK	3	BT EDR
2400 - 2483,5	0,0054	680kF1D	Sequência direta	GFSK	3	BT LE

Organismo de Certificação /
Certification Body

UL do Brasil Certificações

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CERTIFICADO DE CONFORMIDADE

CERTIFICATE OF CONFORMITY

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WiFi 5150-5350 MHz e 5470 a 5725 MHz

Faixa de Frequências (MHz)	Potência Média E.I.R.P. (W)	Tecnologias	Tipo de Modulação	Velocidade de transmissão (Mbps)	Padrão
5150 a 5350	0,0639	OFDM	BPSK, QPSK, 16/64 QAM	54	802.11a
5470 a 5725	0,0661	OFDM	BPSK, QPSK, 16/64 QAM	54	802.11a
5150 a 5350	0,0492	OFDM	BPSK, QPSK, 16/64 QAM	144,4	802.11 n BW 20 MHz
5470 a 5725	0,0455	OFDM	BPSK, QPSK, 16/64 QAM	144,4	802.11 n BW 20 MHz
5150 a 5350	0,0230	OFDM	BPSK, QPSK, 16/64 QAM	300	802.11 n BW 40 MHz
5470 a 5725	0,0600	OFDM	BPSK, QPSK, 16/64 QAM	300	802.11 n BW 40 MHz
5150 a 5350	0,0239	OFDM	BPSK, QPSK, 16/64 QAM	173,3	802.11ac (BW 20 MHz)
5470 a 5725	0,0670	OFDM	BPSK, QPSK, 16/64 QAM	173,3	802.11ac (BW 20 MHz)
5150 a 5350	0,0229	OFDM	BPSK, QPSK, 16/64 QAM	400	802.11ac (BW 40 MHz)
5470 a 5725	0,0610	OFDM	BPSK, QPSK, 16/64 QAM	400	802.11ac (BW 40 MHz)
5150 a 5350	0,0201	OFDM	BPSK, QPSK, 16/64/256 QAM	866,7	802.11ac (BW 80 MHz)
5470 a 5725	0,0520	OFDM	BPSK, QPSK, 16/64/256 QAM	866,7	802.11ac (BW 80 MHz)

Tensão de alimentação: 5 Vcc

Antena interna.

Ganho da antena:

BT:2dBi;

2.4G:3dBi;

5G:4dBi;

Ensaio de SAR não aplicável: produto não acabado, cuja incorporação em outro equipamento requer nova avaliação.

LABORATÓRIO DE ENSAIO / TESTING LABS

Relatório de ensaio emitido por	Número	Data
Laboratório IBEC	IBEC 212695	19/01/2022

INFORMAÇÕES ADICIONAIS / ADDITIONAL INFORMATION

- Os produtos objeto do certificado de conformidade estão sujeitos à comprovação periódica de que mantém as características originalmente certificadas. Para fins de comercialização e uso é necessária a homologação da Anatel conforme resolução nº 715 de 23 outubro 2019.
The products covered by the certificate of conformity, can be periodically evaluated in order to check if it maintains its original characteristics. Before the commercialization and use of the product covered by this certificate, it must be homologated by ANATEL, according resolution nº 715 from October 23th 2019.
- Este certificado aplica-se aos produtos ou equipamentos de telecomunicações idênticos à amostra avaliada e certificada, quaisquer modificações no projeto ou no processo de fabricação obrigam o responsável a informar a UL do Brasil.
This certificate applies to products or telecommunications equipment identical to sample assessed and certified. any changes in design or manufacturing undertake the responsible to inform at UL do Brasil Certificações.

Organismo de Certificação /
Certification Body

UL do Brasil Certificações

Av. Engenheiro Luís Carlos Berrini, 105 – 24º Andar
04571-010 – São Paulo – SP – Brasil
T: 55 11 30498300 / W: brazil.ul.com

41-IC-F0035 Rev. 7.0

CERTIFICADO DE CONFORMIDADE

CERTIFICATE OF CONFORMITY

Certificado No. / Certificate No. UL-BR 22.0225

Página / Page 4 / 4

3. O requerente apresentou declaração em conformidade com os Requisitos de Segurança Cibernética para Equipamentos para Telecomunicações.
The applicant has submitted a declaration in compliance with the Cyber Security Requirements for Telecommunications Equipment.

HISTÓRICO DE REVISÕES / REVISION DESCRIPTION

11/07/2022	Rev.1 – Inclusão de Fábrica
16/02/2022	Emissão inicial

A última revisão substitui e cancela as anteriores
The last review cancel and substitutes the previous on

Organismo de Certificação /
Certification Body

UL do Brasil Certificações

Av. Engenheiro Luís Carlos Berrini, 105 – 24º Andar
04571-010 – São Paulo – SP – Brasil
T: 55 11 30498300 / W: brazil.ul.com

41-IC-F0035 Rev. 7.0

Certificado de Conformidade

Certificate of Conformity

Certificado/Certificate
UL-BR 22.0225

Emissão / Issue
16 de fevereiro de 2022
February 16, 2022

Revisão / Revision
8 de abril de 2024
April 8, 2024

Validade / Expiration
15 de fevereiro de 2026
February 15, 2026



Reconhecer que o Solicitante / Acknowledge that the Certificate Holder

**ITC- INTELLIGENT TELECOM
CERTIFICATION LTDA**

avaliou o produto / has had

Transceptor de Radiação Restrita

conforme o(s) documento(s) normativo(s) / evaluated according to the
normative documents

**Resolução 680 de 27/06/2017 e Ato 14448 de
04/12/2017,
Resolution 680 of 06/27/2017 and Act 14448
of 04/12/2017**

e atesta que o produto para telecomunicações está em conformidade
com a regulamentação expedida ou adotada pela ANATEL.
and ensures that the telecommunications product complies with the
regulations issued or adopted by ANATEL.

Rafael Parada
Program Owner

UL do Brasil Certificações, Organismo de Certificação Designado (OCD) pela
Agência Nacional de Telecomunicações - ANATEL, segundo Ato nº 44313,
de 17 de maio de 2004.

UL do Brasil Certificações, Designated Certification Body (OCD) by the
National Telecommunications Agency - ANATEL, according to Act No. 44313,
of May 17, 2004.

Certificado de Conformidade

Certificate of Conformity

Certificado / Certificate: UL-BR 22.0225

Solicitante / Certificate Holder
1591072 ITC- INTELIGENT TELECOM CERTIFICATION LTDA
Av.da Emancipação, 3770 Bloco D
Jardim Santa Clara do Lago I – Hortolândia – São Paulo
CNPJ 23.786.165/0001-36

Fabricante / Manufacturer
1591072 HUIZHOU GAOSHENGDA TECHNOLOGY CO.,LTD.
NO.2,JIN-DA ROAD,HUINAN HIGH-TECH INDUSTRIAL PARK,HUI-AO
AVENUE,HUIZHOU CITY,GUANGDONG,CHINA

Unidade Fabril/ Factory Unit
1591072 HUIZHOU GAOSHENGDA TECHNOLOGY CO.,LTD.
NO.2,JIN-DA ROAD,HUINAN HIGH-TECH INDUSTRIAL PARK,HUI-AO
AVENUE,HUIZHOU CITY,GUANGDONG,CHINA

UNIVERSAL ELECTRONICS DO BRASIL LTDA.
AVENIDA TORQUATO TAPAJÓS, 4010 - GALPÃO 04
COLÔNIA SANTO ANTÔNIO - MANAUS – AM - 69093-018
BRASIL

Modelo/ WCT2GM2511
Model

Família de Produtos / Conforme lista de referência de Produtos
Products Family

Modalidade de Avaliação da Certificação
Conformidade /
Conformity Assessment Model

Tipo de Serviço / Radiocomunicação de Radiação Restrita.
Service Type

Relatório de Avaliação da BR4325 / Vol. 1 / Sec. 13 / 2022
Conformidade Técnica (RACT) /
Conformity Assessment Report

Características Técnicas Básicas / Basic Technical Characteristics

O produto é um módulo de rádio-frequência com as seguintes características técnicas:

WiFi 2400-2483,5 MHz, 5725-5850 MHz , BT EDR , BLE

Faixa de Frequência / Frequency Range (MHz)	Potência Máxima de Saída / Maximum Output Power (W)	Designação de Emissões / Designation of Emissions	Tecnologia / Technology	Tipo de Modulação / Modulation	Taxa Máxima de Transmissão / Maximum Transmission Rate (Mbps)	Padrão / Standard	SAR Cabeça / Head SAR (W/kg)	SAR Corpo / Body SAR (W/kg)
2400 - 2483,5	0,2217	8M8X9D	Sequência Direta	CCK, DQPSK, DBPSK	11	802.11b	---	---
2400- 2483,5	0,7461	16M2X9D	OFDM	BPSK, QPSK, 16/64 QAM	54	802.11g	---	---

Certificado de Conformidade

Certificate of Conformity

Certificado / Certificate: UL-BR 22.0225

2400 - 2483,5	0,6562	16M9X9D	OFDM	BPSK, QPSK, 16/64 QAM	144,4	802.11n 20 MHz	---	---
2400 - 2483,5	0,7621	36M1X9D	OFDM	BPSK, QPSK, 16/64 QAM	300	802.11n 40 MHz	---	---
5725 - 5850	0,5856	15M3X9D	OFDM	BPSK, QPSK, 16/64 QAM	54	802.11a	---	---
5725 - 5850	0,5102	15M4X9D	OFDM	BPSK, QPSK, 16/64 QAM	144,4	802.11n 20 MHz	---	---
5725 - 5850	0,5218	35M1X9D	OFDM	BPSK, QPSK, 16/64 QAM	300	802.11n 40 MHz	---	---
5725 - 5850	0,6459	16M6X9D	OFDM	BPSK, QPSK, 16/64 QAM	173,3	802.11ac (BW 20 MHz)	---	---
5725 - 5850	0,6043	35M1X9D	OFDM	BPSK, QPSK, 16/64 QAM	400	802.11ac (BW 40 MHz)	---	---
5725 - 5850	0,4344	75M4X9D	OFDM	BPSK, QPSK, 16/64/256 QAM	866,7	802.11ac (BW 80 MHz)	---	---
2400 - 2483,5	0,0062	730kF1D	Salto em frequência	GFSK	1	BT EDR	---	---
2400 - 2483,5	0,0042	1M2F1D	Salto em frequência	8DPSK	3	BT EDR	---	---
2400 - 2483,5	0,0054	680kF1D	Sequência direta	GFSK	1	BT LE	---	---

WiFi 5150-5350 MHz e 5470 a 5725 MHz

Faixa de Frequência / Frequency Range (MHz)	Potência Máxima de Saída / Maximum Output Power (W)	Designação de Emissões / Designation of Emissions	Tecnologia / Technology	Tipo de Modulação / Modulation	Taxa Máxima de Transmissão / Maximum Transmission Rate (Mbps)	Padrão / Standard	SAR Cabeça / Head SAR (W/kg)	SAR Corpo / Body SAR (W/kg)
5150 a 5350	0,0639	OFDM	BPSK, QPSK, 16/64 QAM	54	802.11a	5150 a 5350	---	---
5470 a 5725	0,0661	OFDM	BPSK, QPSK, 16/64 QAM	54	802.11a	5470 a 5725	---	---
5150 a 5350	0,0492	OFDM	BPSK, QPSK, 16/64 QAM	144,4	802.11 n BW 20 MHz	5150 a 5350	---	---
5470 a 5725	0,0455	OFDM	BPSK, QPSK, 16/64 QAM	144,4	802.11 n BW 20 MHz	5470 a 5725	---	---
5150 a 5350	0,0230	OFDM	BPSK, QPSK, 16/64 QAM	300	802.11 n BW 40 MHz	5150 a 5350	---	---
5470 a 5725	0,0600	OFDM	BPSK, QPSK, 16/64 QAM	300	802.11 n BW 40 MHz	5470 a 5725	---	---
5150 a 5350	0,0239	OFDM	BPSK, QPSK, 16/64 QAM	173,3	802.11ac (BW 20 MHz)	5150 a 5350	---	---

Certificado de Conformidade

Certificate of Conformity

Certificado / Certificate: UL-BR 22.0225

5470 a 5725	0,0670	OFDM	BPSK, QPSK, 16/64 QAM	173,3	802.11ac (BW 20 MHz)	5470 a 5725	---	---
5150 a 5350	0,0229	OFDM	BPSK, QPSK, 16/64 QAM	400	802.11ac (BW 40 MHz)	5150 a 5350	---	---
5470 a 5725	0,0610	OFDM	BPSK, QPSK, 16/64 QAM	400	802.11ac (BW 40 MHz)	5470 a 5725	---	---
5150 a 5350	0,0201	OFDM	BPSK, QPSK, 16/64/256 QAM	866,7	802.11ac (BW 80 MHz)	5150 a 5350	---	---
5470 a 5725	0,0520	OFDM	BPSK, QPSK, 16/64/256 QAM	866,7	802.11ac (BW 80 MHz)	5470 a 5725	---	---

Tensão de alimentação: 5 Vcc

Antena interna.

Ganho da antena:

- BT:2dBi;
- 2.4G:3dBi;
- 5G:4dBi;

Ensaio de SAR não aplicável: Produto não acabado, de uso interno, cuja integração em outros equipamentos pode requerer nova avaliação.

Laboratório(s) de Ensaios / Testing Laboratory(s):

Relatório de ensaio / Test report	Laboratório / Laboratory	N.º do Relatório / Report No.	Data de Emissão / Issue Date
1	Laboratório IBEC	IBEC 212695	19/01/2022

Informações Adicionais / Additional Information:

- Os produtos objeto do certificado de conformidade estão sujeitos à comprovação periódica de que mantém as características originalmente certificadas. Para fins de comercialização e uso é necessária a homologação da Agência conforme Resolução ANATEL n.º 715 de 23 outubro 2019.
The products covered by the certificate of conformity are subject to periodic evaluated to check if it maintains the originally certified characteristics. Before the commercialization and use of the product covered by this certificate, it must be homologated by Agency according ANATEL Resolution No. 715 of October 23, 2019.
- Este certificado aplica-se aos produtos ou equipamentos de telecomunicações idênticos à amostra avaliada e certificada. Quaisquer modificações no projeto ou no processo de fabricação obrigam o responsável a informar a UL do Brasil.
This certificate applies to products or telecommunications equipment identical to sample assessed and certified. Any modifications to the design or manufacturing process oblige the person responsible to inform UL do Brasil.
- Qualquer alteração no produto, incluindo a marcação, invalidará o presente certificado, salvo se o solicitante informar por escrito à UL do Brasil sobre esta modificação, a qual procederá à avaliação e decidirá quanto à continuidade da validade do certificado.
Any non-authorized changes performed in the product, including marking, will invalidate this certificate. UL do Brasil must be notified about any desired change. This notification will be analyzed by UL do Brasil that will decide about certificate force.
- Os produtos para telecomunicações podem ser submetidos a um Programa de Supervisão de Mercado, cujo objetivo é verificar se os produtos homologados pela ANATEL mantêm o atendimento aos Requisitos Técnicos.
Telecommunications products may be subject to a Market Supervision Program, the objective of which is to verify whether products approved by ANATEL maintain compliance with Technical Requirements.

Certificado de Conformidade

Certificate of Conformity

Certificado / Certificate: UL-BR 22.0225

5. O requerente apresentou declaração em conformidade com os Requisitos de Segurança Cibernética para Equipamentos para Telecomunicações.
The applicant has submitted a declaration in compliance with the Cyber Security Requirements for Telecommunications Equipment.

Histórico de Revisões / Revisions History:

Revisão / Review	Data / Date	Descrição da Revisão / Revision Description
02	08/04/2024	Rev.2 Manutenção 2023 / Renewal 2023
01	11/07/2022	Rev.1 – Inclusão de Unidade Fabril
00	16/02/2022	Emissão Inicial / Initial issue
A última revisão substitui e cancela as anteriores / <i>The last review replaces and cancels the previous ones</i>		

CERTIFICADO DE CONFORMIDADE TÉCNICA

CERTIFICATE OF TECHNICAL CONFORMITY

INTRANSFERÍVEL
(CANNOT BE TRANSFERRED)

Número do Certificado: 00126264
(Certificate Number)

Data da Certificação: 22/09/2020
(Certification Date D/M/Y)

Data de Validade: 22/09/2022
(Expiration Date D/M/Y)

Solicitante (Applicant):

Intel Semicondutores do Brasil Ltda
Av. Doutor Chucri Zaidan, 940 - Vila Cordeiro
04.583-906 - São Paulo - São Paulo
Brasil
CNPJ: 57.286.247/0001-33

Fabricante (Manufacturer):

Intel Mobile Communications
505 route des Lucioles, Bldg B, Sophia-Antipolis, 06560
França
CNPJ: N/A

Modelo (Model): AX210NGW

Tipo de Produto (Type of Product): Transceptor de radiação restrita

Serviço / Aplicação (Service / Application): Radiocomunicação de radiação restrita

Norma(s) Técnica(s) Aplicável(eis) / (Technical Standard(s) Applicable): ATO (Act) Nº 14448/2017; ATO (Act) nº 4776/2020; Resolução (Resolution) nº 680;

O IBRACE, no uso das atribuições que lhe confere o Ato de Designação nº 19.436, de 28/09/2001, da ANATEL, concede esta certificação ao(s) produto(s) acima descrito(s), baseado em ensaios de tipo efetuados conforme normas técnicas aplicáveis e documentação fornecida pelo fabricante/distribuidor. Antes da comercialização deste(s) produto(s), deverá ser obtida a homologação deste Certificado junto à ANATEL e efetuar a correta identificação dos produtos com o selo ANATEL, conforme regulamentação vigente.

IBRACE, using the powers invested by the Designation Act nº 19.436, of September 28th 2001, from ANATEL, it grants to this Certification of Product (s) above described, based on tests of type performed according to applicable technical standards and documentation sent by Manufacturer/Distributor. Before the commercialization of this(ese) product(s), it shall be obtained the Homologation of this Certificate at ANATEL and apply the correct identification of products with ANATEL Label, according to current Regulations.

Campinas, 22/09/2020



(Campinas, D/M/Y)

Alexandre Sabatini

Presidente Ibrace / IBRACE President



Certificado de Conformidade Técnica válido somente acompanhado de todas as suas páginas.

Características Técnicas Básicas (Basic Technical Characteristics):

Faixa de Frequência \ Frequency range (MHz)	Potência máxima de transmissão \ Maximum power transmission (W)	Designação de emissões \ Designation of emission	Tecnologia \ Technology	Modulação \ Modulation	SAR cabeça \ SAR head (W/kg)	SAR corpo (pior caso) \ SAR body (worst case) (W/kg)	Taxa de transmissão \ Transmission rate (Mbit/s)	Padrão \ Standard
2400 a 2483,5	0,0107	882KF7D	FHSS - Salto em Frequência	GFSK	-	-	1	Bluetooth
2400 a 2483,5	0,0078	1M41G7D	FHSS - Salto em Frequência	π/4DQPSK e 8DPSK	-	-	2 e 3	Bluetooth+ED R
2400 a 2483,5	0,0036	678KF7D	DSSS - Sequência Direta	GFSK	-	-	1	Bluetooth LE
2400 a 2483,5	0,0036	1M15F7D	DSSS - Sequência Direta	GFSK	-	-	2	Bluetooth LE 5.0
2400 a 2483,5	0,291	10M3X9D	DSSS - Sequência Direta	DBPSK, DQPSK e CCK	-	-	1, 2, 5,5 e 11	802.11b
2400 a 2483,5	0,534	16M3X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11g
2400 a 2483,5	0,516	17M5X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
2400 a 2483,5	0,244	35M9X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 300	802.11n BW 40 MHz
2400 a 2483,5	0,174	18M4X9D	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz
2400 a 2483,5	0,168	36M4X9D	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5725 a 5850	0,199	15M1X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11a
5725 a 5850	0,234	16M3X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
5725 a 5850	0,196	35M1X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 300	802.11n BW 40 MHz
5725 a 5850	0,234	16M3X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 192,6	802.11ac BW 20 MHz
5725 a 5850	0,196	35M1X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 400	802.11ac BW 40 MHz
5725 a 5850	0,102	76M4X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 866,6	802.11ac BW 80 MHz
5725 a 5850	0,239	19M0X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz

Faixa de Frequência \ Frequency range (MHz)	Potência máxima de transmissão \ Maximum power transmission (W)	Designação de emissões \ Designation of emission	Tecnologia \ Technology	Modulação \ Modulation	SAR cabeça \ SAR head (W/kg)	SAR corpo (pior caso) \ SAR body (worst case) (W/kg)	Taxa de transmissão \ Transmission rate (Mbit/s)	Padrão \ Standard
5725 a 5850	0,193	38M0X9D	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5725 a 5850	0,102	78M0X9D	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 1200	802.11ax BW 80 MHz
5150 a 5350	0,0799	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11a
5150 a 5350	0,0936	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
5150 a 5350	0,0951	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 300	802.11n BW 40 MHz
5150 a 5350	0,0936	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 173,4	802.11ac BW 20 MHz
5150 a 5350	0,0951	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 400	802.11ac BW 40 MHz
5150 a 5350	0,0921	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 866,6	802.11ac BW 80 MHz
5150 a 5350	0,0850	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	Até 1733,4	802.11ac BW 160 MHz
5150 a 5350	0,0961	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz
5150 a 5350	0,0754	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5150 a 5350	0,0724	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 1200	802.11ax BW 80 MHz
5150 a 5350	0,0690	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 2400	802.11ax BW 160 MHz
5470 a 5725	0,2064	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11a
5470 a 5725	0,2025	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
5470 a 5725	0,1573	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 300	802.11n BW 40 MHz

Faixa de Frequência \ Frequency range (MHz)	Potência máxima de transmissão \ Maximum power transmission (W)	Designação de emissões \ Designation of emission	Tecnologia \ Technology	Modulação \ Modulation	SAR cabeça \ SAR head (W/kg)	SAR corpo (piores caso) \ SAR body (worst case) (W/kg)	Taxa de transmissão \ Transmission rate (Mbit/s)	Padrão \ Standard
5470 a 5725	0,2025	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 173,4	802.11ac BW 20 MHz
5470 a 5725	0,1573	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 400	802.11ac BW 40 MHz
5470 a 5725	0,1769	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 866,6	802.11ac BW 80 MHz
5470 a 5725	0,0975	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	Até 1733,4	802.11ac BW 160 MHz
5470 a 5725	0,2010	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz
5470 a 5725	0,2338	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5470 a 5725	0,1742	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 1200	802.11ax BW 80 MHz
5470 a 5725	0,0577	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 2400	802.11ax BW 160 MHz

- Produto não acabado, cuja integração em outro equipamento requer nova avaliação.
- Possui antena integrada.
- Os valores de potências indicados nas faixas de 5150-5350 MHz e 5470-5725 MHz referem-se a potência média em E.I.R.P.
- Ganho das antenas (5,1 GHz): 3,73 dBi (antenas 1 e 2)
- Ganho das antenas (5,4 GHz): 4,77 dBi (antenas 1 e 2)
- Possui mecanismo DFS.

Dados Complementares da Certificação do Produto

(Complementary Information of Product Certification)

Laboratório de Ensaio: CERTLAB - LAB. DE ENSAIOS ELÉTRICOS E MAGNÉTICOS
(Testing Laboratory)

Endereço do Laboratório: Rua Maestro Francisco Manoel da Silva, 71
(Laboratory Address)

Telefone(s) \ Telephone(s) : +55(19) 31129800

Número do Relatório (Report Number)	Número(s) de Série(s) (Serial Number)
CertLab-IBT-116993-20-01A-Rev0	NA
CertLab-I11-116993-20-01A-Rev0_Parte_2_2	NA
CertLab-IWF-116993-20-01A-Rev0_Parte_2_2	NA
CertLab-I11-116993-20-01A-Rev0_Parte_1_2	NA

CertLab-IWF-116993-20-01A-Rev0_Parte_1_2	NA
CERTLAB-IDE-116993-20-01A-Rev1	NA

Observações (Comments):

Os produtos que estão sujeitos à comprovação periódica serão avaliados quanto a manutenção das características originalmente certificadas.

(The Products that are subject to periodic verification will be evaluated for the maintenance of the characteristics originally certified).

Comentários Adicionais (Additional Comments):

- Caso o equipamento utilize antenas de transmissão com ganho direcional superior a 6 dBi, devem ter a potência de pico máxima na saída do transmissor reduzida para valores abaixo daqueles especificados nos incisos 10.2.5, 10.2.6, 10.2.7 e no item 10.3.2 (do Ato nº 14448), pela quantidade em dB que o ganho direcional da antena exceder a 6 dBi.
- Sistemas operando na faixa de 2400-2483,5 MHz e utilizados exclusivamente em aplicações ponto-a-ponto do serviço fixo podem fazer uso de antenas de transmissão com ganho direcional superior a 6 dBi, desde que potência de pico máxima na saída do transmissor seja reduzida de 1 dB para cada 3 dB que o ganho direcional da antena exceder a 6 dBi.
- Sistemas operando na faixa 5.725-5.850 MHz e utilizados exclusivamente em aplicações ponto-a-ponto do serviço fixo podem fazer uso de antenas de transmissão com ganho direcional superior a 6 dBi sem necessidade de uma correspondente redução na potência de pico máxima na saída do transmissor.
- Sistemas operando na faixa 5.150-5.350 MHz, as emissões devem estar confinadas aos ambientes internos das edificações.
- O equipamento opera como escravo e possui mecanismos DFS acompanhando os mecanismos do equipamento mestre.

Histórico da Certificação (Certification History):

- Emissão 00: Proposta número 116993-20 - Emissão inicial.

Unidade(s) Fabril(is) (Factory Units(s)):

AzureWave Technologies (Shangai) Inc.
No 1355 Jiaxin Road, Malu Town, Jiading District, Shanghai,, China

Flextronics International Tecnologia Ltda
Avenida Liberdade, 6315, Iporanga, - 18017-013, Sorocaba, São Paulo, Brasil

Gemtek Electronics (Kunshan) Co., Ltd.
No 88, Xin Zhu Rd., Comprehensive Bonded Zone, Jiangsu Province 215300, China

CERTIFICADO DE CONFORMIDADE TÉCNICA

CERTIFICATE OF TECHNICAL CONFORMITY

INTRANSFERÍVEL
(CANNOT BE TRANSFERRED)

Número do Certificado: 00126264
(Certificate Number)

Data da Certificação: 22/09/2020
(Certification Date D/M/Y)

Data de Validade: 22/09/2024
(Expiration Date D/M/Y)

Data de Manutenção: 28/06/2022
(Last Renewal Date D/M/Y)

Solicitante (Applicant):

Intel Semicondutores do Brasil Ltda
Av. Doutor Chucri Zaidan, 940 - Vila Cordeiro
04.583-906 - São Paulo - São Paulo
Brasil
CNPJ: 57.286.247/0001-33

Fabricante (Manufacturer):

Intel Corporation SAS
425 Rue de GOA. Cargo B6. 06600 Antibes.
França
CNPJ: N/A

Modelo (Model): AX210NGW

Tipo de Produto (Type of Product): Transceptor de radiação restrita

Serviço / Aplicação (Service / Application): Radiocomunicação de radiação restrita

Norma(s) Técnica(s) Aplicável(eis) / (Technical Standard(s) Applicable): ATO (Act) Nº 14448/2017; ATO (Act) nº 423/2022; ATO (Act) nº 4776/2020; Resolução (Resolution) nº 680;

O IBRACE, no uso das atribuições que lhe confere o Ato de Designação nº 19.436, de 28/09/2001, da ANATEL, concede esta certificação ao(s) produto(s) acima descrito(s), baseado em ensaios de tipo efetuados conforme normas técnicas aplicáveis e documentação fornecida pelo fabricante/distribuidor. Antes da comercialização deste(s) produto(s), deverá ser obtida a homologação deste Certificado junto à ANATEL e efetuar a correta identificação dos produtos com o selo ANATEL, conforme regulamentação vigente.

IBRACE, using the powers invested by the Designation Act nº 19.436, of September 28th 2001, from ANATEL, it grants to this Certification of Product (s) above described, based on tests of type performed according to applicable technical standards and documentation sent by Manufacturer/Distributor. Before the commercialization of this(ese) product(s), it shall be obtained the Homologation of this Certificate at ANATEL and apply the correct identification of products with ANATEL Label, according to current Regulations.

Campinas, 28/06/2022



(Campinas, D/M/Y)

Cesar Crisanti Filho

Presidente Ibrace / IBRACE President



Certificado de Conformidade Técnica válido somente acompanhado de todas as suas páginas.

Características Técnicas Básicas (Basic Technical Characteristics):

Faixa de Frequência \ Frequency range (MHz)	Potência máxima de transmissão \ Maximum power transmission (W)	Designação de emissões \ Designation of emission	Tecnologia \ Technology	Modulação \ Modulation	SAR cabeça \ SAR head (W/kg)	SAR corpo (pior caso) \ SAR body (worst case) (W/kg)	Taxa de transmissão \ Transmission rate (Mbit/s)	Padrão \ Standard
2400 a 2483,5	0,0107	882KF7D	FHSS - Salto em Frequência	GFSK	-	-	1	Bluetooth
2400 a 2483,5	0,0078	1M41G7D	FHSS - Salto em Frequência	π/4DQPSK e 8DPSK	-	-	2 e 3	Bluetooth+ED R
2400 a 2483,5	0,0036	678KF7D	DSSS - Sequência Direta	GFSK	-	-	1	Bluetooth LE
2400 a 2483,5	0,0036	1M15F7D	DSSS - Sequência Direta	GFSK	-	-	2	Bluetooth LE 5.0
2400 a 2483,5	0,291	10M3X9D	DSSS - Sequência Direta	DBPSK, DQPSK e CCK	-	-	1, 2, 5,5 e 11	802.11b
2400 a 2483,5	0,534	16M3X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11g
2400 a 2483,5	0,516	17M5X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
2400 a 2483,5	0,244	35M9X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 300	802.11n BW 40 MHz
2400 a 2483,5	0,174	18M4X9D	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz
2400 a 2483,5	0,168	36M4X9D	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5725 a 5850	0,199	15M1X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11a
5725 a 5850	0,234	16M3X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
5725 a 5850	0,196	35M1X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 300	802.11n BW 40 MHz
5725 a 5850	0,234	16M3X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 192,6	802.11ac BW 20 MHz
5725 a 5850	0,196	35M1X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 400	802.11ac BW 40 MHz
5725 a 5850	0,102	76M4X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 866,6	802.11ac BW 80 MHz
5725 a 5850	0,239	19M0X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz

Faixa de Frequência \ Frequency range (MHz)	Potência máxima de transmissão \ Maximum power transmission (W)	Designação de emissões \ Designation of emission	Tecnologia \ Technology	Modulação \ Modulation	SAR cabeça \ SAR head (W/kg)	SAR corpo (pior caso) \ SAR body (worst case) (W/kg)	Taxa de transmissão \ Transmission rate (Mbit/s)	Padrão \ Standard
5725 a 5850	0,193	38M0X9D	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5725 a 5850	0,102	78M0X9D	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 1200	802.11ax BW 80 MHz
5150 a 5350	0,0799	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11a
5150 a 5350	0,0936	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
5150 a 5350	0,0951	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 300	802.11n BW 40 MHz
5150 a 5350	0,0936	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 173,4	802.11ac BW 20 MHz
5150 a 5350	0,0951	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 400	802.11ac BW 40 MHz
5150 a 5350	0,0921	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 866,6	802.11ac BW 80 MHz
5150 a 5350	0,0850	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 1733,4	802.11ac BW 160 MHz
5150 a 5350	0,0961	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz
5150 a 5350	0,0754	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5150 a 5350	0,0724	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 1200	802.11ax BW 80 MHz
5150 a 5350	0,0690	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 2400	802.11ax BW 160 MHz
5470 a 5725	0,2064	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11a
5470 a 5725	0,2025	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
5470 a 5725	0,1573	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 300	802.11n BW 40 MHz

Faixa de Frequência \ Frequency range (MHz)	Potência máxima de transmissão \ Maximum power transmission (W)	Designação de emissões \ Designation of emission	Tecnologia \ Technology	Modulação \ Modulation	SAR cabeça \ SAR head (W/kg)	SAR corpo (piores caso) \ SAR body (worst case) (W/kg)	Taxa de transmissão \ Transmission rate (Mbit/s)	Padrão \ Standard
5470 a 5725	0,2025	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 173,4	802.11ac BW 20 MHz
5470 a 5725	0,1573	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 400	802.11ac BW 40 MHz
5470 a 5725	0,1769	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 866,6	802.11ac BW 80 MHz
5470 a 5725	0,0975	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 1733,4	802.11ac BW 160 MHz
5470 a 5725	0,2010	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz
5470 a 5725	0,2338	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5470 a 5725	0,1742	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 1200	802.11ax BW 80 MHz
5470 a 5725	0,0577	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 2400	802.11ax BW 160 MHz
5925 a 7125	0,0233	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11a
5925 a 7125	0,0230	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
5925 a 7125	0,0515	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 300	802.11n BW 40 MHz
5925 a 7125	0,0230	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 173,4	802.11ac BW 20 MHz
5925 a 7125	0,0515	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 400	802.11ac BW 40 MHz
5925 a 7125	0,1007	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 866,6	802.11ac BW 80 MHz
5925 a 7125	0,1797	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 1733,4	802.11ac BW 160 MHz
5925 a 7125	0,0253	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz

Faixa de Frequência \ Frequency range (MHz)	Potência máxima de transmissão \ Maximum power transmission (W)	Designação de emissões \ Designation of emission	Tecnologia \ Technology	Modulação \ Modulation	SAR cabeça \ SAR head (W/kg)	SAR corpo (piores caso) \ SAR body (worst case) (W/kg)	Taxa de transmissão \ Transmission rate (Mbit/s)	Padrão \ Standard
5925 a 7125	0,0525	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5925 a 7125	0,0961	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 1200	802.11ax BW 80 MHz
5925 a 7125	0,1704	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 2400	802.11ax BW 160 MHz

- Possui antena integrada.
- Os valores de potências indicados nas faixas de 5150-5350 MHz, 5470-5725 MHz e 5925-7125 MHz referem-se a potência média em E.I.R.P.
- Ganho das antenas (5,1 GHz): 3,73 dBi (antenas 1 e 2).
- Ganho das antenas (5,4 GHz): 4,77 dBi (antenas 1 e 2).
- Ganho das antenas (6 GHz): 5,60 dBi (antenas 1 e 2).
- Possui mecanismo DFS.
- Produto não acabado, cuja integração em outro equipamento requer nova avaliação.

Dados Complementares da Certificação do Produto

(Complementary Information of Product Certification)

Laboratório de Ensaio: CERTLAB - LAB. DE ENSAIOS ELÉTRICOS E MAGNÉTICOS
(Testing Laboratory)

Endereço do Laboratório: Rua Maestro Francisco Manoel da Silva, 71
(Laboratory Address)

Telefone(s) \ Telephone(s) : +55(19) 31129800

Número do Relatório (Report Number)	Número(s) de Série(s) (Serial Number)
CertLab-IBT-116993-20-01A-Rev0	NA
CertLab-I11-116993-20-01A-Rev0_Parte_2_2	NA
CertLab-IWF-116993-20-01A-Rev0_Parte_2_2	NA
CertLab-I11-116993-20-01A-Rev0_Parte_1_2	NA
CertLab-IWF-116993-20-01A-Rev0_Parte_1_2	NA
CERTLAB-IDE-116993-20-01A-Rev1	NA
CertLab-IDE-121122-21-02A-Rev0	NA
CertLab-IW6-121122-21-02A-Rev0_Parte_1_4	NA
CertLab-IW6-121122-21-02A-Rev0_Parte_2_4	NA
CertLab-IW6-121122-21-02A-Rev0_Parte_3_4	NA
CertLab-IW6-121122-21-02A-Rev0_Parte_4_4	NA

Observações (Comments):

Os produtos que estão sujeitos à comprovação periódica serão avaliados quanto a manutenção das características originalmente certificadas.

(The Products that are subject to periodic verification will be evaluated for the maintenance of the characteristics originally certified).

Comentários Adicionais (Additional Comments):

- Este certificado substitui o de mesmo número emitido em 18/08/2021. Motivo: Manutenção periódica, atualização dos dados cadastrais do fabricante e adequação do endereço das unidades fabris AzureWave e Flextronics.
- O requerente apresentou declaração em conformidade com os Requisitos de Segurança Cibernética para Equipamentos para Telecomunicações.
- Caso o equipamento utilize antenas de transmissão com ganho direcional superior a 6 dBi, devem ter a potência de pico máxima na saída do transmissor reduzida para valores abaixo daqueles especificados nos incisos 10.2.5, 10.2.6, 10.2.7 e no item 10.3.2 (do Ato nº 14448), pela quantidade em dB que o ganho direcional da antena exceder a 6 dBi.
- Sistemas operando na faixa de 2400-2483,5 MHz e utilizados exclusivamente em aplicações ponto-a-ponto do serviço fixo podem fazer uso de antenas de transmissão com ganho direcional superior a 6 dBi, desde que potência de pico máxima na saída do transmissor seja reduzida de 1 dB para cada 3 dB que o ganho direcional da antena exceder a 6 dBi.
- Sistemas operando na faixa 5.725-5.850 MHz e utilizados exclusivamente em aplicações ponto-a-ponto do serviço fixo podem fazer uso de antenas de transmissão com ganho direcional superior a 6 dBi sem necessidade de uma correspondente redução na potência de pico máxima na saída do transmissor.
- Sistemas operando na faixa 5.150-5.350 MHz, as emissões devem estar confinadas aos ambientes internos das edificações.
- O equipamento opera como escravo e possui mecanismos DFS acompanhando os mecanismos do equipamento mestre.

Histórico da Certificação (Certification History):

- Emissão 00: Proposta número 116993 - Emissão inicial.
- Emissão 01: Proposta número 121122 - Inclusão da faixa de frequência 5925 a 7125 MHz (6GHz) na tabela de características técnicas.
- Emissão 02: Proposta número 129090 - Manutenção periódica, atualização dos dados cadastrais do fabricante e adequação do endereço das unidades fabris AzureWave e Flextronics.

Unidade(s) Fabril(is) (Factory Units(s)):

AzureWave Technologies (Shanghai) Inc.

No 1355, Jiabin Highway, Malu Town, Jiading District, Shanghai, Post Code: 201801 P.R., China

Flextronics International Tecnologia Ltda

Avenida Liberdade, 6315, Iporanga, - 18087-170, Sorocaba, São Paulo, Brasil

Gemtek Electronics (Kunshan) Co., Ltd.

No 88, Xin Zhu Rd., Comprehensive Bonded Zone, Jiangsu Province 215300, China

CERTIFICADO DE CONFORMIDADE TÉCNICA

CERTIFICATE OF TECHNICAL CONFORMITY

INTRANSFERÍVEL
(CANNOT BE TRANSFERRED)

Número do Certificado: 00126264
(Certificate Number)

Data da Certificação: 22/09/2020
(Certification Date D/M/Y)

Data de Validade: 22/09/2022
(Expiration Date D/M/Y)

Solicitante (Applicant):

Intel Semicondutores do Brasil Ltda
Av. Doutor Chucri Zaidan, 940 - Vila Cordeiro
04.583-906 - São Paulo - São Paulo
Brasil
CNPJ: 57.286.247/0001-33

Fabricante (Manufacturer):

Intel Mobile Communications
505 Route des Lucioles, Bldg B, Sophia-Antipolis, 06560
França
CNPJ: N/A

Modelo (Model): AX210NGW

Tipo de Produto (Type of Product): Transceptor de radiação restrita

Serviço / Aplicação (Service / Application): Radiocomunicação de radiação restrita

Norma(s) Técnica(s) Aplicável(eis) / (Technical Standard(s) Applicable): ATO (Act) Nº 14448/2017; ATO (Act) nº 4776/2020; Resolução (Resolution) nº 680;

O IBRACE, no uso das atribuições que lhe confere o Ato de Designação nº 19.436, de 28/09/2001, da ANATEL, concede esta certificação ao(s) produto(s) acima descrito(s), baseado em ensaios de tipo efetuados conforme normas técnicas aplicáveis e documentação fornecida pelo fabricante/distribuidor. Antes da comercialização deste(s) produto(s), deverá ser obtida a homologação deste Certificado junto à ANATEL e efetuar a correta identificação dos produtos com o selo ANATEL, conforme regulamentação vigente.

IBRACE, using the powers invested by the Designation Act nº 19.436, of September 28th 2001, from ANATEL, it grants to this Certification of Product (s) above described, based on tests of type performed according to applicable technical standards and documentation sent by Manufacturer/Distributor. Before the commercialization of this(ese) product(s), it shall be obtained the Homologation of this Certificate at ANATEL and apply the correct identification of products with ANATEL Label, according to current Regulations.

Campinas, 18/08/2021



(Campinas, D/M/Y)

Alexandre Sabatini

Presidente Ibrace / IBRACE President



Certificado de Conformidade Técnica válido somente acompanhado de todas as suas páginas.

Características Técnicas Básicas (Basic Technical Characteristics):

Faixa de Frequência \ Frequency range (MHz)	Potência máxima de transmissão \ Maximum power transmission (W)	Designação de emissões \ Designation of emission	Tecnologia \ Technology	Modulação \ Modulation	SAR cabeça \ SAR head (W/kg)	SAR corpo (pior caso) \ SAR body (worst case) (W/kg)	Taxa de transmissão \ Transmission rate (Mbit/s)	Padrão \ Standard
2400 a 2483,5	0,0107	882KF7D	FHSS - Salto em Frequência	GFSK	-	-	1	Bluetooth
2400 a 2483,5	0,0078	1M41G7D	FHSS - Salto em Frequência	π/4DQPSK e 8DPSK	-	-	2 e 3	Bluetooth+ED R
2400 a 2483,5	0,0036	678KF7D	DSSS - Sequência Direta	GFSK	-	-	1	Bluetooth LE
2400 a 2483,5	0,0036	1M15F7D	DSSS - Sequência Direta	GFSK	-	-	2	Bluetooth LE 5.0
2400 a 2483,5	0,291	10M3X9D	DSSS - Sequência Direta	DBPSK, DQPSK e CCK	-	-	1, 2, 5,5 e 11	802.11b
2400 a 2483,5	0,534	16M3X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11g
2400 a 2483,5	0,516	17M5X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
2400 a 2483,5	0,244	35M9X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 300	802.11n BW 40 MHz
2400 a 2483,5	0,174	18M4X9D	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz
2400 a 2483,5	0,168	36M4X9D	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5725 a 5850	0,199	15M1X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11a
5725 a 5850	0,234	16M3X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
5725 a 5850	0,196	35M1X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 300	802.11n BW 40 MHz
5725 a 5850	0,234	16M3X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 192,6	802.11ac BW 20 MHz
5725 a 5850	0,196	35M1X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 400	802.11ac BW 40 MHz
5725 a 5850	0,102	76M4X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 866,6	802.11ac BW 80 MHz
5725 a 5850	0,239	19M0X9D	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz

Faixa de Frequência \ Frequency range (MHz)	Potência máxima de transmissão \ Maximum power transmission (W)	Designação de emissões \ Designation of emission	Tecnologia \ Technology	Modulação \ Modulation	SAR cabeça \ SAR head (W/kg)	SAR corpo (pior caso) \ SAR body (worst case) (W/kg)	Taxa de transmissão \ Transmission rate (Mbit/s)	Padrão \ Standard
5725 a 5850	0,193	38M0X9D	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5725 a 5850	0,102	78M0X9D	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 1200	802.11ax BW 80 MHz
5150 a 5350	0,0799	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11a
5150 a 5350	0,0936	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
5150 a 5350	0,0951	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 300	802.11n BW 40 MHz
5150 a 5350	0,0936	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 173,4	802.11ac BW 20 MHz
5150 a 5350	0,0951	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 400	802.11ac BW 40 MHz
5150 a 5350	0,0921	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 866,6	802.11ac BW 80 MHz
5150 a 5350	0,0850	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 1733,4	802.11ac BW 160 MHz
5150 a 5350	0,0961	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz
5150 a 5350	0,0754	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5150 a 5350	0,0724	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 1200	802.11ax BW 80 MHz
5150 a 5350	0,0690	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 2400	802.11ax BW 160 MHz
5470 a 5725	0,2064	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11a
5470 a 5725	0,2025	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
5470 a 5725	0,1573	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 300	802.11n BW 40 MHz

Faixa de Frequência \ Frequency range (MHz)	Potência máxima de transmissão \ Maximum power transmission (W)	Designação de emissões \ Designation of emission	Tecnologia \ Technology	Modulação \ Modulation	SAR cabeça \ SAR head (W/kg)	SAR corpo (pior caso) \ SAR body (worst case) (W/kg)	Taxa de transmissão \ Transmission rate (Mbit/s)	Padrão \ Standard
5470 a 5725	0,2025	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 173,4	802.11ac BW 20 MHz
5470 a 5725	0,1573	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 400	802.11ac BW 40 MHz
5470 a 5725	0,1769	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 866,6	802.11ac BW 80 MHz
5470 a 5725	0,0975	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 1733,4	802.11ac BW 160 MHz
5470 a 5725	0,2010	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz
5470 a 5725	0,2338	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5470 a 5725	0,1742	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 1200	802.11ax BW 80 MHz
5470 a 5725	0,0577	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 2400	802.11ax BW 160 MHz
5925 a 7125	0,0233	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	6, 9, 12, 18, 24, 36, 48 e 54	802.11a
5925 a 7125	0,0230	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 144,4	802.11n BW 20 MHz
5925 a 7125	0,0515	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM	-	-	até 300	802.11n BW 40 MHz
5925 a 7125	0,0230	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 173,4	802.11ac BW 20 MHz
5925 a 7125	0,0515	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 400	802.11ac BW 40 MHz
5925 a 7125	0,1007	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 866,6	802.11ac BW 80 MHz
5925 a 7125	0,1797	-	OFDM	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	-	-	até 1733,4	802.11ac BW 160 MHz
5925 a 7125	0,0253	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 286	802.11ax BW 20 MHz

Faixa de Frequência \ Frequency range (MHz)	Potência máxima de transmissão \ Maximum power transmission (W)	Designação de emissões \ Designation of emission	Tecnologia \ Technology	Modulação \ Modulation	SAR cabeça \ SAR head (W/kg)	SAR corpo (piores caso) \ SAR body (worst case) (W/kg)	Taxa de transmissão \ Transmission rate (Mbit/s)	Padrão \ Standard
5925 a 7125	0,0525	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 574	802.11ax BW 40 MHz
5925 a 7125	0,0961	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 1200	802.11ax BW 80 MHz
5925 a 7125	0,1704	-	OFDMA	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	-	-	até 2400	802.11ax BW 160 MHz

- Possui antena integrada.
- Os valores de potências indicados nas faixas de 5150-5350 MHz, 5470-5725 MHz e 5925-7125 MHz referem-se a potência média em E.I.R.P.
- Ganho das antenas (5,1 GHz): 3,73 dBi (antenas 1 e 2).
- Ganho das antenas (5,4 GHz): 4,77 dBi (antenas 1 e 2).
- Ganho das antenas (6 GHz): 5,60 dBi (antenas 1 e 2).
- Possui mecanismo DFS.
- Produto não acabado, cuja integração em outro equipamento requer nova avaliação.

Dados Complementares da Certificação do Produto

(Complementary Information of Product Certification)

Laboratório de Ensaio: CERTLAB - LAB. DE ENSAIOS ELÉTRICOS E MAGNÉTICOS
(Testing Laboratory)

Endereço do Laboratório: Rua Maestro Francisco Manoel da Silva, 71
(Laboratory Address)

Telefone(s) \ Telephone(s) : +55(19) 31129800

Número do Relatório (Report Number)	Número(s) de Série(s) (Serial Number)
CertLab-IBT-116993-20-01A-Rev0	NA
CertLab-I11-116993-20-01A-Rev0_Parte_2_2	NA
CertLab-IWF-116993-20-01A-Rev0_Parte_2_2	NA
CertLab-I11-116993-20-01A-Rev0_Parte_1_2	NA
CertLab-IWF-116993-20-01A-Rev0_Parte_1_2	NA
CERTLAB-IDE-116993-20-01A-Rev1	NA
CertLab-IDE-121122-21-02A-Rev0	NA
CertLab-IW6-121122-21-02A-Rev0_Parte_1_4	NA
CertLab-IW6-121122-21-02A-Rev0_Parte_2_4	NA
CertLab-IW6-121122-21-02A-Rev0_Parte_3_4	NA
CertLab-IW6-121122-21-02A-Rev0_Parte_4_4	NA

Observações (Comments):

Os produtos que estão sujeitos à comprovação periódica serão avaliados quanto a manutenção das características originalmente certificadas.

(The Products that are subject to periodic verification will be evaluated for the maintenance of the characteristics originally certified).

Comentários Adicionais (Additional Comments):

- Este certificado substitui o de mesmo número emitido em 22/09/2020. Motivo: Inclusão da faixa de frequência 5925 a 7125 MHz (6GHz) na tabela de características técnicas.
- O requerente apresentou declaração em conformidade com os Requisitos de Segurança Cibernética para Equipamentos para Telecomunicações.
- Caso o equipamento utilize antenas de transmissão com ganho direcional superior a 6 dBi, devem ter a potência de pico máxima na saída do transmissor reduzida para valores abaixo daqueles especificados nos incisos 10.2.5, 10.2.6, 10.2.7 e no item 10.3.2 (do Ato nº 14448), pela quantidade em dB que o ganho direcional da antena exceder a 6 dBi.
- Sistemas operando na faixa de 2400-2483,5 MHz e utilizados exclusivamente em aplicações ponto-a-ponto do serviço fixo podem fazer uso de antenas de transmissão com ganho direcional superior a 6 dBi, desde que potência de pico máxima na saída do transmissor seja reduzida de 1 dB para cada 3 dB que o ganho direcional da antena exceder a 6 dBi.
- Sistemas operando na faixa 5.725-5.850 MHz e utilizados exclusivamente em aplicações ponto-a-ponto do serviço fixo podem fazer uso de antenas de transmissão com ganho direcional superior a 6 dBi sem necessidade de uma correspondente redução na potência de pico máxima na saída do transmissor.
- Sistemas operando na faixa 5.150-5.350 MHz, as emissões devem estar confinadas aos ambientes internos das edificações.
- O equipamento opera como escravo e possui mecanismos DFS acompanhando os mecanismos do equipamento mestre.

Histórico da Certificação (Certification History):

- Emissão 00: Proposta número 116993 - Emissão inicial.
- Emissão 01: Proposta número 121122 - Inclusão da faixa de frequência 5925 a 7125 MHz (6GHz) na tabela de características técnicas.

Unidade(s) Fabril(is) (Factory Units(s)):

AzureWave Technologies (Shanghai) Inc.

No 1355, Jiaxin Highway, Malu Town, Jiading District, Shanghai, P.R. China, China

Flextronics International Tecnologia Ltda

Avenida Liberdade, 6315, Iporanga, - 18017-013, Sorocaba, São Paulo, Brasil

Gemtek Electronics (Kunshan) Co., Ltd.

No 88, Xin Zhu Rd., Comprehensive Bonded Zone, Jiangsu Province 215300, China

Fotos Externas

Modelo: AX210NGW

Por se tratar de produto não acabado, o produto sob homologação é integralmente identificado pelas fotos internas, cujo arquivo está anexado no campo respectivo.

Fotos Externas

Modelo: AX210NGW

Por se tratar de produto não acabado, o produto sob homologação é integralmente identificado pelas fotos internas, cujo arquivo está anexado no campo respectivo.

Intel® WiFi Adapter Information Guide

This version of Intel® PROSet/Wireless WiFi Software is compatible with the adapters listed below. Note that newer features provided in this software are generally not supported on older generations of wireless adapters.

The following adapters are supported in Windows* 10:

- Intel® Wi-Fi 6E AX210
- Intel® Wi-Fi 6 AX201
- Intel® Wi-Fi 6 AX200
- Intel® Wireless-AC 9560
- Intel® Wireless-AC 9462
- Intel® Wireless-AC 9461
- Intel® Wireless-AC 9260
- Intel® Dual Band Wireless-AC 8265
- Intel® Dual Band Wireless-AC 8260
- Intel® Dual Band Wireless-AC 3168
- Intel® Dual Band Wireless-AC 7265
- Intel® Dual Band Wireless-N 7265
- Intel® Wireless-N 7265
- Intel® Dual Band Wireless-AC 3165

With your WiFi network card, you can access WiFi networks, share files or printers, or even share your Internet connection. All these features can be explored using a WiFi network in your home or office. This WiFi network solution is designed for both home and business use. Additional users and features can be added as your networking needs grow and change.

This guide contains basic information about Intel adapters. Intel® wireless adapters enable fast connectivity without wires for desktop and notebook PCs.

- [Adapter Settings](#)
- [Regulatory and Safety Information](#)
- [Specifications](#)
- [Support](#)
- [Warranty](#)

Depending on the model of your Intel WiFi adapter, your adapter is compatible with 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac and 802.11ax wireless standards. Operating at 5GHz or 2.4GHz frequency, you can now connect your computer to existing high-speed networks that use multiple access points within large or small environments. Your WiFi adapter maintains automatic data rate control according to the access point location and signal strength to achieve the fastest possible connection.

Information in this document is subject to change without notice.

Intel Corporation assumes no responsibility for errors or omissions in this document. Nor does Intel make any commitment to update the information contained herein.

IMPORTANT NOTICE FOR ALL USERS OR DISTRIBUTORS:

Intel wireless LAN adapters are engineered, manufactured, tested, and quality checked to ensure that they meet all necessary local and governmental regulatory agency requirements for the regions that they are designated and/or marked to ship into. Because wireless LANs are generally unlicensed devices that share spectrum with radars, satellites, and other licensed and unlicensed devices, it is sometimes necessary to dynamically detect, avoid, and limit usage to avoid interference with these devices. In many instances Intel is required to provide test data to prove regional and local compliance to regional and governmental regulations before certification or approval to use the product is granted. Intel's wireless LAN's EEPROM, firmware, and software driver are designed to carefully control parameters that affect radio operation and to ensure electromagnetic compliance (EMC). These parameters include, without limitation, RF power, spectrum usage, channel scanning, and human exposure.

For these reasons Intel cannot permit any manipulation by third parties of the software provided in binary format

with the wireless LAN adapters (e.g., the EEPROM and firmware). Furthermore, if you use any patches, utilities, or code with the Intel wireless LAN adapters that have been manipulated by an unauthorized party (i.e., patches, utilities, or code (including open source code modifications) which have not been validated by Intel), (i) you will be solely responsible for ensuring the regulatory compliance of the products, (ii) Intel will bear no liability, under any theory of liability for any issues associated with the modified products, including without limitation, claims under the warranty and/or issues arising from regulatory non-compliance, and (iii) Intel will not provide or be required to assist in providing support to any third parties for such modified products.

Note: Many regulatory agencies consider Wireless LAN adapters to be "modules", and accordingly, condition system-level regulatory approval upon receipt and review of test data documenting that the antennas and system configuration do not cause the EMC and radio operation to be non-compliant.

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*Other names and brands may be claimed as the property of others.

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October 2019

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Adapter Settings

The **Advanced** tab displays the device properties for the WiFi adapter installed on your computer.

How to Access

Double-click on the Intel WiFi adapter in the Network adapters section of the Device Manager and select the **Advanced** tab.

A description of the WiFi adapter settings on the Advanced tab can be found here:

<https://www.intel.com/content/www/us/en/support/articles/000005585/network-and-i-o/wireless-networking.html>

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[Trademarks and Disclaimers](#)

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Regulatory Information

This section provides regulatory information for the following wireless adapters:

- [Intel® Centrino® Wireless-N 100](#)
- [Intel® Centrino® Wireless-N 105](#)
- [Intel® Centrino® Wireless-N 130](#)
- [Intel® Centrino® Wireless-N 135](#)
- [Intel® Centrino® Wireless-N 1000](#)
- [Intel® Centrino® Wireless-N 1030](#)
- [Intel® Centrino® Wireless-N 2200](#)
- [Intel® Centrino® Wireless-N 2230](#)
- [Intel® Centrino® Wireless-N + WiMAX 6150](#)
- [Intel® Centrino® Advanced-N 6200](#)
- [Intel® Centrino® Advanced-N 6205](#)
- [Intel® Centrino® Advanced-N 6230](#)
- [Intel® Centrino® Advanced-N 6235](#)
- [Intel® Centrino® Advanced-N + WiMAX 6250](#)
- [Intel® Centrino® Ultimate-N 6300](#)
- [Intel® Dual Band Wireless-AC 7260](#)
- [Intel® Dual Band Wireless-N 7260](#)
- [Intel® Wireless-N 7260](#)
- [Intel® Dual Band Wireless-AC 3160](#)
- [Intel® Dual Band Wireless-AC 3165](#)
- [Intel® Dual Band Wireless-AC 3168](#)
- [Intel® Dual Band Wireless-AC 7265](#)
- [Intel® Dual Band Wireless-N 7265](#)
- [Intel® Wireless-N 7265](#)
- [Intel® Dual Band Wireless-AC 8260](#)
- [Intel® Dual Band Wireless-AC 8265](#)
- [Intel® Wireless-AC 9260](#)
- [Intel® Wireless-AC 9461](#)
- [Intel® Wireless-AC 9462](#)
- [Intel® Wireless-AC 9560](#)
- [Intel® Tri-Band Wireless-AC 17265](#)
- [Intel® Tri-Band Wireless-AC 18260](#)
- [Intel® Tri-Band Wireless-AC 18265](#)
- [Intel® Wireless Gigabit Sink W13100](#)
- [Intel® Wireless Gigabit 11000](#)
- [Intel® Wireless Gigabit Sink W13110VR](#)
- [Intel® Wireless Gigabit 11100VR](#)
- [Intel® Wi-Fi 6 AX200](#)
- [Intel® Wi-Fi 6 AX201](#)
- [Intel® Wi-Fi 6E AX210](#)

NOTE: Due to the evolving state of regulations and standards in the wireless LAN field (IEEE 802.11 and similar standards), the information provided herein is subject to change. Intel Corporation assumes no responsibility for errors or omissions in this document.

Intel WiFi / WiMAX Wireless Adapters

Information in this section supports the following wireless adapters:

- Intel® Centrino® Wireless-N + WiMAX 6150
- Intel® Centrino® Advanced-N + WiMAX 6250

See [Specifications](#) for complete wireless adapter specifications.

NOTE: In this section, all references to the "wireless adapter" refer to all adapters listed above.

The following information is provided:

- [Information for the User](#)
 - [Regulatory Information](#)
 - [Regulatory ID](#)
 - [Information for OEMs and Host Integrators](#)
-

INFORMATION FOR THE USER

Safety Notices

USA FCC Radio Frequency Exposure

The FCC with its action in ET Docket 96-8 has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC certified equipment. The wireless adapter meets the Human Exposure requirements found in FCC Part 2, 15C, 15E along with guidance from KDB 447498, KDB 248227 and KDB 616217. Proper operation of this radio according to the instructions found in this manual will result in exposure substantially below the FCC's recommended limits.

The following safety precautions should be observed:

- Do not touch or move antenna while the unit is transmitting or receiving.
- Do not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.
- Do not operate the radio or attempt to transmit data unless the antenna is connected; this behavior may cause damage to the radio.
- Use in specific environments:
 - The use of wireless adapters in hazardous locations is limited by the constraints posed by the safety directors of such environments.
 - The use of electronic devices equipped with wireless adapters on airplanes is governed by rules for each commercial airline operator.
 - The use of wireless adapters in hospitals is restricted to the limits set forth by each hospital.

Explosive Device Proximity Warning



Warning: Do not operate a portable transmitter (including this wireless adapter) near unshielded blasting caps or in an explosive environment unless the transmitter has been modified to be qualified for such use.

Antenna Warnings



Warning: The wireless adapter is not designed for use with high-gain directional antennas.

Use On Aircraft Caution



Caution: Regulations of commercial airline operators may prohibit airborne operation of certain electronic devices equipped with radio-frequency wireless devices (wireless adapters) because their signals could interfere with critical aircraft instruments.



Caution: 60 GHz/802.11ad equipment is not permitted on aircraft per FCC §15.255. OEM and host integrators should consider this FCC rule in host devices.

Other Wireless Devices

Safety Notices for Other Devices in the Wireless Network: See the documentation supplied with wireless adapters or other devices in the wireless network.

Local Restrictions on 802.11a, 802.11b, 802.11d, 802.11g, 802.11n, 802.11ac, and 802.16e Radio Usage



Caution: Due to the fact that the frequencies used by 802.11a, 802.11b, 802.11d, 802.11g, 802.11n, 802.11ac, and 802.16e wireless LAN devices may not yet be harmonized in all countries, 802.11a, 802.11b, 802.11d, 802.11g, 802.11n, 802.11ac, and 802.16e products are designed for use only in specific countries, and are not allowed to be operated in countries other than those of designated use. As a user of these products, you are responsible for ensuring that the products are used only in the countries for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country of use. The device transmit power control (TPC) interface is part of the Intel® PROSet/Wireless WiFi Connection Utility Software. Operational restrictions for Equivalent Isotropic Radiated Power (EIRP) are provided by the system manufacturer. Any deviation from the permissible power and frequency settings for the country of use is an infringement of national law and may be punished as such.

Wireless Interoperability

The wireless adapter is designed to be interoperable with other wireless LAN products that are based on direct sequence spread spectrum (DSSS) radio technology and to comply with the following standards:

- IEEE Std. 802.11b compliant Standard on Wireless LAN
- IEEE Std. 802.11g compliant Standard on Wireless LAN
- IEEE Std. 802.11a compliant Standard on Wireless LAN
- IEEE Std. 802.11n draft 2.0 compliant on Wireless LAN
- IEEE 802.16e-2005 Wave 2 compliant
- Wireless Fidelity certification, as defined by the Wi-Fi Alliance
- WiMAX certification as defined by the WiMAX Forum

The Wireless Adapter and Your Health

The wireless adapter, like other radio devices, emits radio frequency electromagnetic energy. The level of energy emitted by the wireless adapter, however, is less than the electromagnetic energy emitted by other wireless devices such as mobile phones. The wireless adapter operates within the guidelines found in radio frequency safety standards and recommendations. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature. In some situations or environments, the use of the wireless adapter may be restricted by the proprietor of the building or responsible representatives of the applicable organization. Examples of such situations may include:

- Using the wireless adapter on board airplanes, or
- Using the wireless adapter in any other environment where the risk of interference with other devices or services is perceived or identified as being harmful.

If you are uncertain of the policy that applies to the use of wireless adapters in a specific organization or environment (an airport, for example), you are encouraged to ask for authorization to use the adapter before you turn it on.

REGULATORY INFORMATION

USA - Federal Communications Commission (FCC)

This wireless adapter is restricted to indoor use due to its operation in the 5.15 to 5.25 and 5.470 to 5.75GHz frequency ranges. No configuration controls are provided for Intel® wireless adapters allowing any change in the frequency of operations outside the FCC grant of authorization for U.S. operation according to Part 15.407 of the FCC rules.

- Intel® wireless adapters are intended for OEM integrators only.
- Intel® wireless adapters cannot be co-located with any other transmitter unless approved by the FCC.

This wireless adapter complies with Part 15 of the FCC Rules. Operation of the device is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference that may cause undesired operation.

Class B Device Interference Statement

This wireless adapter has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This wireless adapter generates, uses, and can radiate radio frequency energy. If the wireless adapter is not installed and used in accordance with the instructions, the wireless adapter may cause harmful interference to radio communications. There is no guarantee, however, that such interference will not occur in a particular installation. If this wireless adapter does cause harmful interference to radio or television reception (which can be determined by turning the equipment off and on), the user is encouraged to try to correct the interference by taking one or more of the following measures:

- Reorient or relocate the receiving antenna of the equipment experiencing the interference.
- Increase the distance between the wireless adapter and the equipment experiencing the interference.
- Connect the computer with the wireless adapter to an outlet on a circuit different from that to which the equipment experiencing the interference is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE: The adapter must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. Any other installation or use will violate FCC Part 15 regulations.

Safety Approval Considerations

This device has been safety approved as a component and is for use only in complete equipment where the acceptability of the combination is determined by the appropriate safety agencies. When installed, consideration must be given to the following:

- It must be installed into a compliant host device meeting the requirement of UL/EN/IEC 60950-1 2nd edition including the general provisions of enclosure design 1.6.2 and specifically paragraph 1.2.6.2 (Fire Enclosure).
- The device shall be supplied by a SELV source when installed in the end-use equipment.
- A heating test shall be considered in the end-use product for meeting the requirement of UL/EN/IEC 60950-1 2nd edition.

Low Halogen

Applies only to brominated and chlorinated flame retardants (BFRs/CFRs) and PVC in the final product. Intel components as well as purchased components on the finished assembly meet JS-709 requirements, and the PCB / substrate meet IEC 61249-2-21 requirements. The replacement of halogenated flame retardants and/or PVC may not be better for the environment.

Japan

5GHz 帯は室内でのみ使用のこと

Korea

해당 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없음.
해당 무선 설비는 5150-5250MHz 대역에서 실내에서만 사용할 수 있음.

Mexico

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o

dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

Taiwan

第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信。經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

在 5.25-5.35 兆赫頻帶內操作之無線資訊傳輸設備，限於室內使用。

Radio Approvals

To determine whether you are allowed to use your wireless network device in a specific country, please check to see if the radio type number that is printed on the identification label of your device is listed in the manufacturer's OEM Regulatory Guidance document.

Modular Regulatory Certification Country Markings

A list of countries requiring regulatory markings is available. Note that the lists include only countries requiring marking but not all certified countries. To find the regulatory country marking information for your adapter, perform these steps:

1. Open this web site: <http://www.intel.com/content/www/us/en/support/network-and-i-o/wireless-networking/000007443.html>
 2. Click on the link for your adapter.
 3. Click on **Regulatory Marking Document** for your adapter.
-

INFORMATION FOR OEMs and HOST INTEGRATORS

The guidelines described within this document are provided to OEM integrators installing Intel® wireless adapters in notebook and tablet PC host platforms. Adherence to these requirements is necessary to meet the conditions of compliance with FCC rules, including RF exposure. When all antenna type and placement guidelines described herein are fulfilled the Intel® wireless adapters may be incorporated into notebook and tablet PC host platforms with no further restrictions. If any of the guidelines described herein are not satisfied it may be necessary for the OEM or integrator to perform additional testing and/or obtain additional approval. The OEM or integrator is responsible to determine the required host regulatory testing and/or obtaining the required host approvals for compliance.

- Intel® wireless adapters are intended for OEMs and host integrators only.
 - The Intel® wireless adapter FCC Grant of Authorization describes any limited conditions of modular approval.
 - The Intel® wireless adapters must be operated with an access point that has been approved for the country of operation.
 - Changes or modification to Intel® wireless adapters by OEMs, integrators or other third parties is not permitted. Any changes or modification to Intel® wireless adapters by OEMs, integrators or other third parties will void authorization to operate the adapter.
-

Antenna Type and Gains

Only antennas of the same type and with equal or less gains as 3dBi for the 2.4GHz band and 5dBi for the 5GHz

band shall be used with the Intel® wireless adapters. Other types of antennas and/or higher gain antennas may require additional authorization for operation. For testing purposes the following dual band antenna that approximates closely the above limits was used:

Antenna Type	Antenna Location (Main / Aux)	2.4GHz Peak Gain in dBi*	5.2GHz Peak Gain in dBi*	5.5GHz Peak Gain in dBi*	5.7GHz Peak Gain in dBi*
PIFA	Main				
	Aux	3.24	3.73	4.77	4.77
	MIMO				
*All antenna gains include cable loss.					

Antenna Placement Within the Host Platform

To ensure RF exposure compliance the antenna(s) used with the Intel® wireless adapters must be installed in notebook or tablet PC host platforms to provide a minimum separation distance from all persons, in all operating modes and orientations of the host platform, with strict adherence to the table below. The antenna separation distance applies to both horizontal and vertical orientation of the antenna when installed in the host system.

Intel® Wireless Adapter	Minimum required antenna-to-user separation distance
Intel® Centrino® Wireless-N + WiMAX 6150	18 mm
Intel® Centrino® Wireless-N + WiMAX 6350	17 mm

Simultaneous Transmission of Intel® Wireless Adapters with Other Integrated or Plug-In Transmitters

Based upon FCC Knowledge Database publication number 616217 when there are multiple transmitting devices installed in a host device, an RF exposure transmitting assessment shall be performed to determine the necessary application and test requirements. OEM integrators must identify all possible combinations of simultaneous transmission configurations for all transmitters and antennas installed in the host system. This includes transmitters installed in the host as mobile devices (>20 cm separation from user) and portable devices (<20 cm separation from user). OEM integrators should consult the actual FCC KDB 616217 document for all details in making this assessment to determine if any additional requirements for testing or FCC approval is necessary.

Information To Be Supplied to the End User by the OEM or Integrator

The following regulatory and safety notices must be published in documentation supplied to the end user of the product or system incorporating the Intel® wireless adapter, in compliance with local regulations. Host system must be labeled with "Contains FCC ID: XXXXXXXX", FCC ID displayed on label.

The Intel® wireless adapter must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. Intel Corporation is not responsible for any radio or television interference caused by unauthorized modification of the devices included with the wireless adapter kit or the substitution or attachment of connecting cables and equipment other than that specified by Intel Corporation. The correction of interference caused by such unauthorized modification, substitution or attachment is the responsibility of the user. Intel Corporation and authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from the user failing to comply with these guidelines.

China:

模块通过型号核准并不代表嵌入或使用该模块的最终设备符合相关无线电管理技术规定或标准 最终设备厂商须对产品的技术特性是否符合无线电管理技术规定或标准负责

Local Restriction of 802.11a, 802.11b, 802.11g, 802.11n, and 802.11e Radio Usage

The following statement on local restrictions must be published as part of the compliance documentation for all 802.11a, 802.11b, 802.11g and 802.11n products.

 **Caution:** Due to the fact that the frequencies used by 802.11a, 802.11b, 802.11g, 802.11n, and 802.16e wireless LAN devices may not yet be harmonized in all countries, 802.11a, 802.11b, 802.11g, 802.11n, and 802.16e products are designed for use only in specific countries, and are not allowed to be operated in countries other than those of designated use. As a user of these products, you are responsible for ensuring that the products are used only in the countries for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country of use. Any deviation from the permissible power and frequency settings for the country of use is an infringement of national law and may be punished as such.

Intel WiFi Adapters, 802.11n and 802.11ac Compliant

The information in this section applies to the following products:

- Intel® Centrino® Wireless-N 100
- Intel® Centrino® Wireless-N 105
- Intel® Centrino® Wireless-N 130
- Intel® Centrino® Wireless-N 135
- Intel® Centrino® Wireless-N 1000
- Intel® Centrino® Wireless-N 1030
- Intel® Centrino® Wireless-N 2200
- Intel® Centrino® Wireless-N 2230
- Intel® Centrino® Advanced-N 6200
- Intel® Centrino® Advanced-N 6205
- Intel® Centrino® Advanced-N 6230
- Intel® Centrino® Advanced-N 6235
- Intel® Centrino® Ultimate-N 6300
- Intel® Dual Band Wireless-AC 7260
- Intel® Dual Band Wireless-N 7260
- Intel® Wireless-N 7260
- Intel® Dual Band Wireless-AC 3160
- Intel® Dual Band Wireless-AC 3165
- Intel® Dual Band Wireless-AC 3168
- Intel® Dual Band Wireless-AC 7265
- Intel® Dual Band Wireless-N 7265
- Intel® Wireless-N 7265
- Intel® Dual Band Wireless-AC 8260
- Intel® Dual Band Wireless-AC 8265
- Intel® Wireless-AC 9260
- Intel® Wireless-AC 9461
- Intel® Wireless-AC 9462
- Intel® Wireless-AC 9560
- Intel® Tri-Band Wireless-AC 17265
- Intel® Tri-Band Wireless-AC 18260
- Intel® Tri-Band Wireless-AC 18265
- Intel® Wireless Gigabit Sink W13100
- Intel® Wireless Gigabit 11000
- Intel® Wireless Gigabit Sink W13110VR
- Intel® Wireless Gigabit 11100VR
- Intel® Wi-Fi 6 AX200
- Intel® Wi-Fi 6 AX201
- Intel® Wi-Fi 6E AX210

See [Specifications](#) for complete wireless adapter specifications.

NOTE: In this section, all references to the "wireless adapter" refer to all adapters listed above.

The following information is provided:

- [Information for the User](#)
 - [Regulatory Information](#)
 - [Regulatory ID](#)
 - [Information for OEMs and Host Integrators](#)
 - [Statements of European Compliance](#)
-

INFORMATION FOR THE USER

Safety Notices

USA FCC Radio Frequency Exposure

The FCC with its action in ET Docket 96-8 has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC certified equipment. The wireless adapter meets the Human Exposure requirements found in FCC Part 2, 15C, 15E along with guidance from KDB 447498, KDB 248227 and KDB 616217. Proper operation of this radio according to the instructions found in this manual will result in exposure substantially below the FCC's recommended limits.

The following safety precautions should be observed:

- Do not touch or move antenna while the unit is transmitting or receiving.
- Do not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.
- Do not operate the radio or attempt to transmit data unless the antenna is connected; this behavior may cause damage to the radio.
- Use in specific environments:
 - The use of wireless adapters in hazardous locations is limited by the constraints posed by the safety directors of such environments.
 - The use of wireless adapters on airplanes is governed by the Federal Aviation Administration (FAA).
 - The use of wireless adapters in hospitals is restricted to the limits set forth by each hospital.

Explosive Device Proximity Warning



Warning: Do not operate a portable transmitter (including this wireless adapter) near unshielded blasting caps or in an explosive environment unless the transmitter has been modified to be qualified for such use.

Antenna Warnings



Warning: The wireless adapter is not designed for use with high-gain directional antennas.

Use On Aircraft Caution



Caution: Regulations of commercial airline operators may prohibit airborne operation of certain electronic devices equipped with radio-frequency wireless devices (wireless adapters) because their signals could interfere with critical aircraft instruments.



Caution: 60 GHz/802.11ad equipment is not permitted on aircraft per FCC §15.255. OEM and host integrators should consider this FCC rule in host devices.

Other Wireless Devices

Safety Notices for Other Devices in the Wireless Network: See the documentation supplied with wireless adapters or other devices in the wireless network.

Local Restrictions on 802.11a, 802.11b, 802.11d, 802.11g, 802.11n, and 802.11ac Radio Usage

 **Caution:** Due to the fact that the frequencies used by 802.11a, 802.11b, 802.11d, 802.11g, 802.11n, and 802.11ac wireless LAN devices may not yet be harmonized in all countries, 802.11a, 802.11b, 802.11d, 802.11g, 802.11n, and 802.11ac products are designed for use only in specific countries, and are not allowed to be operated in countries other than those of designated use. As a user of these products, you are responsible for ensuring that the products are used only in the countries for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country of use. The device transmit power control (TPC) interface is part of the Intel® PROSet/Wireless WiFi Connection Utility Software. Operational restrictions for Equivalent Isotropic Radiated Power (EIRP) are provided by the system manufacturer. Any deviation from the permissible power and frequency settings for the country of use is an infringement of national law and may be punished as such.

Wireless Interoperability

The wireless adapter is designed to be interoperable with other wireless LAN products that are based on direct sequence spread spectrum (DSSS) radio technology and to comply with the following standards:

- IEEE Std. 802.11b compliant Standard on Wireless LAN
- IEEE Std. 802.11g compliant Standard on Wireless LAN
- IEEE Std. 802.11a compliant Standard on Wireless LAN
- IEEE Std. 802.11n compliant Standard on Wireless LAN
- IEEE Std. 802.11ac draft compliant on Wireless LAN
- Wireless Fidelity certification, as defined by the Wi-Fi Alliance

The Wireless Adapter and Your Health

The wireless adapter, like other radio devices, emits radio frequency electromagnetic energy. The level of energy emitted by the wireless adapter, however, is less than the electromagnetic energy emitted by other wireless devices such as mobile phones. The wireless adapter operates within the guidelines found in radio frequency safety standards and recommendations. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature. In some situations or environments, the use of the wireless adapter may be restricted by the proprietor of the building or responsible representatives of the applicable organization. Examples of such situations may include:

- Using the wireless adapter on board airplanes, or
- Using the wireless adapter in any other environment where the risk of interference with other devices or services is perceived or identified as being harmful.

If you are uncertain of the policy that applies to the use of wireless adapters in a specific organization or environment (an airport, for example), you are encouraged to ask for authorization to use the adapter before you turn it on.

REGULATORY INFORMATION

USA - Federal Communications Commission (FCC)

This wireless adapter is restricted to indoor use due to its operation in the 5.15 to 5.25 and 5.470 to 5.75GHz frequency ranges. No configuration controls are provided for Intel® wireless adapters allowing any change in the frequency of operations outside the FCC grant of authorization for U.S. operation according to Part 15.407 of the FCC rules.

- Intel® wireless adapters are intended for OEM integrators only.
- Intel® wireless adapters cannot be co-located with any other transmitter unless approved by the FCC.

This wireless adapter complies with Part 15 of the FCC Rules. Operation of the device is subject to the following two conditions:

- This device may not cause harmful interference.

- This device must accept any interference that may cause undesired operation.

NOTE: The radiated output power of the adapter is far below the FCC radio frequency exposure limits. Nevertheless, the adapter should be used in such a manner that the potential for human contact during normal operation is minimized. To avoid the possibility of exceeding the FCC radio frequency exposure limits, you should keep a distance of at least 20cm between you (or any other person in the vicinity), or the minimum separation distance as specified by the FCC grant conditions, and the antenna that is built into the computer. Details of the authorized configurations can be found at <http://www.fcc.gov/oet/ea/> by entering the FCC ID number on the device.

Class B Device Interference Statement

This wireless adapter has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This wireless adapter generates, uses, and can radiate radio frequency energy. If the wireless adapter is not installed and used in accordance with the instructions, the wireless adapter may cause harmful interference to radio communications. There is no guarantee, however, that such interference will not occur in a particular installation. If this wireless adapter does cause harmful interference to radio or television reception (which can be determined by turning the equipment off and on), the user is encouraged to try to correct the interference by taking one or more of the following measures:

- Reorient or relocate the receiving antenna of the equipment experiencing the interference.
- Increase the distance between the wireless adapter and the equipment experiencing the interference.
- Connect the computer with the wireless adapter to an outlet on a circuit different from that to which the equipment experiencing the interference is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE: The adapter must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. Any other installation or use will violate FCC Part 15 regulations.

Safety Approval Considerations

This device has been safety approved as a component and is for use only in complete equipment where the acceptability of the combination is determined by the appropriate safety agencies. When installed, consideration must be given to the following:

- It must be installed into a compliant host device meeting the requirement of UL/EN/IEC 60950-1 2nd edition including the general provisions of enclosure design 1.6.2 and specifically paragraph 1.2.6.2 (Fire Enclosure).
- The device shall be supplied by a SELV source when installed in the end-use equipment.
- A heating test shall be considered in the end-use product for meeting the requirement of UL/EN/IEC 60950-1 2nd edition.

Low Halogen

Applies only to brominated and chlorinated flame retardants (BFRs/CFRs) and PVC in the final product. Intel components as well as purchased components on the finished assembly meet JS-709 requirements, and the PCB / substrate meet IEC 61249-2-21 requirements. The replacement of halogenated flame retardants and/or PVC may not be better for the environment.

Canada – Industry Canada (IC)

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil se conforme aux normes Canada d'Industrie de RSS permis-exempt. L'utilisation est assujettie aux deux conditions suivantes: (1) cet appareil ne peut pas causer d'interférences, et (2) cet appareil doit accepter des

interférences , y compris des interférences qui peuvent causer desopérations non désirées de l'appareil.

Caution: When using IEEE 802.11a wireless LAN, this product is restricted to indoor use due to its operation in the 5.15- to 5.25-GHz frequency range. Industry Canada requires this product to be used indoors for the frequency range of 5.15GHz to 5.25GHz to reduce the potential for harmful interference to co-channel mobile satellite systems. High power radar is allocated as the primary user of the 5.25- to 5.35-GHz and 5.65 to 5.85-GHz bands. These radar stations can cause interference with and/or damage to this device. The maximum allowed antenna gain for use with this device is 6dBi in order to comply with the E.I.R.P limit for the 5.25- to 5.35 and 5.725 to 5.85GHz frequency range in point-to-point operation. To comply with RF exposure requirements all antennas should be located at a minimum distance of 20cm, or the minimum separation distance allowed by the module approval, from the body of all persons.

Attention: l'utilisation d'un réseau sans fil IEEE802.11a est restreinte à une utilisation en intérieur à cause du fonctionnement dans la bande de fréquence 5.15-5.25 GHz. Industry Canada requiert que ce produit soit utilisé à l'intérieur des bâtiments pour la bande de fréquence 5.15-5.25 GHz afin de réduire les possibilités d'interférences nuisibles aux canaux co-existants des systèmes de transmission satellites. Les radars de puissances ont fait l'objet d'une allocation primaire de fréquences dans les bandes 5.25-5.35 GHz et 5.65-5.85 GHz. Ces stations radar peuvent créer des interférences avec ce produit et/ou lui être nuisible. Le gain d'antenne maximum permissible pour une utilisation avec ce produit est de 6 dBi afin d'être conforme aux limites de puissance isotropique rayonnée équivalente (P.I.R.E.) applicable dans les bandes 5.25-5.35 GHz et 5.725-5.85 GHz en fonctionnement point-à-point. Pour se conformer aux conditions d'exposition de RF toutes les antennes devraient être localisées à une distance minimum de 20 cm, ou la distance de séparation minimum permise par l'approbation du module, du corps de toutes les personnes.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Selon les règlements de Canada d'Industrie, cet émetteur de radio peut seulement fonctionner en utilisant une antenne du type et de gain maximum (ou moindre) que le gain approuvé pour l'émetteur par Canada d'Industrie. Pour réduire lesinterférences radio potentielles avec les autres utilisateurs, le type d'antenne et son gain devraient être choisis de façon à ce que la puissance isotrope rayonnée équivalente(P.I.R.E.) ne soit pas supérieure à celle qui est nécessaire pour une communication réussie.

European Union

The low band 5.15 - 5.35GHz is for indoor use only.

	AT	BE	BG	CH	CY	CZ	DE
	DK	EE	EL	ES	FI	FR	HR
	HU	IE	IS	IT	LI	LT	LU
	LV	MT	NL	PL	PT	RO	SE
	SI	SK	TR	UK			

This equipment complies with the essential requirements of the European Union directive 2014/53/EU. See [Statements of European Union Compliance](#).

European Union Declarations of Conformity

To view the European Union Declaration of Conformity for your adapter, perform these steps.

- 1. Open this web site: <http://www.intel.com/content/www/us/en/support/network-and-i-o/wireless-networking/000007443.html>
- 2. Click on "User Guide."

- 3. Scroll to your adapter.

To view additional regulatory information for your adapter, perform these steps:

- 1. Open this web site: <http://www.intel.com/content/www/us/en/support/network-and-i-o/wireless-networking/000007443.html>
- 2. Click on the link for your adapter.
- 3. Click on **Regulatory Marking Document** for your adapter.

Waste Electrical and Electronic Equipment Directive (WEEE)



Restriction of Hazardous Substances Directive (RoHS) Compliant

All products described herein are compliant with the European Union's RoHS Directive.

For CE Mark-Related Questions related to the wireless adapter, contact:

Intel Corporation Attn: Corporate Quality 2200 Mission College Blvd. Santa Clara, CA 95054-1549 USA

Japan

5GHz 帯は室内でのみ使用のこと

Korea

해당 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없음.
해당 무선 설비는 5150-5250MHz 대역에서 실내에서만 사용할 수 있음.

Mexico

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

Morocco

The operation of this product in the radio channel 2 (2417 MHz) is not authorized in the following cities: Agadir, Assa-Zag, Cabo Negro, Chaouen, Goulmima, Oujda, Tan Tan, Taourirt, Taroudant and Taza.

The operation of this product in the radio channels 4, 5, 6 et 7 (2425 - 2442 MHz) is not authorized in the following cities: Aéroport Mohamed V, Agadir, Aguelmous, Anza, Benslimane, Béni Hafida, Cabo Negro, Casablanca, Fès, Lakbab, Marrakech, Merchich, Mohammédia, Rabat, Salé, Tanger, Tan Tan, Taounate, Tit Mellil, Zag.

Pakistan

"PTA APPROVED MODEL"

Taiwan

第十二條

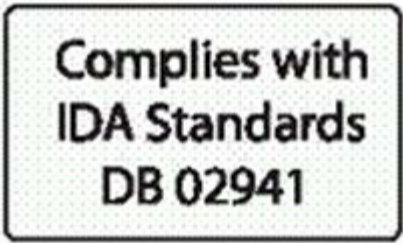
經型式認證合格之低功率射頻電機，非經許可 公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

在 5.25-5.35 兆赫頻帶內操作之無線資訊傳輸設備 限於室內使用。

Singapore



Radio Approvals

To determine whether you are allowed to use your wireless network device in a specific country, please check to see if the radio type number that is printed on the identification label of your device is listed in the manufacturer's OEM Regulatory Guidance document.

Modular Regulatory Certification Country Markings

A list of countries requiring regulatory markings is available. Note that the lists include only countries requiring marking but not all certified countries. To find the regulatory country marking information for your adapter, perform these steps:

1. Open this web site: <http://www.intel.com/content/www/us/en/support/network-and-i-o/wireless-networking/000007443.html>
2. Click on the link for your adapter.
3. Click on **Regulatory Marking Document** for your adapter.

Regulatory ID

Europe: Models 3160Hmw, 3160NGW, 3160SDW, 3165NGW, 7260SDW, 7260NGW, 7260Hmw, 7265D2W, 7265NGW, 8260D2W, 8260NGW, 8260NGWH, 18260NGW

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions (WiFi / BT) Intel® Wireless Dock Manager 3.x and previous versions (WiGig)
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode	20dBm EIRP max (100mW)

(2400 - 2483.5 MHz) BLE / Bluetooth	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver. Not supported by the models: 3160Hmw, 3160NGW, 3160SDW, 3165NGW, 7265D2W, 7265NGW
(57 - 64 GHz) IEEE802.11 ad mode	25 dBm EIRP max

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Intel® Dual Band Wireless-AC 3165

Due to the very small size of the 3165D2W/3165NGW (12x16), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 3165D2W, FCC ID: PD93165D2

Canada: Model 3165D2W, IC: 1000M-3165D2

Japan:

Model 3165D2W:

- RF: 003-150155
- TEL: D150112003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



[R] 003-150155

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

[T] D150112003

Model 3165NGW:

- RF: 003-150009

- TEL: D150008003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



Korea: Model 3165D2W, MSIP-CRM-INT-7265D2W

Taiwan: Model 3165D2W,



China: Model 3165D2W, CMIIT ID: 2015AJ3466 (M)

Europe: Model 3165D2W

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) Bluetooth/BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

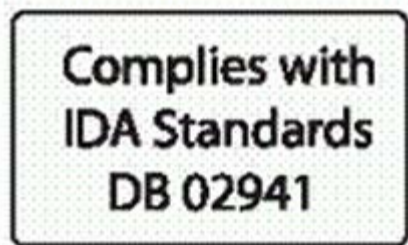
This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Australia: Model 3165D2W



Singapore: Model 3165D2W



Argentina:

Model 3165D2W,



Model 3165NGW,



Intel® Dual Band Wireless-AC 3168

Due to the very small size of the 3168NGW, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

Japan: Model 3168NGW:

- RF: 003-160024
- TEL: D160013003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



[R] 003-160024

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

[T] D160013003

Europe: Model 3168NGW

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) Bluetooth/BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Argentina: Model 3168NGW,



COMISIÓN NACIONAL
DE COMUNICACIONES

CNC ID: C-16378

Due to the very small size of the 7265D2W/7265NGW (12x16), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 7265D2W, FCC ID: PD97265D2

Canada: Model 7265D2W, IC: 1000M-7265D2

Japan:

Model 7265D2W:

- RF: 003-140134
- TEL: D140087003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



Model 7265NGW:

- RF: 003-140018
- TEL: D140017003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



Korea: Model 7265D2W, MSIP-CRM-INT-7265D2W

Taiwan: Model 7265D2W,



China: Model 7265D2W, CMIIT ID: 2014AJ3467 (M)

Australia: Model 7265D2W,



Argentina: Model 7265D2W,



Intel® Wireless Gigabit Sink W13100

Due to the very small size of the 13100NGW, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

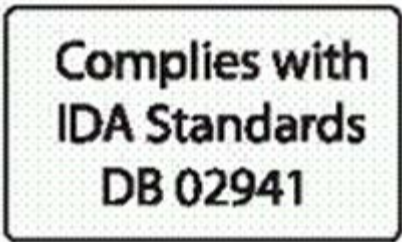
Europe: Model 13100NGW

Software Version	Intel® Wireless Dock Manager 3.x and previous versions
Maximum Power Output	
(57 - 64 GHz) IEEE802.11 ad mode	25 dBm EIRP max

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Singapore: Model 13100NGW



Intel® Tri-Band Wireless-AC 17265

Due to the very small size of the 17265NGW, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

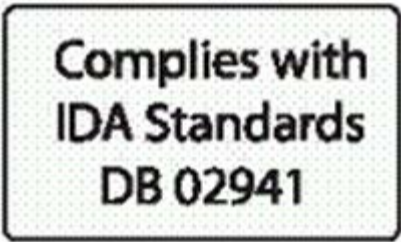
Europe: Model 17265NGW

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions (WiFi / BT) Intel® Wireless Dock Manager 3.x and previous versions (WiGig)
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver
(57 - 64 GHz) IEEE802.11 ad mode	25 dBm EIRP max

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Singapore: Model 17265NGW



Intel® Dual Band Wireless-AC 8260

Due to the very small size of the 8260D2W (12x16), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

- USA:** Model 8260D2W, FCC ID: PD98260D2 (FCC ID without suffix "U" denotes factory installation only);
FCC ID: PD98260D2U (FCC ID with suffix "U" denotes user installation or replacement permitted and supported by bios locking feature)

Canada: Model 8260D2W, IC: 1000M-8260D2

Japan: Model 8260D2W:

- RF: 003-150094
- TEL: D150070003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



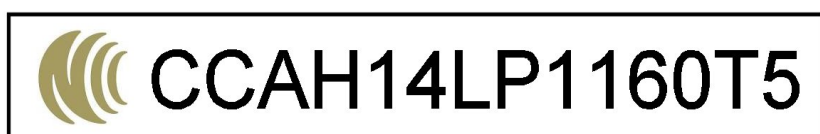
® 003-150094

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

™ D150070003

Korea: Model 8260D2W, MSIP-CRM-INT-8260D2W

Taiwan: Model 8260D2W,



China: Model 8260D2W, CMIIT ID: 2014AJ3467 (M)

Australia: Model 8260D2W,



Argentina: Model 8260D2W,



Due to the very small size of the 8260NGWH/8260NGW, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

Japan:

Model 8260NGW:

- RF: 003-150093
- TEL: D150069003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



[R] 003-150093

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

[T] D150069003

Model 8260NGWH:

- RF: 003-150154
- TEL: D150111003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



[R] 003-150154

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

[T] D150111003

Argentina: Model 8260NGWH,



Argentina: Model 8260NGW,



Intel® Dual Band Wireless-AC 8265

Due to the very small size of the 8265NGW (22mm x 30mm x 2.4mm), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 8265NGW

- FCC ID: PD98265NG (FCC ID without suffix "U" denotes factory installation only)
- FCC ID: PD98265NGU (FCC ID with suffix "U" denotes user installation or replacement permitted and supported by BIOS locking feature)

Canada: Model 8265NGW, IC: 1000M-8265NG

Japan: Model 8265NGW:

- RF 003-160104
- TEL D160055003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



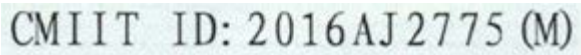
Korea: Model 8265NGW, MSIP-CRM-INT-8265NGW,



Taiwan: Model 8265NGW



China: Model 8265NGW



Europe: Models 8265NGW, 8265D2W

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz)	10dBm EIRP max (10mW)

BLE	
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver
(57 - 64 GHz) IEEE802.11 ad mode	25 dBm EIRP max

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Australia: Model 8265NGW,

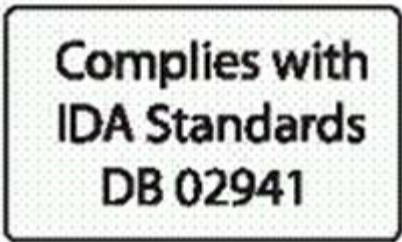


Brazil: Model 8265NGW: ANATEL: XXXXXXXXXX,

Argentina: Model 8265NGW,



Singapore: Model 8265NGW:



Pakistan: Model 8265NGW

"PTA APPROVED MODEL"

Due to the very small size of the 8265D2W (12mm x 16mm x 1.8mm), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 8265D2W, FCC ID: PD98265D2

Canada: Model 8265D2W, IC: 1000M-8265D2

Japan: Model 8265D2W:

- RF 003-160129
- TEL D160076003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



R 003-160129

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

T D160076003

Korea: Model 8265D2W, MSIP-CRM-INT-8265D2W,



Taiwan: Model 8265D2W



China: Model 8265D2W

CMIIT ID: 2016AJ3025 (M)

Australia: Model 8265D2W,

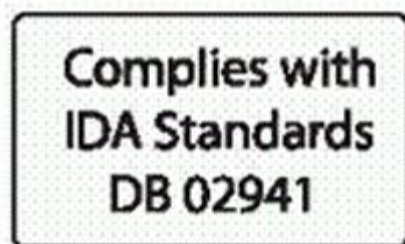


Brazil: Model 8265D2W: ANATEL: XXXXXXXXXX,

Argentina: Model 8265D2W,



Singapore: Model 8265D2W:



Pakistan: Model 8265D2W

"PTA APPROVED MODEL"

Intel® Wireless-AC 9260 (Model 9260NGW)

Due to the very small size of the 9260NGW (22mm x 30mm x 2.4mm), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 9260NGW, FCC ID: PD99260NG

Canada: Model 9260NGW, IC: 1000M-9260NG

Japan: Model 9260NGW:

- RF 003-170125
- TEL D170079003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



[R] 003-170125

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

[T] D170079003

Korea: Model 9260NGW, MSIP-CRM-INT-9260NGW



Taiwan: Model 9260NGW



China: Model 9260NGW

CMIIT ID: 2016AJ2775 (M)

Europe: Model 9260NGW

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Australia: Model 9260NGW



Singapore: Model 9260NGW



Intel® Wireless-AC 9260 (Model 9260D2WL)

Due to the very small size of the 9260D2WL (12mm x 16mm x 1.8mm), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 9260D2WL, FCC ID: PD99260D2L

Canada: Model 9260D2WL, IC: 1000M-9260D2L

Japan: Model 9260D2WL:

- RF: 003-190024
- TEL: D190023003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



Europe: Model 9260D2WL

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.

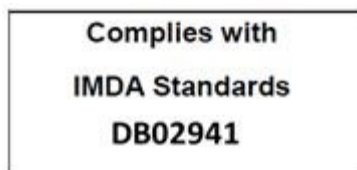


Australia: Model 9260D2WL



Brazil: Model 9260D2WL, ANATEL: 05831-17-04423

Singapore: Model 9260D2WL



Argentina: Model 9260D2WL



Pakistan: Model 9260D2WL

APPROVED BY PTA: 9.9203/2019

Intel® Wireless-AC 9461 (Model 9461NGW)

Due to the very small size of the 9461NGW (22mm x 30mm x 2.4mm), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 9461NGW, FCC ID: PD99461NG

Canada: Model 9461NGW, IC: 1000M-9461NG

Japan: Model 9461NGW:

- RF 003-170204
- TEL D170127003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



[R] 003-170204

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

[T] D170127003

Korea: Model 9461NGW

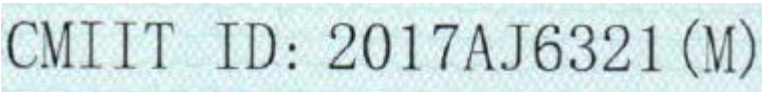


MSIP-CRM-INT-9461NGW

Taiwan: Model 9461NGW



China: Model 9461NGW



Europe: Model 9461NGW

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Australia: Model 9461NGW



Singapore: Model 9461NGW

Complies with
IMDA Standards
DB02941

Intel® Wireless-AC 9461 (Model 9461D2W)

Due to the very small size of the 9461D2W (12mm x 16mm x 1.8mm), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 9461D2W, FCC ID: PD99461D2

Canada: Model 9461D2W, IC: 1000M-9461D2

Japan: Model 9461D2W:

- RF 003-170203
- TEL D170126003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



[R] 003-170203

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

[T] D170126003

Korea: Model 9461D2W

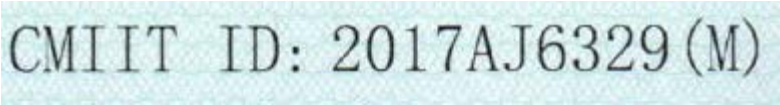


MSIP-CRM-INT-9461D2W

Taiwan: Model 9461D2W



China: Model 9461D2W



Europe: Model 9461D2W

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

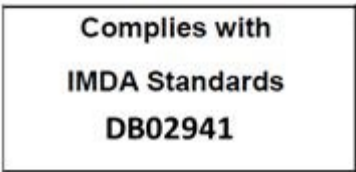
This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Australia: Model 9461D2W



Singapore: Model 9461D2W



Intel® Wireless-AC 9462 (Model 9462NGW)

Due to the very small size of the 9462NGW (22mm x 30mm x 2.4mm), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 9462NGW, FCC ID: PD99462NG

Canada: Model 9462NGW, IC: 1000M-9462NG

Japan: Model 9462NGW:

- RF 003-170245
- TEL D170151003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



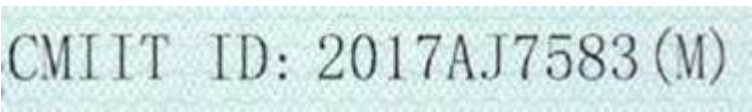
Korea: Model 9462NGW



Taiwan: Model 9462NGW



China: Model 9462NGW



Europe: Model 9462NGW

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	

(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Australia: Model 9462NGW



Singapore: Model 9462NGW



Intel® Wireless-AC 9462 (Model 9462D2W)

Due to the very small size of the 9462D2W (12mm x 16mm x 1.8mm), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 9462D2W, FCC ID: PD99462D2

Canada: Model 9462D2W, IC: 1000M-9462D2

Japan: Model 9462D2W:

- RF 003-170243
- TEL D170149003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



R 003-170243

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

T D170149003

Korea: Model 9462D2W



R-CRM-INT-9462D2W

Taiwan: Model 9462D2W



CCAH17LP4550T5

China: Model 9462D2W

CMIIT ID: 2017AJ7649 (M)

Europe: Model 9462D2W

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

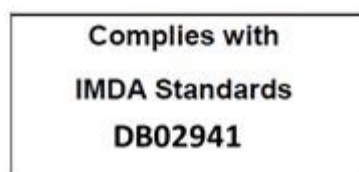
This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Australia: Model 9462D2W



Singapore: Model 9462D2W



Intel® Wireless-AC 9560 (Model 9560NGW)

Due to the very small size of the 9560NGW (22mm x 30mm x 2.4mm), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 9560NGW, FCC ID: PD99560NG

Canada: Model 9560NGW, IC: 1000M-9560NG

Japan: Model 9560NGW:

- RF 003-170126
- TEL D170080003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



[R] 003-170126

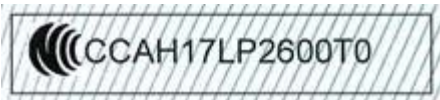
5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

[T] D170080003

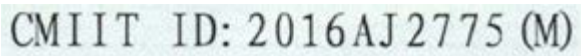
Korea: Model 9560NGW, MSIP-CRM-INT-9560NGW



Taiwan: Model 9560NGW and 9560NGW R:



China: Model 9560NGW



Europe: Model 9560NGW

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Australia: Model 9560NGW



Singapore: Model 9560NGW



Intel® Wireless-AC 9560 (Model 9560D2W)

Due to the very small size of the 9560D2W (12mm x 16mm x 1.8mm), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 9560D2W, FCC ID: PD99560D2

Canada: Model 9560D2W, IC: 1000M-9560D2

Japan: Model 9560D2W:

- RF 003-170244
- TEL D170150003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



R 003-170244

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

T D170150003

Korea: Model 9560D2W

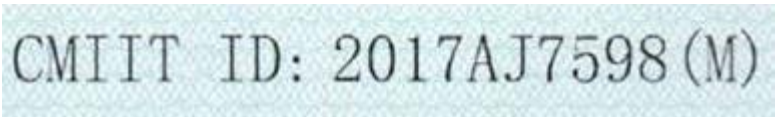


R-CRM-INT-9560D2W

Taiwan: Model 9560D2W



China: Model 9560D2W



Europe: Model 9560D2W

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Australia: Model 9560D2W



Singapore: Model 9560D2W

Complies with
IMDA Standards
DB02941

Intel® Wireless-AC 9560 (Model 9560D2WL)

Due to the very small size of the 9560D2WL (12mm x 16mm x 1.8mm), the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 9560D2WL, FCC ID: PD99560D2L

Canada: Model 9560D2WL, IC: 1000M-9560D2L

Japan: Model 9560D2WL:

- RF 003-180060
- TEL D180033003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



® 003-180060

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

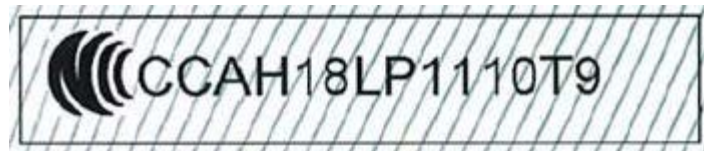
Ⓣ D180033003

Korea: Model 9560D2WL



R-CRM-INT-9560D2WL

Taiwan: Model 9560D2WL



China: Model 9560D2WL

CMIIT ID: 2018AJ2011 (M)

Europe: Model 9560D2WL

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Australia: Model 9560D2WL



Singapore: Model 9560D2WL



Intel® Tri-band Wireless AC 18265

Due to the very small size of the 18265NGW module, the regulatory marking has been placed in this user manual because the product label on the device is considered too small to be readable

USA: Model 18265NGW, FCC ID: PD918265NG (This module is for factory installation only)

Canada: Model 18265NGW, IC : 1000M-18265NG

Japan: Model 18265NGW



Korea: Model 18265NGW, MSIP-CRM-INT-18265NGW



Taiwan: Model 18265NGW



China: Model 18265NGW, CMIIT ID: 2016AJ7066 (M)

Europe: Model 18265NGW,

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions (WiFi / BT) Intel® Wireless Dock Manager 3.x and previous versions (WiGig)
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver
(57 - 64 GHz) IEEE802.11 ad mode	25 dBm EIRP max

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.

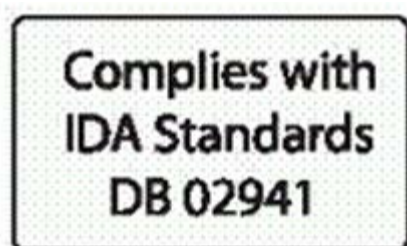


Australia: Model 18265NGW,



Brazil: Model 18265NGW, ANATEL: XXXXXXXXXXXXXXX

Singapore: Model 18265NGW,



Intel® Wireless Gigabit 11000

Due to the very small size of the 11000D2W/11000D2W LC, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 11000D2W and 11000D2W LC, FCC ID: PD911000D2

Canada: Model 11000D2W, IC: 1000M-11000D2

Japan: Model 11000D2W:



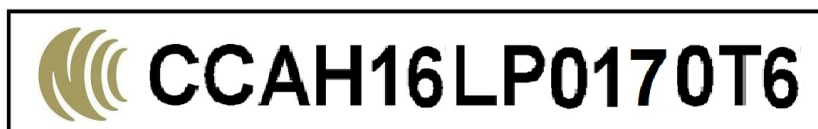
R 003-160015

5.15-5.35 GHz:
Indoor use only

T D160007003

Korea: Model 11000D2W, MSIP-CRM-INT-11000D2W

Taiwan: Model 11000D2W and 11000D2W LC,





China: Model 11000D2W, CMIIT ID: 2016DJ0267 (M); Model 11000D2W LC, CMIIT ID: 2016DJ0268 (M)

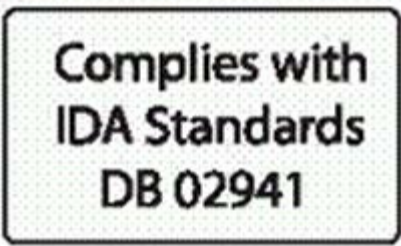
Europe: Model 11000D2W

Software Version	Intel® Wireless Dock Manager 3.x and previous versions
Maximum Power Output	
(57 - 64 GHz) IEEE802.11 ad mode	25 dBm EIRP max

Australia: Model 11000D2W,



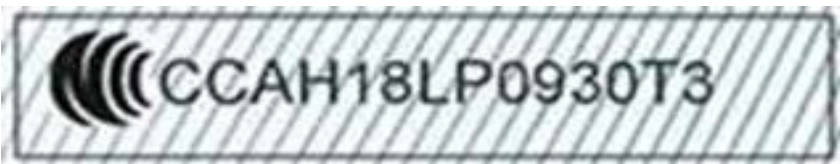
Singapore: Model 11000D2W/11000D2W LC:



Intel® Wireless Gigabit Sink W13110VR

Due to the very small size of the 13110NGW, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

- USA:** Model 13110NGW, FCC ID: PD913110NG
- Canada:** Model 13110NGW, IC: 1000M-13110NG
- Korea:** Model 13110NGW, R-CRM-INT-13110NGW
- Taiwan:** Model 13110NGW



Europe: Model 13110NGW

Software Version	Intel® Wireless VR dashboard 4.x
Maximum Power Output	
(57 - 64 GHz)	25 dBm EIRP max

IEEE802.11ad mode

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Singapore: Model 13110NGW

Complies with
IMDA Standards
DB02941

Intel® Wireless Gigabit 11100VR

Due to the very small size of the 11100D2W, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model 11100D2W, FCC ID: PD911100D2

Canada: Model 11100D2W, IC: 1000M-11100D2

Korea: Model 11100D2W, R-CRM-INT-11100D2W

Taiwan: Model 11100D2W



Europe: Model 11100D2W

Software Version	Intel® Wireless VR Dashboard 4.x
Maximum Power Output	
(57 - 64 GHz) IEEE802.11ad mode	26 dBm EIRP max

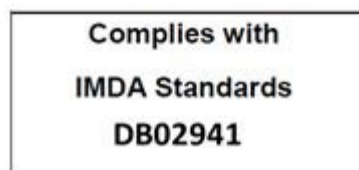
This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Australia: Model 11100D2W



Singapore: Model 11100D2W



Intel® Wi-Fi 6 AX200 (Model AX200D2WL)

Due to the very small size of the AX200D2WL, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model AX200D2WL, FCC ID: PD9AX200D2L

Canada: Model AX200D2WL, IC: 1000M-AX200D2L

Japan: Model AX200D2WL:

- RF: 003-190023
- TEL: D190022003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



® 003-190023

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

Ⓣ D190022003

Korea: Model AX200D2WL



R-C-INT-AX200D2WL

Taiwan: Model AX200D2WL



China: Model AX200D2WL, CMIIT ID: 2019AJ2493 (M)

Europe: Model AX200D2WL

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n/ax mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac/ax mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac/ax mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.

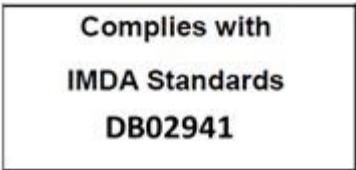


Australia: Model AX200D2WL



Brazil: Model AX200D2WL, ANATEL: XXXXXXXXXXXXXXX

Singapore: Model AX200D2WL



Argentina: Model AX200D2WL



Pakistan: Model AX200D2WL

APPROVED BY PTA: 9.9202/2019

Intel® Wi-Fi 6 AX200 (Model AX200NGW)

Due to the very small size of the AX200NGW, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model AX200NGW, FCC ID: PD9AX200NG

Canada: Model AX200NGW, IC: 1000M-AX200NG

Japan: Model AX200NGW:

- RF: 003-190022
- TEL: D190021003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



® 003-190022

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

Ⓣ D190021003

Korea: Model AX200NGW



R-C-INT-AX200NGW

Taiwan: Model AX200NGW



China: Model AX200NGW, CMIIT ID: 2019AJ2274 (M)

Europe: Model AX200NGW

Software Version	Intel® PROSet/Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n/ax mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac/ax mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac/ax mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.

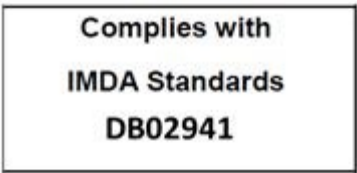


Australia: Model AX200NGW



Brazil: Model AX200NGW, ANATEL: XXXXXXXXXXXXXXX

Singapore: Model AX200NGW



Argentina: Model AX200NGW



Pakistan: Model AX200NGW

APPROVED BY PTA: 9.9211/2019

Intel® Wi-Fi 6 AX201 (Model AX201NGW)

Due to the very small size of the AX201NGW, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model AX201NGW, FCC ID: PD9AX201NG

Canada: Model AX201NGW, IC: 1000M-AX201NG

Japan: Model AX201NGW:

- RF: 003-180232
- TEL: D180131003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



Korea: Model AX201NGW



Taiwan: Model AX201NGW



China: Model AX201NGW



Europe: Model AX201NGW

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	

(2400 - 2483.5 MHz) IEEE802.11 b/g/n/ax mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac/ax mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac/ax mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.

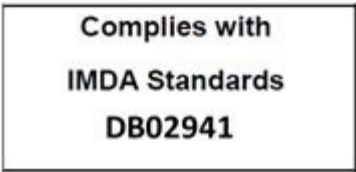


Australia: Model AX201NGW



Brazil: Model AX201NGW, ANATEL: 06970-18-04423

Singapore: Model AX201NGW



Argentina: Model AX201NGW



Pakistan: Model AX201NGW

APPROVED BY PTA: 9.9116/2019

Due to the very small size of the AX201D2W, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model AX201D2W, FCC ID: PD9AX201D2

Canada: Model AX201D2W, IC: 1000M-AX201D2

Japan: Model AX201D2W:

- RF: 003-180233
- TEL: D180132003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



Korea: Model AX201D2W



Taiwan: Model AX201D2W



China: Model AX201D2W



Europe: Model AX201D2W

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n/ax mode Bluetooth	20dBm EIRP max (100mW)

(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11 a/n/ac/ax mode	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only
(5725 - 5875 MHz) IEEE802.11 a/n/ac/ax mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Australia: Model AX201D2W



Brazil: Model AX201D2W, ANATEL: 07039-18-04423

Singapore: Model AX201D2W



Argentina: Model AX201D2W



Pakistan: Model AX201D2W

APPROVED BY PTA: 9.9115/2019

Intel® Wi-Fi 6 AX201 (Model AX201D2WL)

Due to the very small size of the AX201D2WL, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

USA: Model AX201D2WL, FCC ID: PD9AX201D2L

Canada: Model AX201D2WL, IC: 1000M-AX201D2L

Japan: Model AX201D2WL:

- RF: 003-180234
- TEL: D180133003

5.2GHz帯高出力データ通信システム基地局又は陸上移動中継局と通信する場合を除く



R

003-180234

5.15-5.35GHz: Indoor use only
(Except communicate to high power radio)

T

D180133003

Korea: Model AX201D2WL



R-C-INT-AX201D2WL

Taiwan: Model AX201D2WL



China: Model AX201D2WL

CMIIT ID: 2018AJ7568 (M)

Europe: Model AX201D2WL

Software Version	Intel® PROSet / Wireless WiFi Software 20.x and subsequent versions
Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n/ax mode Bluetooth	20dBm EIRP max (100mW)
(2400 - 2483.5 MHz) BLE	10dBm EIRP max (10mW)
(5150 - 5725 MHz) IEEE802.11	23dBm EIRP max (200mW) The low band 5.15 - 5.35 GHz is for indoor use only

a/n/ac/ax mode	
(5725 - 5875 MHz) IEEE802.11 a/n/ac/ax mode	13.98 dBm EIRP Max (25mW) For the standard EN 300 440, the device operating in 5.8 GHz is considered a category 2 receiver

This equipment complies with the essential requirements of the European Union directive 2014/53/EU.



Australia: Model AX201D2WL



Brazil: Model AX201D2WL

Singapore: Model AX201D2WL



Argentina: Model AX201D2WL



Pakistan: Model AX201D2WL

APPROVED BY PTA: 9.9110/2019

Intel® Wi-Fi 6E AX210 (Model AX210NGW)

Due to the very small size of the AX210NGW, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

TBD

Intel® Wi-Fi 6E AX210 (Model AX210D2W)

Due to the very small size of the AX210D2W, the marking has been placed in this user manual because the product label on the device is considered too small to be readable.

TBD

INFORMATION FOR OEMS and HOST INTEGRATORS

The guidelines described within this document are provided to OEM integrators installing Intel® wireless adapters in notebook and tablet PC host platforms. Adherence to these requirements is necessary to meet the conditions of compliance with FCC rules, including RF exposure. When all antenna type and placement guidelines described herein are fulfilled the Intel® wireless adapters may be incorporated into notebook and tablet PC host platforms with no further restrictions. If any of the guidelines described herein are not satisfied it may be necessary for the OEM or integrator to perform additional testing and/or obtain additional approval. The OEM or integrator is responsible to determine the required host regulatory testing and/or obtaining the required host approvals for compliance.

- Intel® wireless adapters are intended for OEMs and host integrators only.
- The Intel® wireless adapter FCC Grant of Authorization describes any limited conditions of modular approval.
- The Intel® wireless adapters must be operated with an access point that has been approved for the country of operation.
- Changes or modification to Intel® wireless adapters by OEMs, integrators or other third parties is not permitted. Any changes or modification to Intel® wireless adapters by OEMs, integrators or other third parties will void authorization to operate the adapter.

Antenna Type and Gains

Only antennas of the same type and with equal or less gains as 3dBi for the 2.4GHz band and 5dBi for the 5GHz band shall be used with the Intel® wireless adapters. Other types of antennas and/or higher gain antennas may require additional authorization for operation. For testing purposes the following dual band antenna that approximates closely the above limits was used:

Antenna Type	Antenna Location (Main / Aux)	2.4GHz Peak Gain in dBi*	5.2GHz Peak Gain in dBi*	5.5GHz Peak Gain in dBi*	5.7GHz Peak Gain in dBi*
PIFA	Main				
	Aux	3.24	3.73	4.77	4.77
	MIMO				
*All antenna gains include cable loss.					

Antenna Placement Within the Host Platform

To ensure RF exposure compliance the antenna(s) used with the Intel® wireless adapters must be installed in notebook or tablet PC host platforms to provide a minimum separation distance from all persons, in all operating modes and orientations of the host platform, with strict adherence to the table below. The antenna separation distance applies to both horizontal and vertical orientation of the antenna when installed in the host system.

Wireless Adapter	Minimum required antenna-to-user separation distance
Intel® Centrino® Wireless-N 100	9 mm
Intel® Centrino® Wireless-N 105	9 mm
Intel® Centrino® Wireless-N 130	8 mm
Intel® Centrino® Wireless-N 135	9 mm
Intel® Centrino® Wireless-N 1000*	20 mm
Intel® Centrino® Wireless-N 1030	8 mm
Intel® Centrino® Wireless-N 2200	9 mm
Intel® Centrino® Wireless-N 2230	6 mm

Intel® Centrino® Advanced-N 6200*	20 mm
Intel® Centrino® Advanced-N 6205	12 mm
Intel® Centrino® Advanced-N 6230	12 mm
Intel® Centrino® Advanced-N 6235	8 mm
Intel® Centrino® Ultimate-N 6300	13 mm
Intel® Dual Band Wireless-AC 7260	8 mm
Intel® Dual Band Wireless-N 7260	8 mm
Intel® Wireless-N 7260	8 mm
Intel® Dual Band Wireless-AC 3160	8 mm
Intel® Dual Band Wireless-AC 3165	8 mm
Intel® Dual Band Wireless-AC 7265	8 mm
Intel® Dual Band Wireless-N 7265	8 mm
Intel® Wireless-N 7265	8 mm
Intel® Dual Band Wireless-AC 8260	8 mm
Intel® Dual Band Wireless-AC 8265	8 mm
Intel® Wireless-AC 9260	14 mm
Intel® Wireless-AC 9461 (9161NGW)	19 mm
Intel® Wireless-AC 9461 (9161D2W)	12 mm
Intel® Wireless-AC 9462 (9162NGW)	14 mm
Intel® Wireless-AC 9462 (9162D2W)	15 mm
Intel® Wireless-AC 9560 (9560NGW)	18 mm
Intel® Wireless-AC 9560 (9560D2W)	15 mm
Intel® Wireless-AC 9560 (9560D2WL)	TBD
Intel® Tri-Band Wireless-AC 17265	8 mm
Intel® Tri-Band Wireless-AC 18260	8 mm
Intel® Tri-Band Wireless-AC 18265	8 mm
Intel® Wireless Gigabit Sink W13100	8 mm
Intel® Wireless Gigabit 11000	8 mm
Intel® Wireless Gigabit Sink W13110VR	8 mm
Intel® Wireless Gigabit 11100VR	8 mm
Intel® Wi-Fi 6 AX201	TBD
Intel® Wi-Fi 6 AX200	TBD
Intel® Wi-Fi 6E AX210	TBD
* This wireless adapter may be installed in mobile devices only (requires > 20 cm antenna separation from the body of user).	

For WiFi/Bluetooth combination adapters it is recommended that a 5 cm separation distance between transmitting antennas be provided within the host system to maintain an adequate separation ratio for simultaneous WiFi and Bluetooth transmission. For less than 5 cm separation the separation ratio must be verified according to FCC publication KDB 447498 for the specific adapter.

Additional regulatory authorization process may be required if wishing to place the 60 GHz/802.11ad RFEM (antenna array) closer than 20 cm to the user.

Simultaneous Transmission of Intel® Wireless Adapters with Other Integrated or Plug-In Transmitters

Based upon FCC Knowledge Database publication number 616217, when there are multiple transmitting devices installed in a host device, an RF exposure transmitting assessment shall be performed to determine the necessary application and test requirements. OEM integrators must identify all possible combinations of simultaneous transmission configurations for all transmitters and antennas installed in the host system. This includes transmitters installed in the host as mobile devices (>20 cm separation from user) and portable devices (<20 cm separation from user). OEM integrators should consult the actual FCC KDB 616217 document for all details in making this assessment to determine if any additional requirements for testing or FCC approval is necessary.

Information To Be Supplied to the End User by the OEM or Integrator

The following regulatory and safety notices must be published in documentation supplied to the end user of the product or system incorporating the Intel® wireless adapter, in compliance with local regulations. Host system must be labeled with "Contains FCC ID: XXXXXXXX", FCC ID displayed on label.

The wireless adapter must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. For country-specific approvals, see [Radio Approvals](#). Intel Corporation is not responsible for any radio or television interference caused by unauthorized modification of the devices included with the wireless adapter kit or the substitution or attachment of connecting cables and equipment other than that specified by Intel Corporation. The correction of interference caused by such unauthorized modification, substitution or attachment is the responsibility of the user. Intel Corporation and authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from the user failing to comply with these guidelines.

China:

模块通过型号核准并不代表嵌入或使用该模块的最终设备符合相关无线电管理技术规定或标准 最终设备厂商须对产品的技术特性是否符合无线电管理技术规定或标准负责

Local Restriction of 802.11a, 802.11b, 802.11g, 802.11n, and 802.11ad Radio Usage

The following statement on local restrictions must be published as part of the compliance documentation for all 802.11a, 802.11b, 802.11g, 802.11n, and 802.11ad products.

 **Caution:** Due to the fact that the frequencies used by 802.11a, 802.11b, 802.11g, 802.11n, and 802.11ad wireless LAN devices may not yet be harmonized in all countries, 802.11a, 802.11b, 802.11g and 802.11n products are designed for use only in specific countries, and are not allowed to be operated in countries other than those of designated use. As a user of these products, you are responsible for ensuring that the products are used only in the countries for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country of use. Any deviation from permissible settings and restrictions in the country of use could be an infringement of national law and may be punished as such.

Statements of European Compliance

Each of the adapters listed below comply with the essential requirements of the European Union directive 2014/53/EU.

- Intel® Centrino® Wireless-N 100
- Intel® Centrino® Wireless-N 105
- Intel® Centrino® Wireless-N 130
- Intel® Centrino® Wireless-N 135
- Intel® Centrino® Wireless-N 1000
- Intel® Centrino® Wireless-N 1030
- Intel® Centrino® Wireless-N 2200
- Intel® Centrino® Wireless-N 2230
- Intel® Centrino® Advanced-N 6200
- Intel® Centrino® Advanced-N 6205
- Intel® Centrino® Advanced-N 6230

- Intel® Centrino® Advanced-N 6235
- Intel® Centrino® Ultimate-N 6300
- Intel® Dual Band Wireless-AC 7260
- Intel® Dual Band Wireless-N 7260
- Intel® Wireless-N 7260
- Intel® Dual Band Wireless-AC 3160
- Intel® Dual Band Wireless-AC 3165
- Intel® Dual Band Wireless-AC 7265
- Intel® Dual Band Wireless-N 7265
- Intel® Wireless-N 7265
- Intel® Dual Band Wireless-AC 8260
- Intel® Dual Band Wireless-AC 8265
- Intel® Wireless-AC 9260
- Intel® Wireless-AC 9560
- Intel® Tri-Band Wireless-AC 17265
- Intel® Tri-Band Wireless-AC 18260
- Intel® Tri-Band Wireless-AC 18265
- Intel® Wireless Gigabit Sink W13100
- Intel® Wireless Gigabit 11000
- Intel® Wireless Gigabit Sink W13110VR
- Intel® Wireless Gigabit 11100VR
- Intel® Wi-Fi 6 AX201
- Intel® Wi-Fi 6 AX200
- Intel® Wi-Fi 6E AX210

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Specifications

This section provides specification information for the family of Intel® wireless adapters. The following list may not be all inclusive.

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- [Intel® Centrino® Wireless-N 105](#)
- [Intel® Centrino® Wireless-N 130](#)
- [Intel® Centrino® Wireless-N 135](#)
- [Intel® Centrino® Wireless-N 1000](#)
- [Intel® Centrino® Wireless-N 1030](#)
- [Intel® Centrino® Wireless-N 2200](#)
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- [Intel® Centrino® Wireless-N + WiMAX 6150](#)
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Intel® Centrino® Wireless-N 100, Intel® Centrino® Wireless-N 105, Intel® Centrino® Wireless-N 130 and Intel® Centrino® Wireless-N 135

Form Factor	PCI Express* Half-Mini Card
Dimensions	Half-Mini Card: Width 1.049 in x Length 1.18 in x Height 0.18 in (26.64 mm x 30 mm x 4.5 mm)
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066

Antenna Diversity	On-board diversity	
Connector Interface	52-pin Mini Card edge connector	
Voltage	3.3 V	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 95% non-condensing (at temperatures of 25 °C to 35 °C)	
WiFi		
Frequency Modulation	2.4 GHz (802.11b/g/n)	
Frequency band	2.400 - 2.4835 GHz (dependent on country)	
Modulation	BPSK, QPSK, 16 QAM, 64 QAM	CCK, DQPSK, DBPSK
Wireless Medium	2.4 GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)	
Channels	All channels as defined by the relevant specification and country rules.	
IEEE 802.11n Data Rates	MIMO Configuration: 1X1 Tx/Rx: 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	
Bluetooth Support	- Intel® Centrino® Wireless-N 100: None - Intel® Centrino® Wireless-N 105: None - Intel® Centrino® Wireless-N 130: Bluetooth 2.1, 2.1 + EDR, 3.0, 3.0+HS - Intel® Centrino® Wireless-N 135: Bluetooth 4.0 (Bluetooth Low-Energy and Bluetooth 3.0 +HS)	
General		
Operating Systems	Windows* 7 (32-bit and 64-bit), Windows* 8 (32-bit and 64-bit), Windows* 8.1 (32-bit and 64-bit)	
Wi-Fi Alliance* certification	Wi-Fi* certification for 802.11b, 802.11g, 802.11n, WPA-Personal, WPA-Enterprise, WPA2-Personal, WPA2-Enterprise, WMM, WPS	
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0	
IEEE Feature Sets	IEEE 802.11b, 802.11g, 802.11n, 802.11e, 802.11i, 802.11d, 802.11h	
Architecture	Infrastructure or ad hoc (peer-to-peer) operating modes	
Security	WPA-Personal, WPA2-Personal, WPA-Enterprise, WPA2-Enterprise, AES-CCMP 128-bit, WEP 128-bit and 64-bit; 802.1X: EAP-SIM, LEAP, PEAP, TKIP, EAP-FAST, EAP-TLS, EAP-TTLS, EAP-AKA	
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)	

Intel® Centrino® Wireless-N 1000

Form Factor	PCI Express* Mini Card and Half-Mini Card
SKUs	Intel® Centrino® Wireless-N 1000 - 1X2 MC/HMC
Dimensions	Mini Card: Width 2.0 in x Length 1.18 in x Height 0.18 in (50.80 mm x 30 mm x 4.5 mm)

	Half-Mini Card: Width 1.049 in x Length 1.18 in x Height 0.18 in (26.64 mm x 30 mm x 4.5 mm)
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066
Antenna Diversity	On-board diversity
Connector Interface	52-pin Mini Card edge connector
Voltage	3.3 V
Operating Temperature	0 to +80 degrees Celsius
Humidity	50% to 90% non-condensing (at temperatures of 25 °C to 35 °C)
WiFi	
Frequency Modulation	2.4 GHz (802.11b/g/n)
Frequency band	2.41-2.474 GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, CCK, DQPSK, DBPSK
Wireless Medium	2.4 GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.
IEEE 802.11n Data Rates	300, 270, 243, 240, 180, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2 Mbps
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps
General	
Operating Systems	Microsoft Windows* XP (32 and 64 bit) and Windows Vista* (32 and 64 bit), Ubuntu Linux*
Wi-Fi Alliance* certification	Wi-Fi* certification for 802.11b, 802.11g, 802.11n, WPA-Personal, WPA-Enterprise, WPA2-Personal, WPA2-Enterprise, WMM, WPS
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0
WLAN Standard	IEEE 802.11g, 802.11b, 802.11n, 802.11d, 802.11e, 802.11i,
Architecture	Infrastructure or ad hoc (peer-to-peer) operating modes
Security	WPA-Personal, WPA2-Personal, WPA-Enterprise, WPA2-Enterprise, 802.1X: EAP-SIM, LEAP, PEAP, EAP-FAST, EAP-TLS, EAP-TTLS, EAP-AKA
Encryption	AES-CCMP 128-bit, WEP 128-bit and 64-bit, CKIP, TKIP
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)

Intel® Centrino® Wireless-N 2200 and Intel® Centrino® Wireless-N 2230

Form Factor	PCI Express* Half-Mini Card
Dimensions	Half-Mini Card: Width 1.049 in x Length 1.18 in x Height 0.18 in (26.64 mm x 30 mm x 4.5 mm)
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066
Antenna Diversity	On-board diversity
Connector	52-pin Mini Card edge connector

Interface		
Voltage	3.3 V	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 95% non-condensing (at temperatures of 25 °C to 35 °C)	
WiFi		
Frequency Modulation	2.4 GHz (802.11b/g/n)	
Frequency band	2.400 - 2.4835 GHz (dependent on country)	
Modulation	BPSK, QPSK, 16 QAM, 64 QAM	CCK, DQPSK, DBPSK
Wireless Medium	2.4 GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)	
Channels	All channels as defined by the relevant specification and country rules.	
IEEE 802.11n Data Rates	MIMO Configuration: 2X2 Tx/Rx: 300, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	
Bluetooth Support	- Intel® Centrino® Wireless-N 2200: None - Intel® Centrino® Wireless-N 2230: Bluetooth 4.0 (Bluetooth Low-Energy and Bluetooth 3.0 +HS)	
General		
Operating Systems	Windows* 7 (32-bit and 64-bit), Windows* 8 (32-bit and 64-bit), Windows* 8.1 (32-bit and 64-bit)	
Wi-Fi Alliance* certification	Wi-Fi* certification for 802.11b, 802.11g, 802.11n, WPA-Personal, WPA-Enterprise, WPA2-Personal, WPA2-Enterprise, WMM, WPS	
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0	
IEEE Feature Sets	IEEE 802.11b, 802.11g, 802.11n, 802.11e, 802.11i, 802.11d, 802.11h	
Architecture	Infrastructure or ad hoc (peer-to-peer) operating modes	
Security	WPA-Personal, WPA2-Personal, WPA-Enterprise, WPA2-Enterprise, AES-CCMP 128-bit, WEP 128-bit and 64-bit; 802.1X: EAP-SIM, LEAP, PEAP, TKIP, EAP-FAST, EAP-TLS, EAP-TTLS, EAP-AKA	
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)	

Intel® Centrino® Wireless-N 1030 and Intel® Centrino® Advanced-N 6230

Form Factor	PCI Express* Half-Mini Card
Dimensions	Half-Mini Card: Width 1.049 in x Length 1.18 in x Height 0.18 in (26.64 mm x 30 mm x 4.5 mm)
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066
Antenna	On-board diversity

Diversity		
Network Standards	802.11a/b/g/n (varies by adapter) and Bluetooth 3.0 + HS	
Connector Interface	52-pin Mini Card edge connector	
Voltage	3.3 V	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 95% non-condensing (at temperatures of 25 °C to 35 °C)	
WiFi Network Standards	Intel® Centrino® Wireless-N 1030: 802.11b/g/n Intel® Centrino® Advanced-N 6230: 802.11a/g/n	
Frequency Modulation	5 GHz (802.11a / n)	2.4 GHz (802.11b / g / n)
Frequency band	5.15 GHz - 5.85 GHz (dependent on country)	2.400 - 2.4835 GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5 GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4 GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
IEEE 802.11n Data Rates	Intel® Centrino® Advanced-N 6230: Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
	Intel® Centrino® Wireless-N 1030: Rx (Mbps): 300, 270, 243, 240, 180 Tx/Rx (Mbps): 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	
Bluetooth	Bluetooth Version 3.0 + HS	
General		
Operating Systems	• Microsoft Windows* XP (32-bit and 64-bit) • Windows Vista* (32-bit and 64-bit) • Windows* 7 (32-bit and 64-bit) • Windows* 8 (32-bit and 64-bit) • Windows* 8.1 (32-bit and 64-bit)	
Wi-Fi Alliance* certification	Wi-Fi* certification for 802.11b, 802.11g, 802.11a, 802.11h, 802.11d, WPA-Personal, WPA-Enterprise, WPA2-Personal, WPA2-Enterprise, WPS, WMM, WMM Power Save, EAP-SIM, LEAP, PEAP, TKIP, EAP-FAST, EAP-TLS, EAP-TTLS, EAP-AKA, P2P	
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0	
WLAN Standard	IEEE 802.11g, 802.11b, 802.11a, 802.11n	

Architecture	Infrastructure or ad hoc (peer-to-peer) operating modes
Security	WPA-Personal, WPA2-Personal, WPA-Enterprise, WPA2-Enterprise, AES-CCMP 128-bit, WEP 128-bit and 64-bit; 802.1X: EAP-SIM, LEAP, PEAP, TKIP, EAP-FAST, EAP-TLS, EAP-TTLS, EAP-AKA
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)

Intel® Centrino® Advanced-N 6235

Form Factor	PCI Express* Half-Mini Card	
Dimensions	Half-Mini Card: Width 1.049 in x Length 1.18 in x Height 0.18 in (26.64 mm x 30 mm x 4.5 mm)	
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066	
Antenna Diversity	On-board diversity	
Network Standards	802.11a/b/g/n and Bluetooth 4.0	
Connector Interface	52-pin Mini Card edge connector	
Voltage	3.3 V	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 95% non-condensing (at temperatures of 25 °C to 35 °C)	
Frequency Modulation	5 GHz (802.11a/n)	2.4 GHz (802.11b/g/n)
Frequency band	5.15 GHz - 5.85 GHz (dependent on country)	2.400 - 2.4835 GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5 GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4 GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	
Bluetooth	Bluetooth Version 4.0 (3.0 +HS)	
General		
Operating Systems	Windows* 7 (32-bit and 64-bit), Windows* 8 (32-bit and 64-bit), Windows* 8.1 (32-bit and 64-bit)	
Wi-Fi Alliance* certification	Wi-Fi* certification for 802.11b, 802.11g, 802.11a, 802.11h, 802.11d, WPA-Personal, WPA-Enterprise, WPA2-Personal, WPA2-Enterprise, WPS, WMM, WMM Power Save, EAP-SIM, LEAP, PEAP, TKIP, EAP-FAST, EAP-TLS, EAP-TTLS, EAP-AKA, P2P	
Cisco Compatible	Cisco Compatible Extensions, v4.0	

Extensions certification	
WLAN Standard	IEEE 802.11g, 802.11b, 802.11a, 802.11n
Architecture	Infrastructure or ad hoc (peer-to-peer) operating modes
Security	WPA-Personal, WPA2-Personal, WPA-Enterprise, WPA2-Enterprise, AES-CCMP 128-bit, WEP 128-bit and 64-bit; 802.1X: EAP-SIM, LEAP, PEAP, TKIP, EAP-FAST, EAP-TLS, EAP-TTLS, EAP-AKA
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)

Intel® Centrino® Advanced-N + WiMAX 6250 and Intel® Centrino® Wireless-N + WiMAX 6150

Form Factor	PCI Express* Half-Mini Card	
Dimensions	Half-Mini Card: Width 1.049 in x Length 1.18 in x Height 0.18 in (26.64 mm x 30 mm x 4.5 mm)	
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066	
Antenna Diversity	On-board diversity	
Connector Interface	52-pin Mini Card edge connector	
Voltage	3.3 V	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 95% non-condensing (at temperatures of 25 °C to 35 °C)	
WiFi		
Frequency Modulation	Intel® Centrino® Advanced-N + WiMAX 6250 2.4 GHz (802.11b/g/n), 5 GHz (802.11a/n)	Intel® Centrino® Wireless-N + WiMAX 6150 2.4 GHz (802.11b/g/n)
Frequency band	5.15 GHz - 5.85 GHz (dependent on country)	2.400 - 2.4835 GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5 GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4 GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
IEEE 802.11n Data Rates	Intel® Centrino® Wireless-N + WiMAX 6150 MIMO Configuration: 1X2 Rx: 300, 270, 243, 240, 180 Mbps Rx/Tx: 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2 Mbps	
	Intel® Centrino® Advanced-N + WiMAX 6250 MIMO Configuration: 2X2 Tx/Rx: 300, 270, 243, 240, 180, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2 Mbps	

IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps
General	
Operating Systems	• Microsoft Windows* XP (32-bit and 64-bit) • Windows Vista* (32-bit and 64-bit) • Windows* 7 (32-bit and 64-bit) • Windows* 8 (32-bit and 64-bit) • Windows* 8.1 (32-bit and 64-bit)
Wi-Fi Alliance* certification	Wi-Fi* certification for 802.11b, 802.11g, 802.11a, 802.11h, 802.11d, WPA-Personal, WPA-Enterprise, WPA2-Personal, WPA2-Enterprise, WMM, WMM Power Save, EAP-SIM, LEAP, PEAP, TKIP, EAP-FAST, EAP-TLS, EAP-TTLS, EAP-AKA
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0
IEEE Feature Sets	Intel® Centrino® Wireless-N + WiMAX 6150: IEEE 802.11b, 802.11g, 802.11n, 802.11e, 802.11i, 802.11h, 802.11d Intel® Centrino® Advanced-N + WiMAX 6250: 802.11a, IEEE 802.11b, 802.11g, 802.11n, 802.11e, 802.11i, 802.11h, 802.11d
Architecture	Infrastructure or ad hoc (peer-to-peer) operating modes
Security	WPA-Personal, WPA2-Personal, WPA-Enterprise, WPA2-Enterprise, AES-CCMP 128-bit, WEP 128-bit and 64-bit; 802.1X: EAP-SIM, LEAP, PEAP, TKIP, EAP-FAST, EAP-TLS, EAP-TTLS, EAP-AKA
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)
WiMAX General	
Operating Systems	• Microsoft Windows* XP (32-bit and 64-bit) • Windows Vista* (32-bit and 64-bit) • Windows* 7 (32-bit and 64-bit) • Windows* 8 (32-bit and 64-bit) • Windows* 8.1 (32-bit and 64-bit)
Standard Compliance	802.16e-2005 Corrigenda 2 (D4)
WiMAX System Profile Feature set	Intel® Centrino® Wireless-N + WiMAX 6150: Mobile WiMAX release 1, Wave II. Supports 3A and 1A/B profiles Intel® Centrino® Advanced-N + WiMAX 6250: Mobile WiMAX release 1, Wave II. Supports 3A, 5A/C, 1A/B, and 5BL profiles
Security	Key Management Protocol (PKMv2)
Encryption	128-bit CCMP (Counter-Mode/CBC-MAC) based on AES encryption
WiMAX	
Frequency band	Intel® Centrino® Wireless-N + WiMAX 6150: 2.3-2.4 GHz / 2.496-2.690 GHz Intel® Centrino® Advanced-N + WiMAX 6250: 2.3-2.4 GHz / 2.496-2.690 GHz / 3.4-3.8 GHz
Modulation	UL - QPSK, 16 QAM DL - QPSK, 16 QAM, 64 QAM

Wireless Medium	Duplex mode: TDD operations	Scalable OFDMA (SOFDMA): 512 and 1024 FFT
	sub-carrier permutation: PUSC	Intel® Centrino® Wireless-N + WiMAX 6150: Channel bandwidths: 5 and 10 MHz Intel® Centrino® Advanced-N + WiMAX 6250: Channel bandwidths: 5, 7, 8.75 and 10 MHz
WiMAX Network Release Feature set	SPWG/NWG Release 1.5	
Rate Performance	Intel® Centrino® Wireless-N + WiMAX 6150: Up to 10 Mbps DL and 4 Mbps UL @ peak rate (OTA performance, 10MHz channel) Intel® Centrino® Advanced-N + WiMAX 6250: Up to 20 Mbps DL and 6 Mbps UL @ peak rate (OTA performance, 10MHz channel)	
RF Transmitter Output Power	Compliance with Power class 2	

Intel® Centrino® Advanced-N 6200, Intel® Centrino® Advanced-N 6205 and Intel® Centrino® Ultimate-N 6300

Form Factor	Intel® Centrino® Advanced-N 6200, Intel® Centrino® Ultimate-N 6300: PCI Express* Full-Mini Card and Half-Mini Card. Intel® Centrino® Advanced-N 6205: PCI Express* Half-Mini Card.	
Dimensions	Full-Mini Card: Width 2.00 in x Length 1.18 in x Height 0.18 in (50.95 mm x 30 mm x 4.5 mm) Half-Mini Card: Width 1.049 in x Length 1.18 in x Height 0.18 in (26.64 mm x 30 mm x 4.5 mm)	
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066	
Antenna Diversity	On-board diversity	
Connector Interface	52-pin Mini Card edge connector	
Voltage	3.3 V	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 95% non-condensing (at temperatures of 25 °C to 35 °C)	
Frequency Modulation	5 GHz (802.11a / n)	2.4 GHz (802.11b / g / n)
Frequency band	5.15 GHz - 5.85 GHz (dependent on country)	2.400 - 2.4835 GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM	CCK, DQPSK, DBPSK
Wireless	5 GHz UNII: Orthogonal Frequency Division	2.4 GHz ISM: Orthogonal Frequency Division

Medium	Multiplexing (OFDM)	Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
IEEE 802.11n Data Rates	Intel® Centrino® Ultimate-N 6300: Tx/Rx: 450, 405, 360, 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2 Mbps	
	Intel® Centrino® Advanced-N 6200, Intel® Centrino® Advanced-N 6205: Tx/Rx: 300, 270, 243, 240, 180, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2 Mbps	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	
General		
Operating Systems	• Microsoft Windows* XP (32-bit and 64-bit) • Windows Vista* (32-bit and 64-bit) • Windows* 7 (32-bit and 64-bit) • Windows* 8 (32-bit and 64-bit) • Windows* 8.1 (32-bit and 64-bit)	
Wi-Fi Alliance* certification	Wi-Fi* certification for 802.11b, 802.11g, 802.11a, 802.11h, 802.11d, WPA-Personal, WPA-Enterprise, WPA2-Personal, WPA2-Enterprise, WMM, WMM Power Save, EAP-SIM, LEAP, PEAP, TKIP, EAP-FAST, EAP-TLS, EAP-TTLS, EAP-AKA	
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0	
WLAN Standard	IEEE 802.11g, 802.11b, 802.11a, 802.11n	
Architecture	Infrastructure or ad hoc (peer-to-peer) operating modes	
Security	WPA-Personal, WPA2-Personal, WPA-Enterprise, WPA2-Enterprise, AES-CCMP 128-bit, WEP 128-bit and 64-bit; 802.1X: EAP-SIM, LEAP, PEAP, TKIP, EAP-FAST, EAP-TLS, EAP-TTLS, EAP-AKA	
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)	

Intel® Dual Band Wireless-AC 7260

Form Factors	Half-Mini Card and M.2 (Next Generation Form Factor - NGFF)
Electrical interfaces	PCIe and USB 2.0 for both form factors
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066
Antenna Diversity	On-board diversity
IEEE 802.11 Networking Standards	Intel® Dual Band Wireless-AC 7260 • Model 7260HMW - 802.11agn, ac, 2x2, Bluetooth 4.0, PCIe, USB, HMC • Model 7260NGW - 802.11agn, ac, 2x2, Bluetooth 4.0, PCIe, USB, M.2
Operating	0 to +80 degrees Celsius

Temperature		
Humidity	50% to 95% non-condensing (at temperatures of 25 °C to 35 °C)	
Frequency Modulation	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
Spatial streams	Intel® Dual Band Wireless-AC 7260: 2 X 2	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11ac Data Rates	Intel® Dual Band Wireless-AC 7260: Up to 867 Mbps	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	
Bluetooth	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE) supported by the following adapters • Model 7260HMW • Model 7260NGW	
General		
Operating Systems	Windows* 7 (32-bit and 64-bit), Windows* 8 (32-bit and 64-bit), Windows* 8.1 (64-bit)	
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* for 802.11ac, a/b/g, n, WMM*, WPA*, WPA2*, and WPS, WPS 2.0, Protected Management Frames. Wi-Fi Direct* for peer-to-peer device connections.	
Architecture	Infrastructure and SoftAP; Supports simultaneous Client and SoftAP modes	
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0	
Security		
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA	
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2	
Encryption	64-bit and 128-bit WEP, AES-CCMP, TKIP	
Wi-Fi Direct* Encryption and Authentication	WPA2, AES-CCMP	
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)	

Intel® Dual Band Wireless-N 7260

Intel® Wireless-N 7260

Form Factors	Half-Mini Card, M.2 (Next Generation Form Factor - NGFF)	
Electrical interfaces	PCIe, USB 2.0 for both form factors	
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066	
Antenna Diversity	On-board diversity	
IEEE 802.11 Networking Standards	Intel® Dual Band Wireless-N 7260 - Model 7260HMW AN - 802.11agn, 2x2, Bluetooth 4.0, PCIe, USB, HMC - Model 7260NGW AN - 802.11agn, 2x2, Bluetooth 4.0, PCIe, USB, M.2 - Model 7260HMW NB - 802.11agn, 2x2, PCIe, USB, HMC - Model 7260NGW NB - 802.11agn, 2x2, PCIe, USB, M.2 Intel® Wireless-N 7260 - Model 7260HMW BN - 802.11agn, 2x2, Bluetooth 4.0, PCIe, USB, M.2 - Model 7260NGW BN - 802.11bgn, 2x2, Bluetooth 4.0, PCIe, USB, M.2	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 95% non-condensing (at temperatures of 25 °C to 35 °C)	
Frequency Modulation (See above, not all bands supported by all adapters)	5GHz (802.11a/n)	2.4GHz (802.11b/g/n)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
802.11n spatial streams	All adapters: 2 X 2 spatial streams	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	
Bluetooth	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE) supported by the following adapters - Model 7260HMW AN - Model 7260NGW AN - Model 7260HMW BN - Model 7260NGW BN	
General		

Operating Systems	Windows* 7 (32-bit and 64-bit), Windows 8 (32-bit and 64-bit), Windows* 8.1 (64-bit)
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* for 802.11ac, a/b/g, n, WMM*, WPA*, WPA2*, and WPS, WPS 2.0, Protected Management Frames. Wi-Fi Direct* for peer-to-peer device connections.
Architecture	Infrastructure and SoftAP; Supports simultaneous Client and SoftAP modes
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0
Security	
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2
Encryption	64-bit and 128-bit WEP, AES-CCMP, TKIP
Wi-Fi Direct* Encryption and Authentication	WPA2, AES-CCMP
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)

Intel® Dual Band Wireless-AC 3160

Form Factors	Half-Mini Card and M.2 (Next Generation Form Factor - NGFF)	
Electrical interfaces	PCIe and USB 2.0 for both form factors	
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066	
Antenna Diversity	On-board diversity	
IEEE 802.11 Networking Standards	Intel® Dual Band Wireless-AC 3160 - Model 3160HMW - 802.11agn, ac, 1x1, Bluetooth 4.0, PCIe, USB, HMC - Model 3160NGW - 802.11agn, ac, 1x1, Bluetooth 4.0, PCIe, USB, M.2	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 90% non-condensing (at temperatures of 25 °C to 35 °C)	
Frequency Modulation	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
Spatial streams	Intel® Dual Band Wireless-AC 3160: 1 X 1	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11ac Data Rates	Intel® Dual Band Wireless-AC 3160: Up to 433 Mbps	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	

IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps
Bluetooth	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE) supported by the following adapters - Model 3160HMW - Model 3160NGW
General	
Operating Systems	Windows* 7 (32-bit and 64-bit), Windows 8 (32-bit and 64-bit), Windows* 8.1 (64-bit)
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* for 802.11ac, a/b/g, n, WMM*, WPA*, WPA2*, and WPS, WPS 2.0, Protected Management Frames. Wi-Fi Direct* for peer-to-peer device connections.
Architecture	Infrastructure and SoftAP; Supports simultaneous Client and SoftAP modes
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0
Security	
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2
Encryption	64-bit and 128-bit WEP, AES-CCMP, TKIP
Wi-Fi Direct* Encryption and Authentication	WPA2, AES-CCMP
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)

Intel® Dual Band Wireless-AC 3165 (Model 3165NGW)

Form Factors	M.2 (Next Generation Form Factor - NGFF)	
Electrical interfaces	PCIe and USB 2.0	
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066	
Antenna Diversity	On-board diversity	
IEEE 802.11 Networking Standards	802.11abgn, 802.11ac, 802.11d, 802.11e, 802.11i, 802.11h, 802.11w	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)	
Frequency Modulation	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)

Channels	All channels as defined by the relevant specification and country rules.
Spatial streams	Intel® Dual Band Wireless-AC 3165: 1 X 1
Data Rates	All data rates are theoretical maximums.
IEEE 802.11ac Data Rates	Intel® Dual Band Wireless-AC 3165: Up to 433 Mbps
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps
Bluetooth	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE)
General	
Operating Systems	Windows* 7 (32-bit and 64-bit), Windows* 8 (32-bit and 64-bit), Windows* 8.1 (64-bit)
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* for 802.11ac, a/b/g, n, WMM*, WPA*, WPA2*, and WPS, WPS 2.0, Protected Management Frames. Wi-Fi Direct* for peer-to-peer device connections.
Architecture	Infrastructure and SoftAP; Supports simultaneous Client and SoftAP modes
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0
Security	
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2
Encryption	64-bit and 128-bit WEP, AES-CCMP, TKIP
Wi-Fi Direct* Encryption and Authentication	WPA2, AES-CCMP
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)

Intel® Dual Band Wireless-AC 3168

Form Factors	M.2 2230 (Next Generation Form Factor - NGFF)	
Electrical interfaces	PCIe and USB 2.0	
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066	
Antenna Diversity	On-board diversity	
IEEE 802.11 Networking Standards	802.11abgn, 802.11ac, 802.11d, 802.11e, 802.11i, 802.11h, 802.11w	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)	
Frequency Modulation	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	5.15GHz - 5.85GHz (dependent on	2.400 - 2.4835GHz (dependent on

	country)	country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
Spatial streams	Intel® Dual Band Wireless-AC 3168: 1 X 1	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11ac Data Rates	Intel® Dual Band Wireless-AC 3168: Up to 433 Mbps	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	
Bluetooth	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.2 (BLE)	
General		
Operating Systems	Linux, Windows* 8.1 (64-bit), Windows* 10 (64-bit)	
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* for 802.11ac, a/b/g, n, WMM*, WPA*, WPA2*, and WPS, WPS 2.0, Protected Management Frames. Wi-Fi Direct* for peer-to-peer device connections.	
Architecture	Infrastructure and SoftAP; Supports simultaneous Client and SoftAP modes	
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0	
Security		
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA	
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2	
Encryption	64-bit and 128-bit WEP, AES-CCMP, TKIP	
Wi-Fi Direct* Encryption and Authentication	WPA2, AES-CCMP	
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)	

Intel® Dual Band Wireless-AC 7265 (Model 7265NGW)

Form Factors	M.2 (Next Generation Form Factor - NGFF)
Electrical interfaces	PCIe and USB 2.0
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066
Antenna Diversity	On-board diversity
IEEE 802.11 Networking Standards	Intel® Dual Band Wireless-AC 7265 Model 7265NGW - 802.11agn, ac, 2x2, Bluetooth 4.0, PCIe, USB, M.2
Operating	0 to +80 degrees Celsius

Temperature		
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)	
Frequency Modulation	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
Spatial streams	Intel® Dual Band Wireless-AC 7265: 2 X 2	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11ac Data Rates	Intel® Dual Band Wireless-AC 7265: Up to 867 Mbps	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	
Bluetooth	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE) supported by the following adapters • Model 7265NGW	
General		
Operating Systems	Windows* 7 (32-bit and 64-bit), Windows* 8 (32-bit and 64-bit), Windows* 8.1 (64-bit)	
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* for 802.11ac, a/b/g, n, WMM*, WPA*, WPA2*, and WPS, WPS 2.0, Protected Management Frames. Wi-Fi Direct* for peer-to-peer device connections.	
Architecture	Infrastructure and SoftAP; Supports simultaneous Client and SoftAP modes	
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0	
Security		
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA	
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2	
Encryption	64-bit and 128-bit WEP, AES-CCMP, TKIP	
Wi-Fi Direct* Encryption and Authentication	WPA2, AES-CCMP	
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)	

Intel® Dual Band Wireless-N 7265 (Models 7265NGW AN and 7265NGW NB)

Intel® Wireless-N 7265 (Model 7265NGW BN)

Form Factors	M.2 (Next Generation Form Factor - NGFF)	
Electrical interfaces	PCIe, USB 2.0	
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066	
Antenna Diversity	On-board diversity	
IEEE 802.11 Networking Standards	Intel® Dual Band Wireless-N 7265 - Model 7265NGW AN - 802.11agn, 2x2, Bluetooth 4.0, PCIe, USB, M.2 - Model 7265NGW NB - 802.11agn, 2x2, PCIe, USB, M.2 Intel® Wireless-N 7265 - Model 7265NGW BN - 802.11bgn, 2x2, Bluetooth 4.0, PCIe, USB, M.2	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 90% non-condensing (at temperatures of 25 °C to 35 °C)	
Frequency Modulation (See above, not all bands supported by all adapters)	5GHz (802.11a/n)	2.4GHz (802.11b/g/n)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
802.11n spatial streams	All adapters: 2 X 2 spatial streams	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	
Bluetooth	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE) supported by the following adapters - Model 7265NGW AN - Model 7265NGW NB - Model 7265NGW BN	
General		
Operating Systems	Windows* 7 (32-bit and 64-bit), Windows 8 (32-bit and 64-bit), Windows* 8.1 (64-bit)	
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* for 802.11ac, a/b/g, n, WMM*, WPA*, WPA2*, and WPS, WPS 2.0, Protected Management Frames. Wi-Fi Direct* for peer-to-peer device connections.	

Architecture	Infrastructure and SoftAP; Supports simultaneous Client and SoftAP modes
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0
Security	
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2
Encryption	64-bit and 128-bit WEP, AES-CCMP, TKIP
Wi-Fi Direct* Encryption and Authentication	WPA2, AES-CCMP
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)

Intel® Dual Band Wireless-AC 8260

Form Factors	Half-Mini Card and M.2 (Next Generation Form Factor - NGFF)	
Electrical interfaces	PCIe and USB 2.0 for both form factors	
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066	
Antenna Diversity	On-board diversity	
IEEE 802.11 Networking Standards	Intel® Dual Band Wireless-AC 8260 Model 8260NGW - 802.11agn, ac, 2x2, Bluetooth 4.0, PCIe, USB, M.2	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 95% non-condensing (at temperatures of 25 °C to 35 °C)	
Frequency Modulation	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
Spatial streams	Intel® Dual Band Wireless-AC 8260: 2 X 2	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11ac Data Rates	Intel® Dual Band Wireless-AC 8260: Up to 867 Mbps	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	
Bluetooth	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE) supported by the	

	following adapters Model 8260NGW
General	
Operating Systems	Windows* 7 (32-bit and 64-bit), Windows* 8 (32-bit and 64-bit), Windows* 8.1 (64-bit)
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* for 802.11ac, a/b/g, n, WMM*, WPA*, WPA2*, and WPS, WPS 2.0, Protected Management Frames. Wi-Fi Direct* for peer-to-peer device connections.
Architecture	Infrastructure and SoftAP; Supports simultaneous Client and SoftAP modes
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0
Security	
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2
Encryption	64-bit and 128-bit WEP, AES-CCMP, TKIP
Wi-Fi Direct* Encryption and Authentication	WPA2, AES-CCMP
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)

Intel® Dual Band Wireless-AC 8265 (Models 8265NGWH/8265NGW/8265D2W)

General	
Dimensions (H x W x D)	- M.2 2230: 22 mm x 30 mm x 2.4 mm - M.2 1216: 12 mm x 16 mm x 1.8 mm
Weight	- M.2 2230: 2.6g - M.2 1216: 0.6g
Antenna Diversity	Supported
Radio ON/OFF Control	Supported
Connector Interface	M.2: PCIe, USB, or UART (M.2 1216 only)
Operating Temperature	0 to +80 degrees Celsius
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)
Operating Systems	Microsoft Windows 7*, Microsoft Windows 8.1*, Microsoft Windows 10*, Linux* (limited feature support), Android
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* a/b/g/n/ac, WMM*, WMM-PS*, WPA*, WPA2*, WPS2*, Protected Management Frames, Wi-Fi Direct* for peer to peer device connections, Wi-Fi Miracast* as Source.
IEEE WLAN Standard	IEEE 802.11a/b/g/n/ac, 802.11d, 802.11e, 802.11h, 802.11i, 802.11w; 802.11r, 802.11k, 802.11v pending OS support; Fine Timing Measurement based on 802.11REVmc

Roaming	Supports seamless roaming between access points	
Bluetooth	Dual Mode Bluetooth* 4.2, BLE	
Security		
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA, EAP-AKA	
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2	
Encryption	64-bit and 128-bit WEP, 128-bit AES-CCMP	
Wi-Fi Direct* Encryption and Authentication	WPA2-PSK, AES-CCMP	
Compliance		
Product Safety	UL, C-UL, CB (IEC 60950-1)	
Model Numbers		
Models	Model 8265NGWH	802.11ac, 2x2, Bluetooth* 4.2, PCIe, USB, LTE Coexistence, eFEM, M.2 2230 HE
	Model 8265NGW	802.11ac, 2x2, Bluetooth* 4.2, PCIe, USB, M.2 2230 MS
	Model 8265D2W	802.11ac, 2x2, Bluetooth* 4.2, PCIe, LTE Coexistence, M.2 1216 SD
Frequency Modulation	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
Spatial streams	Intel® Dual Band Wireless-AC 8265: 2 X 2	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11ac Data Rates	Intel® Dual Band Wireless-AC 8265: Up to 867 Mbps	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	

Intel® Wireless-AC 9260 (Models 9260NGW and 9260D2WL)

General	
Dimensions (H x W x D)	- M.2 2230: 22 mm x 30 mm x 2.4 mm [1.5 mm max (top side)/ 0.1 mm max (bottom side)] - M.2 1216: 12 mm x 16 mm x 1.67 (±0.08) mm

Weight	• M.2 2230: 2.9 ±0.3 g • M.2 1216: 0.61 ±0.1 g	
Antenna Diversity	Supported	
Radio ON/OFF Control	Supported	
Connector Interface	M.2: PCIe, USB	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)	
Operating Systems	Microsoft Windows 10*, Linux* (limited feature support), Chrome*	
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* a/b/g/n/ac with wave 2 features, WMM*, WMM-PS*, WPA*, WPA2*, WPS2*, Protected Management Frames, Wi-Fi Miracast* as Source, and Wi-Fi Direct*.	
IEEE WLAN Standard	IEEE 802.11a/b/g/n/ac, 802.11d, 802.11e, 802.11h, 802.11i, 802.11w; 802.11r, 802.11k, 802.11v pending OS support; Fine Timing Measurement based on 802.11REVmc	
Roaming	Supports seamless roaming between access points	
Bluetooth	Bluetooth* 5	
Security		
Authentication	WPA* and WPA2*, 802.1X (EAP-TLS, TTLS, PEAP, EAP-SIM, EAP-AKA, EAP-AKA)	
Authentication Protocols	PAP, CHAP, TLS, MS-CHAP*, MS-CHAPv2*	
Encryption	64-bit and 128-bit WEP, 128-bit AES-CCMP	
Wi-Fi Direct* Encryption and Authentication	WPA2-PSK, AES-CCMP	
Compliance		
US Government	FIPS, FISMA	
Product Safety	UL, C-UL, CB (IEC 60950-1)	
Model Numbers		
Models	9260NGW	802.11ac wave 2, 2x2, Bluetooth* 5, PCIe, USB, M.2 2230
	9260D2WL	802.11ac wave 2, 2x2, Bluetooth* 5, PCIe, USB, M.2 1216 LTE Coex
Frequency Modulation	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
Spatial streams	Intel® Wireless-AC 9260: 2 X 2	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11ac Data Rates	1.73 Gbps when using 160MHz channels	
IEEE 802.11n Data	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120,	

Rates	117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps

Intel® Wireless-AC 9461 (Models 9461NGW / 9461D2W)

General		
Dimensions (H x W x D)	• M.2 2230: 22 mm x 30 mm x 2.4 mm • M.2 1216: 12 mm x 16 mm x 1.57 (+-0.08) mm	
Weight	• M.2 2230: 2.7g • M.2 1216: 0.7g	
Antenna Diversity	Supported	
Radio ON/OFF Control	Supported	
Connector Interface	M.2: CNVio	
Operating Temperature	0°C to +80°C	
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)	
Operating Systems	Microsoft Windows 10*, Linux* (limited feature support), Chrome	
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* a/b/g/n/ac with wave 2 features, WMM*, WMM-PS*, WPA*, WPA2*, WPS2*, Protected Management Frames, Wi-Fi Miracast* as Source, and Wi-Fi Direct	
IEEE WLAN Standard	IEEE 802.11a/b/g/n/ac, 802.11d, 802.11e, 802.11h, 802.11i, 802.11w; 802.11r, 802.11k, 802.11v pending OS support; Fine Timing Measurement based on 802.11REVMc	
Roaming	Supports seamless roaming between access points	
Bluetooth	Bluetooth* 5	
Security		
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, EAP-SIM, EAP-AKA)	
Authentication Protocols	PAP, CHAP, TLS, MS-CHAP*, MS-CHAPv2	
Encryption	64-bit and 128-bit WEP, 128-bit AES-CCMP	
Wi-Fi Direct* Encryption and Authentication	WPA2-PSK, AES-CCMP	
Compliance		
Regulatory	For a list of country approvals, please contact your local Intel representatives.	
US Government	FIPS, FISMA	
Product Safety	UL, C-UL, CB (IEC 60950-1)	
Model Numbers		
Models	9461NGW	802.11ac wave 2, 1x1, Bluetooth* 5, PCIe, USB, M.2 2230, Single Antenna

	9461D2W	802.11ac wave 2, 1x1, Bluetooth* 5, PCIe, USB, M.2 1216, Single Antenna
Frequency Modulation	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
Spatial streams	Intel® Wireless-AC 9461: 1 X 1	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11ac Data Rates	433 Mbps when using 80MHz channels	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	

Intel® Wireless-AC 9462 (Models 9462NGW / 9462D2W)

General	
Dimensions (H x W x D)	- M.2 2230: 22 mm x 30 mm x 2.4 mm - M.2 1216: 12 mm x 16 mm x 1.57 (+-0.08) mm
Weight	- M.2 2230: 2.7g - M.2 1216: 0.7g
Antenna Diversity	Supported
Radio ON/OFF Control	Supported
Connector Interface	M.2: CNVio
Operating Temperature	0°C to +80°C
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)
Operating Systems	Microsoft Windows 10*, Linux* (limited feature support), Chrome
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* a/b/g/n/ac with wave 2 features, WMM*, WMM-PS*, WPA*, WPA2*, WPS2*, Protected Management Frames, Wi-Fi Miracast* as Source, and Wi-Fi Direct
IEEE WLAN Standard	IEEE 802.11a/b/g/n/ac, 802.11d, 802.11e, 802.11h, 802.11i, 802.11w; 802.11r, 802.11k, 802.11v pending OS support; Fine Timing Measurement based on 802.11REVmc
Roaming	Supports seamless roaming between access points
Bluetooth	Bluetooth* 5

Security		
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, EAP-SIM, EAP-AKA)	
Authentication Protocols	PAP, CHAP, TLS, MS-CHAP*, MS-CHAPv2	
Encryption	64-bit and 128-bit WEP, 128-bit AES-CCMP	
Wi-Fi Direct* Encryption and Authentication	WPA2-PSK, AES-CCMP	
Compliance		
Regulatory	For a list of country approvals, please contact your local Intel representatives.	
US Government	FIPS, FISMA	
Product Safety	UL, C-UL, CB (IEC 60950-1)	
Model Numbers		
Models	9462NGW	802.11ac wave 2, 1x1, Bluetooth* 5, PCIe, USB, M.2 2230, Diversity Antenna
	9462D2W	802.11ac wave 2, 1x1, Bluetooth* 5, PCIe, USB, M.2 1216, Diversity Antenna
Frequency Modulation	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
Spatial streams	Intel® Wireless-AC 9462: 1 X 1	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11ac Data Rates	433 Mbps when using 80MHz channels	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	

Intel® Wireless-AC 9560 (Models 9560NGW / 9560D2W)

General	
Dimensions (H x W x D)	- M.2 2230: 22 mm x 30 mm x 2.4 mm - M.2 1216: 12 mm x 16 mm x 1.8 mm
Weight	- M.2 2230: 2.6g - M.2 1216: 0.6g

Antenna Diversity	Supported	
Radio ON/OFF Control	Supported	
Connector Interface	M.2: CNVio	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)	
Operating Systems	Microsoft Windows 10*, Linux* (limited feature support), Chrome*	
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* a/b/g/n/ac with wave 2 features, WMM*, WMM-PS*, WPA*, WPA2*, WPS2*, Protected Management Frames, Wi-Fi Miracast* as Source, and Wi-Fi Direct* (For Microsoft Windows* only).	
IEEE WLAN Standard	IEEE 802.11a/b/g/n/ac, 802.11d, 802.11e, 802.11h, 802.11i, 802.11w; 802.11r, 802.11k, 802.11v pending OS support; Fine Timing Measurement based on 802.11-2016	
Roaming	Supports seamless roaming between access points	
Bluetooth	Bluetooth* 5	
Security		
Authentication	WPA* and WPA2*, 802.1X (EAP-TLS, TTLS, PEAP, EAP-SIM, EAP-AKA, EAP-AKA)	
Authentication Protocols	PAP, CHAP, TLS, MS-CHAP*, MS-CHAPv2*	
Encryption	64-bit and 128-bit WEP, 128-bit AES-CCMP	
Wi-Fi Direct* Encryption and Authentication	WPA2-PSK, AES-CCMP	
Compliance		
US Government	FIPS, FISMA	
Product Safety	UL, C-UL, CB (IEC 60950-1)	
Model Numbers		
Models	9560NGW	802.11ac wave 2, 2x2, Bluetooth* 5, PCIe, USB, M.2 2230
	9560D2W	802.11ac wave 2, 2x2, Bluetooth* 5, PCIe, USB, M.2 1216
Frequency Modulation	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	All channels as defined by the relevant specification and country rules.	
Spatial streams	Intel® Wireless-AC 9560: 2 X 2	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11ac Data Rates	1.73 Gbps when using 160MHz channels	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	

IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps

Intel® Tri-Band Wireless-AC 17265 (17265NGW / 17265NGW LC)

Form Factors	M.2 Type 3030		
Electrical interfaces	M.2 Key 1-DP: 2xPCIe, USB, DP. Interface to Intel® Wireless Gigabit-Antenna M10041 Module using X-FL, and one dedicated for Bluetooth		
Antenna Interface Connector	X.FL; Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066		
Antenna Diversity	On-board diversity		
IEEE 802.11 Networking Standards	802.11ac, 802.11ad, 802.11abgn, 802.11a, 802.11d, 802.11e, 802.11i, 802.11h, 802.11w		
Operating Temperature	0 to +80 degrees Celsius		
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)		
Frequency Modulation	60GHz (802.11ad)	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	57GHz - 64GHz (dependent on country)	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	DPSK, BPSK, QPSK, 16 QAM,	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	DMG control PHY, DMG SC PHY	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	1, 2 and 3, subject to country rules	All channels as defined by the relevant specification and country rules.	
Spatial streams	N/A	Intel® Tri-Band Wireless-AC 17265	
Data Rates	All data rates are theoretical maximums.		
IEEE 802.11ac Data Rates	Intel® Tri-Band Wireless-AC 17265: Up to 867 Mbps		
IEEE 802.11ad Data Rates	4620, 3850, 3080, 2503, 2310, 1925, 1540, 1251, 1155, 963, 770, 385 Mbps		
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2		
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps		
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps		
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps		
Bluetooth	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE)		
General			
Operating Systems	Microsoft Windows 7*, Microsoft Windows 8.1* with connected standby		
Wi-Fi Alliance*	Wi-Fi CERTIFIED* for 802.11ac, a/b/g, n, WMM*, WPA*, WPA2*, and WPS, WPS 2.0,		

certification	Protected Management Frames. Wi-Fi Direct* for peer-to-peer device connections.
Architecture	Infrastructure and SoftAP; Supports simultaneous Client and SoftAP modes
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0
Security	
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2
Encryption	64-bit and 128-bit WEP, AES-CCMP, AES-GCMP, TKIP
Wi-Fi Direct* Encryption and Authentication	WPA2, AES-CCMP
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)

Intel® Tri-Band Wireless-AC 17265 (17265NGW / 17265NGW LC)

Form Factors	M.2 Type 3030		
Electrical interfaces	M.2 Key 1-DP: 2xPCIe, USB, DP. Interface to Intel® Wireless Gigabit-Antenna M10041 Module using X-FL, and one dedicated for Bluetooth		
Antenna Interface Connector	X.FL; Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066		
Antenna Diversity	On-board diversity		
IEEE 802.11 Networking Standards	802.11ac, 802.11ad, 802.11abgn, 802.11a, 802.11d, 802.11e, 802.11i, 802.11h, 802.11w		
Operating Temperature	0 to +80 degrees Celsius		
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)		
Frequency Modulation	60GHz (802.11ad)	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	57GHz - 64GHz (dependent on country)	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	DPSK, BPSK, QPSK, 16 QAM,	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	DMG control PHY, DMG SC PHY	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	1, 2 and 3, subject to country rules	All channels as defined by the relevant specification and country rules.	
Spatial streams	N/A	Intel® Tri-Band Wireless-AC 17265	
Data Rates	All data rates are theoretical maximums.		
IEEE 802.11ac Data Rates	Intel® Tri-Band Wireless-AC 17265: Up to 867 Mbps		
IEEE 802.11ad Data Rates	4620, 3850, 3080, 2503, 2310, 1925, 1540, 1251, 1155, 963, 770, 385 Mbps		
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2		

IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps
Bluetooth	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE)
General	
Operating Systems	Microsoft Windows 7*, Microsoft Windows 8.1* with connected standby
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* for 802.11ac, a/b/g, n, WMM*, WPA*, WPA2*, and WPS, WPS 2.0, Protected Management Frames. Wi-Fi Direct* for peer-to-peer device connections.
Architecture	Infrastructure and SoftAP; Supports simultaneous Client and SoftAP modes
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0
Security	
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2
Encryption	64-bit and 128-bit WEP, AES-CCMP, AES-GCMP, TKIP
Wi-Fi Direct* Encryption and Authentication	WPA2, AES-CCMP
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)

Intel® Tri-Band Wireless-AC 18260 (18260NGW)

Form Factors	M.2 Type 2230		
Electrical interfaces	M.2 Key 1-DP: 2xPCIe, USB, DP. Interface to Intel® Wireless Gigabit-Antenna M10041 or M10042 Module using X-FL (single coax cable to carry power, IF and control)		
Dimensions	22 mm x 30 mm x S3 [1.5mm Max (Top Side)/ 0.1mm max (bottom side)]		
Antenna Interface Connector	X.FL; Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066		
Antenna Diversity	On-board diversity		
IEEE 802.11 Networking Standards	IEEE 802.11abgn, 802.11ac, 802.11ad, 802.11d, 802.11e, 802.11i, 802.11h, 802.11w		
Operating Temperature	0 to +80 degrees Celsius		
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)		
Frequency Modulation	60GHz (802.11ad)	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	57GHz - 64GHz (dependent on country)	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	DPSK, BPSK, QPSK, 16 QAM,	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	DMG control PHY,	5GHz UNII: Orthogonal	2.4GHz ISM: Orthogonal

	DMG SC PHY	Frequency Division Multiplexing (OFDM)	Frequency Division Multiplexing (OFDM)
Channels	1, 2 and 3, subject to country rules	All channels as defined by the relevant specification and country rules.	
Spatial streams	N/A	Intel® Tri-Band Wireless-AC 18260	
Data Rates	All data rates are theoretical maximums.		
IEEE 802.11ac Data Rates	Intel® Tri-Band Wireless-AC 18260: Up to 867 Mbps		
IEEE 802.11ad Data Rates	4620, 3850, 3080, 2503, 2310, 1925, 1540, 1251, 1155, 963, 770, 385 Mbps		
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2		
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps		
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps		
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps		
Bluetooth	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE), 4.1		
General			
Operating Systems	Microsoft Windows 7*, Microsoft Windows 8.1* with connected standby		
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* for 802.11ac, a/b/g, n, WMM*, WPA*, WPA2*, and WPS, WPS 2.0, Protected Management Frames. Wi-Fi Direct* for peer-to-peer device connections.		
Architecture	Infrastructure and SoftAP; Supports simultaneous Client and SoftAP modes		
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0		
Security			
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA		
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2		
Encryption	64-bit and 128-bit WEP, AES-CCMP, AES-GCMP, TKIP		
Wi-Fi Direct* Encryption and Authentication	WPA2, AES-CCMP		
Product Safety	UL, C-UL, CB (IEC/EN 60950-1)		

Intel® Tri-Band Wireless-AC 18265 (18265NGW)

General	
Dimensions (H x W x D)	M.2 2230: 22 mm x 30 mm x 2.4 mm [1.5mm Max (Top Side)/ 0.1mm Max (Bottom Side)]
Weight	M.2 2230: 2.4g
Antenna Diversity	Supported
Radio ON/OFF Control	Supported
Connector interface	M.2: PCIe, USB Interface to Intel® Wireless Gigabit-Antenna M10101 Module using X-FL (single coax cable to carry power, IF and control)

Operating Temperature (Adapter Shield)	0 to +80 °C		
Humidity Non-Operating	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)		
Operating Systems	Microsoft Windows 7*, Microsoft Windows 8.1*, Microsoft Windows 10, Linux* (limited feature support), Android		
Wi-Fi Alliance	Wi-Fi CERTIFIED* a/b/g/n/ac, WMM*, WMM-PS*, WPA*, WPA2*, WPS2, Protected Management Frames, Wi-Fi Direct* for peer to peer device connections, Wi-Fi Miracast as Source		
IEEE WLAN Standard	IEEE 802.11a/b/g/n/ac, 802.11d, 802.11e, 802.11h, 802.11i, 802.11w; 802.11r, 802.11k, 802.11v pending OS support; Fine Timing Measurement based on 802.11REVmc		
Roaming	Supports seamless roaming between respective access points		
Bluetooth	Dual Mode Bluetooth* 4.2, BLE		
Frequency Modulation	60GHz (802.11ad)	5GHz (802.11ac/n)	2.4GHz (802.11b/g/n)
Frequency band	57GHz - 64GHz (dependent on country)	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	DPSK, BPSK, QPSK, 16 QAM,	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	CCK, DQPSK, DBPSK
Wireless Medium	DMG control PHY, DMG SC PHY	5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM)	2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM)
Channels	1, 2 and 3, subject to country rules	All channels as defined by the relevant specification and country rules.	
Spatial streams	N/A	Intel® Tri-Band Wireless-AC 18265	
Data Rates	All data rates are theoretical maximums.		
IEEE 802.11ac Data Rates	Up to 867 Mbps		
IEEE 802.11ad Data Rates	4620, 3850, 3080, 2503, 2310, 1925, 1540, 1251, 1155, 963, 770, 385 Mbps		
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2		
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps		
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps		
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps		
Security			
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP), EAP-SIM, EAP-AKA		
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2		
Encryption	64-bit and 128-bit WEP, AES-CCMP		
Wi-Fi Direct* Encryption and Authentication	WPA2-PSK, AES-CCMP		
Compliance			

Product Safety	UL, C-UL, CB (IEC 60950-1)
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Intel® Wireless Gigabit Sink W13100

Form Factors	M.2 Type 3030
Electrical interfaces	M.2 Key 1-DP: 2xPCIe, USB, DP. Interface to Intel® Wireless Gigabit-Antenna M10041 Module using X-FL, and one dedicated for Bluetooth
Antenna Interface Connector	X.FL
Antenna Diversity	On-board diversity
IEEE 802.11 Networking Standards	802.11ac, 802.11ad, 802.11abgn, 802.11a, 802.11d, 802.11e, 802.11i, 802.11h, 802.11w
Operating Temperature	0 to +80 degrees Celsius
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)
Frequency Modulation	60GHz (802.11ad)
Frequency band	57GHz - 64GHz (dependent on country)
Modulation	DPSK, BPSK, QPSK, 16 QAM,
Wireless Medium	DMG control PHY, DMG SC PHY
Channels	1, 2 and 3, subject to country rules
Spatial streams	Intel® Wireless Gigabit Sink W13100
Data Rates	All data rates are theoretical maximums.
IEEE 802.11ad Data Rates	4620, 3850, 3080, 2503, 2310, 1925, 1540, 1251, 1155, 963, 770, 385 Mbps
Over-the-Air Security	
Authentication	WPA2-Personal (WSC - WiFi Simple Configuration)
Encryption	128-bit AES-GCMP
Additional Crypto Functions	
Public Key Decrypt	RSA-2048
General	
Operating Systems	Microsoft Windows 7*, Microsoft Windows 8.1* with connected standby
Architecture	Infrastructure and SoftAP; Supports simultaneous Client and SoftAP modes
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0

Intel® Wireless Gigabit 11000

Dimensions	20.5 mm x 14.2 mm x 1.8 mm (shield included)
Weight	2 grams
Electrical interfaces	Soldered module has a proprietary land plan. Interface to Intel® Wireless Gigabit Antenna-M 10042R using X-FL (single coax cable to carry power, IF and control)
Antenna Interface Connector	X.FL
Antenna Diversity	On-board diversity
IEEE 802.11 Networking Standards	802.11ad

Operating Temperature	0 to +80 degrees Celsius
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)
Frequency Modulation	60GHz (802.11ad)
Frequency band	57GHz - 64GHz (dependent on country)
Modulation	DPSK, BPSK, QPSK, 16 QAM,
Channels	1, 2 and 3, subject to country rules
Data Rates	All data rates are theoretical maximums.
IEEE 802.11ad Data Rates	4620, 3850, 3080, 2503, 2310, 1925, 1540, 1251, 1155, 963, 770, 385 Mbps
Over-the-Air Security	
Authentication	WPA2-Personal (WSC - WiFi Simple Configuration)
Encryption	128-bit AES-GCMP
Additional Crypto Functions	
Public Key Decrypt	RSA-2048
General	
Operating Systems	Microsoft Windows 7*, Microsoft Windows 8.1* with connected standby, Microsoft Windows 10* with connected standby

Intel® Wireless Gigabit Sink W13110VR

Dimensions (H x W x D)	M.2 4230: 42 mm x 30 mm x 2.6 mm [1.5 mm Max (Top Side)/ 0.1 mm Max (Bottom Side)]
Weight	5.16 grams
Radio ON/OFF Control	Hardware Support
Electrical interfaces	M.2 Key G (User Defined). Interface to Intel® Wireless Gigabit Antenna-M 10101 Module using X-FL (single coax cable to carry power, IF and control), up to 2 modules
LEDs & GPIO Support	Driving 2 LEDs or Multicolor LED with 4 states, Recovery button, Activity button with configurable action
Antenna Diversity	On-board diversity
IEEE 802.11 Networking Standards	802.11ad
Operating Temperature (Adapter Shield)	0 to +80 degrees Celsius
Humidity Non-Operating	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)
Frequency Modulation	60GHz (802.11ad)
Frequency band	57GHz - 64GHz (dependent on country)
Modulation	DPSK, BPSK, QPSK, 16 QAM,
Channels	1, 2 and 3, subject to country rules
Data Rates	All data rates are theoretical maximums.
IEEE 802.11ad	4620, 3850, 3080, 2503, 2310, 1925, 1540, 1251, 1155, 963, 770, 385 Mbps

Data Rates	
Operating Systems	None
Wi-Fi Alliance* certification	N/A
Over-the-Air Security	
Authentication	WPA2-Personal (WSC - WiFi Simple Configuration)
Encryption	128-bit AES-GCMP
Additional Crypto Functions	
Public Key Decrypt	RSA-2048
Intel® Wireless Gigabit Antenna-M 10101R Module	
Dimensions (H x W x D)	7 mm x 19.3 mm x 1.8 mm
Weight	1 gram
Antenna Connector Interface	X.FL
Operating Temperature (Adapter Shield)	0 to +80 degrees Celsius
Humidity Non-Operating	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)

Intel® Wireless Gigabit 11100VR

Dimensions (H x W x D)	20.5 mm x 14.2 mm x 1.8 mm (shield included)
Weight	2 grams
Radio ON/OFF Control	Supported in both hardware and software
Electrical interfaces	Soldered module has a proprietary land plan. Interface to Intel® Wireless Gigabit Antenna-M 10042 Module using X-FL (single coax cable to carry power, IF and control)
LED Output	On/Off
IEEE 802.11 Networking Standards	802.11ad
Operating Temperature (Adapter Shield)	0 to +80 degrees Celsius
Humidity Non-Operating	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)
Frequency Modulation	60GHz (802.11ad)
Frequency band	57GHz - 64GHz (dependent on country)
Modulation	DPSK, BPSK, QPSK, 16 QAM,
Channels	1, 2 and 3, subject to country rules
Data Rates	All data rates are theoretical maximums.
IEEE 802.11ad Data Rates	4620, 3850, 3080, 2503, 2310, 1925, 1540, 1251, 1155, 963, 770, 385 Mbps
Operating Systems	Microsoft Windows 10* with connected standby

Over-the-Air Security	
Authentication	WPA2-Personal (WSC - WiFi Simple Configuration)
Encryption	128-bit AES-GCMP
Additional Crypto Functions	
Public Key Decrypt	RSA-2048
Intel® Wireless Gigabit Antenna -M 10042R Module	
Dimensions (H x W x D)	7.5 mm x 24.5 mm x 1.8 mm
Weight	1 gram
Antenna Connector Interface	X.FL
Operating Temperature (Adapter Shield)	0 to +80 degrees Celsius
Humidity Non-Operating	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)

Intel® Wi-Fi 6 AX200 (Models AX200NGW / AX200D2WL)

General	
Dimensions (H x W x D)	- M.2 2230: 22 mm x 30 mm x 2.4 mm [1.5 mm max (top side)/ 0.1 mm max (bottom side)] - M.2 1216: 12 mm x 16 mm x 1.65 (±0.08) mm
Weight	- M.2 2230: 2.33 (±0.3) g - M.2 1216: 0.61 (±0.1) g
Radio ON/OFF Control	Supported
Connector Interface	M.2: PCIe, USB
Operating Temperature	0 to +80 degrees Celsius
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)
Operating Systems	Microsoft Windows 10*, Linux*, Chrome OS*
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* a/b/g/n/ac with wave 2 features, WMM*, WMM-PS*, WPA*, WPA2*, WPS*, PMF*, Wi-Fi Direct*, Wi-Fi Miracast*, Wi-Fi Agile Multiband*, Wi-Fi Optimized Connectivity*, Wi-Fi Location*, Passpoint*, Wi-Fi Aware*, and Wi-Fi TimeSync*
IEEE WLAN Standard	IEEE 802.11-2016 and select amendments (selected feature coverage) IEEE 802.11a, b, g, n, ac, ax, d, e, h, i, k, r, u, v, w, ai; Fine Timing Measurement based on 802.11-2016
Bluetooth	Bluetooth* 5
Security	
Authentication	WPA* and WPA2* Personal and Enterprise; WPA3* (pending OS support)
Authentication Protocols	802.1X EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA')
Encryption	64-bit and 128-bit WEP, TKIP, 128-bit AES-CCMP, 256-bit AES-GCMP

Compliance		
Regulatory	For a list of country approvals, please contact your local Intel representatives.	
US Government	FIPS 140-2, FISMA	
Product Safety	UL, C-UL, CB (IEC 60950-1)	
Model Numbers		
Models	Model AX200NGW	802.11ax, 2x2, Bluetooth* 5, M.2 2230
	Model AX200D2WL	802.11ax, 2x2, Bluetooth* 5, M.2 1216; LTE Coexistence
Frequency Modulation	5GHz (802.11a/n/ac/ax)	2.4GHz (802.11b/g/n/ax)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024 QAM	CCK, DQPSK, DBPSK, 16 QAM, 64 QAM, 256 QAM, 1024 QAM
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiple Access (OFDMA)	2.4GHz ISM: Orthogonal Frequency Division Multiple Access (OFDMA)
Channels	All channels as defined by the relevant specification and country rules.	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11ax Data Rates	Up to 2.4 Gbps	
IEEE 802.11ac Data Rates	Up to 867 Mbps	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps	

Intel® Wi-Fi 6 AX201 (Models AX201NGW / AX201D2W / AX201D2WL)

General	
Dimensions (H x W x D)	- M.2 2230: 22 mm x 30 mm x 2.4 mm [1.5 mm max (top side)/ 0.1 mm max (bottom side)] - M.2 1216: 12 mm x 16 mm x 1.65 (±0.05) mm
Weight	- M.2 2230: 2.33 (±0.3) g - M.2 1216: 0.61 (±0.1) g
Radio ON/OFF Control	Supported
Connector Interface	M.2: CNVio2

Operating Temperature	0 to +80 degrees Celsius	
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)	
Operating Systems	Microsoft Windows 10*, Linux*, Chrome OS*	
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* a/b/g/n/ac with wave 2 features, WMM*, WMM-PS*, WPA*, WPA2*, WPS*, PMF*, Wi-Fi Direct*, Wi-Fi Miracast*, Wi-Fi Agile Multiband*, Wi-Fi Optimized Connectivity*, Wi-Fi Location*, Passpoint*, Wi-Fi Aware*, and Wi-Fi TimeSync*	
IEEE WLAN Standard	IEEE 802.11-2016 and select amendments (selected feature coverage) IEEE 802.11a, b, g, n, ac, ax, d, e, h, i, k, r, u, v, w, ai; Fine Timing Measurement based on 802.11-2016	
Bluetooth	Bluetooth* 5	
Security		
Authentication	WPA* and WPA2* Personal and Enterprise; WPA3* (pending OS support)	
Authentication Protocols	802.1X EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA')	
Encryption	64-bit and 128-bit WEP, TKIP, 128-bit AES-CCMP, 256-bit AES-GCMP	
Compliance		
Regulatory	For a list of country approvals, please contact your local Intel representatives.	
US Government	FIPS 140-2, FISMA	
Product Safety	UL, C-UL, CB (IEC 60950-1)	
Model Numbers		
Models	Model AX201NGW	802.11ax, 2x2, Bluetooth* 5, M.2 2230
	Model AX201D2W	802.11ax, 2x2, Bluetooth* 5, M.2 1216
	Model AX201D2WL	802.11ax, 2x2, Bluetooth* 5, M.2 1216; LTE Coexistence
Frequency Modulation	5GHz (802.11a/n/ac/ax)	2.4GHz (802.11b/g/n/ax)
Frequency band	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024 QAM	CCK, DQPSK, DBPSK, 16 QAM, 64 QAM, 256 QAM, 1024 QAM
Wireless Medium	5GHz UNII: Orthogonal Frequency Division Multiple Access (OFDMA)	2.4GHz ISM: Orthogonal Frequency Division Multiple Access (OFDMA)
Channels	All channels as defined by the relevant specification and country rules.	
Data Rates	All data rates are theoretical maximums.	
IEEE 802.11ax Data Rates	Up to 2.4 Gbps	
IEEE 802.11ac Data Rates	Up to 867 Mbps	
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2	
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	
IEEE 802.11g	54, 48, 36, 24, 18, 12, 9, 6 Mbps	

Data Rates	
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps

Intel® Wi-Fi 6E AX210 (Models AX210NGW / AX210D2W)

General			
Dimensions (H x W x D)	- M.2 2230: 22 mm x 30 mm x 2.4 mm [1.5 mm max (top side)/ 0.1 mm max (bottom side)] - M.2 1216: 12 mm x 16 mm x 1.65 (±0.08) mm		
Weight	- M.2 2230: 2.33 (±0.3) g - M.2 1216: 0.61 (±0.1) g		
Radio ON/OFF Control	Supported		
Connector Interface	M.2: PCIe, USB		
Operating Temperature	0 to +80 degrees Celsius		
Humidity	50% to 90% RH non-condensing (at temperatures of 25 °C to 35 °C)		
Operating Systems	Microsoft Windows 10*, Linux*		
Wi-Fi Alliance* certification	Wi-Fi CERTIFIED* a/b/g/n/ac, WMM*, WMM-PS*, WPA2*, WPA3*, WPS*, PMF*, Wi-Fi Direct*, Wi-Fi Agile Multiband* and Wi-Fi TimeSync*		
IEEE WLAN Standard	IEEE 802.11-2016 and select amendments (selected feature coverage) IEEE 802.11a, b, g, n, ac, ax, d, e, h, i, k, r, u, v, w; Fine Timing Measurement based on 802.11-2016 802.11-2016, Wi-Fi Location R2 (802.11az) HW readiness		
Bluetooth	Bluetooth* 5.2		
Security			
Authentication	WPA2* and WPA3*		
Authentication Protocols	802.1X EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA')		
Encryption	128-bit AES-CCMP, 256-bit AES-GCMP		
Compliance			
Regulatory	For a list of country approvals, please contact your local Intel representatives.		
US Government	FIPS 140-2		
Product Safety	UL, C-UL, CB (IEC 60950-1)		
Model Numbers			
Models	Model AX210NGW	Wi-Fi 6E (6GHz), 2x2, Bluetooth* 5.2, M.2 2230	
	Model AX210D2W	Wi-Fi 6E (6GHz), 2x2, Bluetooth* 5.2, M.2 1216	

Frequency Modulation	6GHz (802.11ax)	5GHz (802.11a/n/ac/ax)	2.4GHz (802.11b/g/n/ax)
Frequency band	xxxx	5.15GHz - 5.85GHz (dependent on country)	2.400 - 2.4835GHz (dependent on country)
Modulation	xxxx	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024 QAM	CCK, DQPSK, DBPSK, 16 QAM, 64 QAM, 256 QAM, 1024 QAM
Wireless Medium	xxxx	5GHz UNII: Orthogonal Frequency Division Multiple Access (OFDMA)	2.4GHz ISM: Orthogonal Frequency Division Multiple Access (OFDMA)
Channels	All channels as defined by the relevant specification and country rules.		
Data Rates	All data rates are theoretical maximums.		
IEEE 802.11ax Data Rates	Up to 2.4 Gbps		
IEEE 802.11ac Data Rates	Up to 867 Mbps		
IEEE 802.11n Data Rates	Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2		
IEEE 802.11a Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps		
IEEE 802.11g Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps		
IEEE 802.11b Data Rates	11, 5.5, 2, 1 Mbps		

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Customer Support

Intel support is available online or by telephone. Available services include the most up-to-date product information, installation instructions about specific products, and troubleshooting tips.

Online Support

Technical Support: <http://www.intel.com/support>

Network Product Support: <http://www.intel.com/network>

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Warranty Information

One-Year Limited Hardware Warranty

Limited Warranty

In this warranty statement, the term "Product" applies to the wireless adapters listed in [Specifications](#).

Intel warrants to the purchaser of the Product that the Product, if properly used and installed, will be free from defects in material and workmanship and will substantially conform to Intel's publicly available specifications for the Product for a period of one (1) year beginning on the date the Product was purchased in its original sealed packaging.

SOFTWARE OF ANY KIND DELIVERED WITH OR AS PART OF THE PRODUCT IS EXPRESSLY PROVIDED "AS IS", SPECIFICALLY EXCLUDING ALL OTHER WARRANTIES, EXPRESS, IMPLIED (INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE), provided however, that Intel warrants that the media on which the software is furnished will be free from defects for a period of ninety (90) days from the date of delivery. If such a defect appears within the warranty period, you may return the defective media to Intel for replacement or alternative delivery of the software at Intel's discretion and without charge. Intel does not warrant or assume responsibility for the accuracy or completeness of any information, text, graphics, links or other items contained within the software.

If the Product which is the subject of this Limited Warranty fails during the warranty period for reasons covered by this Limited Warranty, Intel, at its option, will:

- **REPAIR** the Product by means of hardware and/or software; OR
- **REPLACE** the Product with another product, OR, if Intel is unable to repair or replace the Product,
- **REFUND** the then-current Intel price for the Product at the time a claim for warranty service is made to Intel under this Limited Warranty.

THIS LIMITED WARRANTY, AND ANY IMPLIED WARRANTIES THAT MAY EXIST UNDER APPLICABLE STATE, NATIONAL, PROVINCIAL OR LOCAL LAW, APPLY ONLY TO YOU AS THE ORIGINAL PURCHASER OF THE PRODUCT.

Extent of Limited Warranty

Intel does not warrant that the Product, whether purchased stand-alone or integrated with other products, including without limitation, semi-conductor components, will be free from design defects or errors known as "errata." Current characterized errata are available upon request. Further, this Limited Warranty does NOT cover: (i) any costs associated with the replacement or repair of the Product, including labor, installation or other costs incurred by you, and in particular, any costs relating to the removal or replacement of any Product soldered or otherwise permanently affixed to any printed circuit board or integrated with other products; (ii) damage to the Product due to external causes, including accident, problems with electrical power, abnormal, mechanical or environmental conditions, usage not in accordance with product instructions, misuse, neglect, accident, abuse, alteration, repair, improper or unauthorized installation or improper testing, or (iii) any Product which has been modified or operated outside of Intel's publicly available specifications or where the original product identification markings (trademark or serial number) have been removed, altered or obliterated from the Product; or (iv) issues resulting from modification (other than by Intel) of software products provided or included in the Product, (v) incorporation of software products, other than those software products provided or included in the Product by Intel, or (vi) failure to apply Intel-supplied modifications or corrections to any software provided with or included in the Product.

How to Obtain Warranty Service

To obtain warranty service for the Product, you may contact your original place of purchase in accordance with its instructions or you may contact Intel. To request warranty service from Intel, you must contact the Intel Customer Support ("ICS") center in your region (<http://www.intel.com/support/wireless/>) within the warranty period during normal business hours (local time), excluding holidays and return the Product to the designated ICS center. Please

be prepared to provide: (1) your name, mailing address, email address, telephone numbers and, in the USA, valid credit card information; (2) proof of purchase; (3) model name and product identification number found on the Product; and (4) an explanation of the problem. The Customer Service Representative may need additional information from you depending on the nature of the problem. Upon ICS's verification that the Product is eligible for warranty service, you will be issued a Return Material Authorization ("RMA") number and provided with instructions for returning the Product to the designated ICS center. When you return the Product to the ICS center, you must include the RMA number on the outside of the package. Intel will not accept any returned Product without an RMA number, or that has an invalid RMA number, on the package. You must deliver the returned Product to the designated ICS center in the original or equivalent packaging, with shipping charges pre-paid (within the USA), and assume the risk of damage or loss during shipment. Intel may elect to repair or replace the Product with either a new or reconditioned Product or components, as Intel deems appropriate. The repaired or replaced product will be shipped to you at the expense of Intel within a reasonable period of time after receipt of the returned Product by ICS. The returned Product shall become Intel's property on receipt by ICS. The replacement product is warranted under this written warranty and is subject to the same limitations of liability and exclusions for ninety (90) days or the remainder of the original warranty period, whichever is longer. If Intel replaces the Product, the Limited Warranty period for the replacement Product is not extended.

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IMPORTANT! UNLESS OTHERWISE AGREED IN WRITING BY INTEL, THE INTEL PRODUCTS SOLD HEREUNDER ARE NOT DESIGNED, OR INTENDED FOR USE IN ANY MEDICAL, LIFE SAVING OR LIFE SUSTAINING SYSTEMS, TRANSPORTATION SYSTEMS, NUCLEAR SYSTEMS, OR FOR ANY OTHER MISSION CRITICAL APPLICATION IN WHICH THE FAILURE OF THE INTEL PRODUCT COULD CREATE A SITUATION WHERE PERSONAL INJURY OR DEATH MAY OCCUR.

WEEE



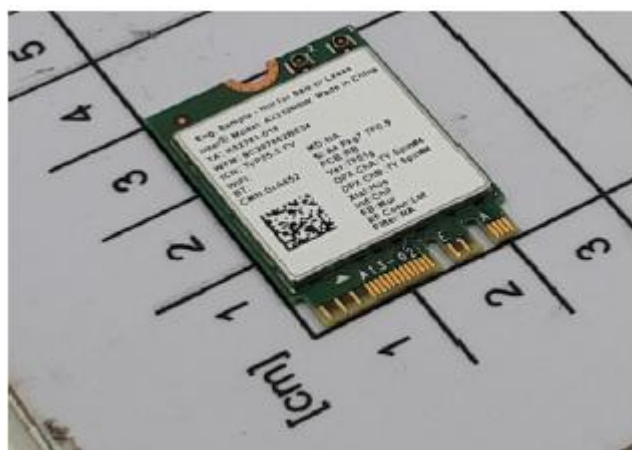
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Foto do Selo Anatel

Modelo: AX210NGW



ADENDO AO MANUAL

Modelo: AX210NGW

Para maiores informações, consulte o site da ANATEL www.anatel.gov.br

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados

**“Este produto contém a placa AX210NGW código de
Homologação 14242-20-04423.”**

ADENDO AO MANUAL

Modelo: AX210NGW

Para maiores informações, consulte o site da ANATEL www.anatel.gov.br

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados



República Federativa do Brasil
Agência Nacional de Telecomunicações

Certificado de Homologação

(Intransferível)

Nº **14242-20-04423**

Validade: **Indeterminada**

Emissão: **22/08/2022**

Requerente:

CNPJ: **57.286.247/0001-33**

INTEL SEMICONDUCTORES DO BRASIL LTDA

Fabricante:

INTEL CORPORATION SAS

425 RUE DE GOA, CARGO B6

Nº

06600

FRANCA

Este documento homologa, nos termos da regulamentação de telecomunicações vigente, o Certificado de Conformidade nº 00126264, emitido pelo Instituto Brasileiro de Certificação para produtos de Telecomunicações. Esta homologação é expedida em nome do solicitante aqui identificado e é válida somente para o produto a seguir discriminado, cuja utilização deve observar as condições estabelecidas na regulamentação de telecomunicações.

Tipo - Categoria:

Transceptor de Radiação Restrita - II

Modelo - Nome Comercial (s):

AX210NGW

Características técnicas básicas:

Potência Máxima de Saída (W)	Designação de Emissões	Tipo de Modulação	Tecnologias	Faixa de Frequências Tx (MHz)
0,0107	882KF7D	GFSK	SALTO EM FREQUÊNCIA	2.400,0 a 2.483,5
0,0078	1M41G7D	1/4DQPSK e 8DPSK	SALTO EM FREQUÊNCIA	2.400,0 a 2.483,5
0,0036	678KF7D	GFSK	SEQUÊNCIA DIRETA	2.400,0 a 2.483,5
0,0036	1M15F7D	GFSK	SEQUÊNCIA DIRETA	2.400,0 a 2.483,5
0,291	10M3X9D	DBPSK, DQPSK e CCK	SEQUÊNCIA DIRETA	2.400,0 a 2.483,5
0,534	16M3X9D	BPSK, QPSK, 16 QAM, 64 QAM	OFDM	2.400,0 a 2.483,5
0,516	17M5X9D	BPSK, QPSK, 16 QAM, 64 QAM	OFDM	2.400,0 a 2.483,5
0,244	35M9X9D	BPSK, QPSK, 16 QAM, 64 QAM	OFDM	2.400,0 a 2.483,5
0,174	18M4X9D	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	2.400,0 a 2.483,5
0,168	36M4X9D	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	2.400,0 a 2.483,5
0,199	15M1X9D	BPSK, QPSK, 16 QAM, 64 QAM	OFDM	5.725,0 a 5.850,0
0,234	16M3X9D	BPSK, QPSK, 16 QAM, 64 QAM	OFDM	5.725,0 a 5.850,0
0,196	35M1X9D	BPSK, QPSK, 16 QAM, 64 QAM	OFDM	5.725,0 a 5.850,0
0,234	16M3X9D	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.725,0 a 5.850,0
0,196	35M1X9D	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.725,0 a 5.850,0
0,102	76M4X9D	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.725,0 a 5.850,0
0,239	19M0X9D	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OFDM	5.725,0 a 5.850,0
0,193	38M0X9D	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.725,0 a 5.850,0
0,102	78M0X9D	BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.725,0 a 5.850,0
0,0799		BPSK, QPSK, 16 QAM, 64 QAM	OFDM	5.150,0 a 5.350,0
0,0936		BPSK, QPSK, 16 QAM, 64 QAM	OFDM	5.150,0 a 5.350,0
0,0951		BPSK, QPSK, 16 QAM, 64 QAM	OFDM	5.150,0 a 5.350,0
0,0936		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.150,0 a 5.350,0
0,0951		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.150,0 a 5.350,0
0,0921		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.150,0 a 5.350,0
0,085		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.150,0 a 5.350,0
0,0961		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.150,0 a 5.350,0
0,0754		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.150,0 a 5.350,0
0,0724		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.150,0 a 5.350,0
0,069		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.150,0 a 5.350,0
0,2064		BPSK, QPSK, 16 QAM, 64 QAM	OFDM	5.470,0 a 5.725,0
0,2025		BPSK, QPSK, 16 QAM, 64 QAM	OFDM	5.470,0 a 5.725,0
0,1573		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.470,0 a 5.725,0
0,2025		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.470,0 a 5.725,0
0,1573		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.470,0 a 5.725,0
0,1769		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.470,0 a 5.725,0
0,0975		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.470,0 a 5.725,0
0,201		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.470,0 a 5.725,0
0,2338		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.470,0 a 5.725,0

Potência Máxima de Saída (W)	Designação de Emissões	Tipo de Modulação	Tecnologias	Faixa de Frequências Tx (MHz)
0,1742		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.470,0 a 5.725,0
0,0577		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.470,0 a 5.725,0
0,0233		BPSK, QPSK, 16 QAM, 64 QAM	OFDM	5.925,0 a 7.125,0
0,023		BPSK, QPSK, 16 QAM, 64 QAM	OFDM	5.925,0 a 7.125,0
0,0515		BPSK, QPSK, 16 QAM, 64 QAM	OFDM	5.925,0 a 7.125,0
0,023		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.925,0 a 7.125,0
0,0515		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.925,0 a 7.125,0
0,1007		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.925,0 a 7.125,0
0,1797		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM	OFDM	5.925,0 a 7.125,0
0,0253		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.925,0 a 7.125,0
0,0525		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.925,0 a 7.125,0
0,0961		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.925,0 a 7.125,0
0,1704		BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM	OUTRAS	5.925,0 a 7.125,0
Ensaio de SAR não aplicável.				
Os valores de potências indicados nas faixas de 5150-5350 MHz e 5470-5725 MHz referem-se à potência média em E.I.R.P.				
Observações				
Produto não acabado, de uso interno, cuja integração em outros equipamentos pode requerer nova avaliação.				
Este produto destina-se ao uso profissional, manuseado por pessoal devidamente qualificado, não sendo destinado ao uso do público em geral para acesso a serviço de telecomunicações de interesse coletivo.				
Na instalação do produto devem ser observadas as condições de uso conforme estabelecido no Regulamento sobre Equipamentos de Radiocomunicação de Radiação Restrita.				
Este certificado substitui o de mesmo número emitido em 11/07/2022				
Constitui obrigação do fabricante do produto no Brasil providenciar a identificação do produto homologado, nos termos da regulamentação de telecomunicações, em todas as unidades comercializadas, antes de sua efetiva distribuição ao mercado, assim como observar e manter as características técnicas que fundamentaram a certificação original.				
As informações constantes deste certificado de homologação podem ser confirmadas no SCH - Sistema de Gestão de Certificação e Homologação, disponível no portal da Anatel. (www.anatel.gov.br).				
Davidson Gonzaga da Silva Gerente de Certificação e Numeração				



República Federativa do Brasil
Agência Nacional de Telecomunicações

Certificado de Homologação

(Intransferível)

Nº **00711-22-06714**

Validade: Indeterminada

Emissão: 30/04/2024

Requerente:

CNPJ: 23.786.165/0001-36

ITC - INTELLIGENT TELECOM CERTIFICATION LTDA

Fabricante:

HUIZHOU GAOSHENGDA TECHNOLOGY CO., LTD.

NO. 2,JIN-DA ROAD HUINAN HIGH-TECH INDUSTRIAL PARK
Nº HUI-AO AVENUE, GUANGDONG

CHINA

Este documento homologa, nos termos da regulamentação de telecomunicações vigente, o Certificado de Conformidade nº UL-BR 22.0225, emitido pelo **UL do Brasil Certificações**. Esta homologação é expedida em nome do solicitante aqui identificado e é válida somente para o produto a seguir discriminado, cuja utilização deve observar as condições estabelecidas na regulamentação de telecomunicações.

Tipo - Categoria:

Transceptor de Radiação Restrita - II

Modelo - Nome Comercial (s):
WCT2GM2511

Características técnicas básicas:

Tipo de Modulação	Potência Máxima de Saída (W)	Designação de Emissões	Tecnologias	Faixa de Frequências Tx (MHz)
CCK, DQPSK, DBPSK	0,2217	8M8X9D	SEQUÊNCIA DIRETA	2.400,0 a 2.483,5
BPSK, QPSK, 16/64 QAM	0,7461	16M2X9D	OFDM	2.400,0 a 2.483,5
BPSK, QPSK, 16/64 QAM	0,6562	16M9X9D	OFDM	2.400,0 a 2.483,5
BPSK, QPSK, 16/64 QAM	0,7621	36M1X9D	OFDM	2.400,0 a 2.483,5
BPSK, QPSK, 16/64 QAM	0,5856	15M3X9D	OFDM	5.725,0 a 5.850,0
BPSK, QPSK, 16/64 QAM	0,5102	15M4X9D	OFDM	5.725,0 a 5.850,0
BPSK, QPSK, 16/64 QAM	0,5218	35M1X9D	OFDM	5.725,0 a 5.850,0
BPSK, QPSK, 16/64 QAM	0,6459	16M6X9D	OFDM	5.725,0 a 5.850,0
BPSK, QPSK, 16/64 QAM	0,6043	35M1X9D	OFDM	5.725,0 a 5.850,0
BPSK, QPSK, 16/64/256 QAM	0,4344	75M4X9D	OFDM	5.725,0 a 5.850,0
GFSK	0,0062	730Kf1D	SALTO EM FREQUÊNCIA	2.400,0 a 2.483,5
8DPSK	0,0042	1M2F1D	SALTO EM FREQUÊNCIA	2.400,0 a 2.483,5
GFSK	0,0054	680Kf1D	SEQUÊNCIA DIRETA	2.400,0 a 2.483,5
BPSK, QPSK, 16/64 QAM	0,0639	-	OFDM	5.150,0 a 5.350,0
BPSK, QPSK, 16/64 QAM	0,0661	-	OFDM	5.470,0 a 5.725,0
BPSK, QPSK, 16/64 QAM	0,0492	-	OFDM	5.150,0 a 5.350,0
BPSK, QPSK, 16/64 QAM	0,0455	-	OFDM	5.470,0 a 5.725,0
BPSK, QPSK, 16/64 QAM	0,023	-	OFDM	5.150,0 a 5.350,0
BPSK, QPSK, 16/64 QAM	0,06	-	OFDM	5.470,0 a 5.725,0
BPSK, QPSK, 16/64 QAM	0,0239	-	OFDM	5.150,0 a 5.350,0
BPSK, QPSK, 16/64 QAM	0,067	-	OFDM	5.470,0 a 5.725,0
BPSK, QPSK, 16/64 QAM	0,0229	-	OFDM	5.150,0 a 5.350,0
BPSK, QPSK, 16/64 QAM	0,061	-	OFDM	5.470,0 a 5.725,0
BPSK, QPSK, 16/64/256 QAM	0,0201	-	OFDM	5.150,0 a 5.350,0
BPSK, QPSK, 16/64/256 QAM	0,052	-	OFDM	5.470,0 a 5.725,0

Tensão de alimentação: 5 Vcc.

Antena interna.

Ganho da antena: BT: 2 dBi; 2,4 GHz: 3 dBi; 5 GHz: 4 dBi.

Ensaio de SAR não aplicável: produto não acabado, cuja incorporação em outro equipamento requer nova avaliação.

Observações

Na instalação do produto, devem ser observadas as condições de uso conforme estabelecido no Regulamento sobre Equipamentos de Radiocomunicação de Radiação Restrita.

Este certificado substitui o de mesmo número emitido em 19/07/2022

Constitui obrigação do fabricante do produto no Brasil providenciar a identificação do produto homologado, nos termos da regulamentação de telecomunicações, em todas as unidades comercializadas, antes de sua efetiva distribuição ao mercado, assim como observar e manter as características técnicas que fundamentaram a certificação original.

As informações constantes deste certificado de homologação podem ser confirmadas no SCH - Sistema de Gestão de Certificação e Homologação, disponível no portal da Anatel. (www.anatel.gov.br).

Davison Gonzaga da Silva
Gerente de Certificação e Numeração

CERTIFICADO DE CONFORMIDADE

CERTIFICATE OF CONFORMITY

Certificado No. / Certificate No. UL-BR 22.0225

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Solicitante / Applicant ITC- INTELLIGENT TELECOM CERTIFICATION LTDA
Av.da Emancipação, 3770 Bloco D
Jardim Santa Clara do Lago I – Hortolândia – São Paulo
CNPJ 23.786.165/0001-36

Produto Certificado / Certified Product Transceptor de Radiação Restrita

Modelo - Tipo / Model – Type WCT2GM2511

Lote ou No. de série / Lot or Serial number N/A

Categoria / Category Certificação - definição de tipo de produto conforme LISTA DE REFERÊNCIA DE PRODUTOS PARA TELECOMUNICAÇÕES

Tipo de Serviço / Service Type Radiocomunicação de Radiação Restrita.

Programa e versão / Software and version N/A

Avaliado segundo a(s) Norma(s) /
Evaluated according to: Resolução 680 de 27/06/2017 e Ato 14448 de 02/01/2018,
Resolution 680 of 06/27/2017 and Act 14448 of 01/02/2018

Relatório de Avaliação da Conformidade Técnica (RACT) #
/ Conformity Assessment Report # BR4325 / Vol. 1 / Sec. 13 / 2022

Emissão / Date of issue 16/02/2022

Revisão / Revision date

Validade / Expire date 15/02/2024

Original assinado por / Original signed by

Pedro Mottola
Program Owner

A UL do Brasil Certificações sendo um Organismo de Certificação Designado junto à ANATEL, segundo o Ato de Designação No 44.313, confirma que o produto está em conformidade com a(s) norma(s) acima descrita(s).

UL do Brasil Certificações as a Product Certification Organization Designated by ANATEL according to the register No.: 44.313, confirms that the product is in compliance with the standard(s) above mentioned.



Organismo de Certificação /
Certification Body

UL do Brasil Certificações
Av. Engenheiro Luís Carlos Berrini, 105 – 24º Andar
04571-010 – São Paulo – SP – Brasil
T: 55 11 30498300 / W: brazil.ul.com

41-IC-F0035 Rev. 7.0

CERTIFICADO DE CONFORMIDADE

CERTIFICATE OF CONFORMITY

Certificado No. / Certificate No. UL-BR 22.0225

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Apêndice / Appendix

ESTE CERTIFICADO É APLICÁVEL A / THIS CERTIFICATE APPLIES TO:

Fabricante / Manufacturer HUIZHOU GAOSHENGDA TECHNOLOGY CO.,LTD.
NO.2,JIN-DA ROAD,HUINAN HIGH-TECH INDUSTRIAL
PARK,HUI-AO AVENUE,HUIZHOU CITY,GUANGDONG,CHINA

Unidade Fabril / Factory Unit HUIZHOU GAOSHENGDA TECHNOLOGY CO.,LTD
NO.2,JIN-DA ROAD,HUINAN HIGH-TECH INDUSTRIAL
PARK,HUI-AO AVENUE,HUIZHOU CITY,GUANGDONG,CHINA

CARACTERÍSTICAS TÉCNICAS BÁSICAS / BASIC TECHNICAL CHARACTERISTICS

O produto é um módulo de rádio-frequência com as seguintes características técnicas:

WiFi 2400-2483,5 MHz, 5725-5850 MHz e BT EDR + LE

Faixa de Frequências (MHz)	Potência Máxima de Saída (W)	Designação de Emissões	Tecnologias	Tipo de Modulação	Velocidade de Transmissão (Mbps)	Padrão
2400 - 2483,5	0,2217	8M8X9D	Sequência Direta	CCK, DQPSK, DBPSK	11	802.11b
2400- 2483,5	0,7461	16M2X9D	OFDM	BPSK, QPSK, 16/64 QAM	54	802.11g
2400 - 2483,5	0,6562	16M9X9D	OFDM	BPSK, QPSK, 16/64 QAM	144,4	802.11n 20 MHz
2400 - 2483,5	0,7621	36M1X9D	OFDM	BPSK, QPSK, 16/64 QAM	300	802.11n 40 MHz
5725 - 5850	0,5856	15M3X9D	OFDM	BPSK, QPSK, 16/64 QAM	54	802.11a
5725 - 5850	0,5102	15M4X9D	OFDM	BPSK, QPSK, 16/64 QAM	144,4	802.11n 20 MHz
5725 - 5850	0,5218	35M1X9D	OFDM	BPSK, QPSK, 16/64 QAM	300	802.11n 40 MHz
5725 - 5850	0,6459	16M6X9D	OFDM	BPSK, QPSK, 16/64 QAM	173,3	802.11ac (BW 20 MHz)
5725 - 5850	0,6043	35M1X9D	OFDM	BPSK, QPSK, 16/64 QAM	400	802.11ac (BW 40 MHz)
5725 - 5850	0,4344	75M4X9D	OFDM	BPSK, QPSK, 16/64/256 QAM	866,7	802.11ac (BW 80 MHz)
2400 - 2483,5	0,0062	730kF1D	Salto em frequência	GFSK	3	BT EDR
2400 - 2483,5	0,0042	1M2F1D	Salto em frequência	8DPSK	3	BT EDR
2400 - 2483,5	0,0054	680kF1D	Sequência direta	GFSK	3	BT LE

WiFi 5150-5350 MHz e 5470 a 5725 MHz

Faixa de Frequências (MHz)	Potência Média E.I.R.P. (W)	Tecnologias	Tipo de Modulação	Velocidade de transmissão (Mbps)	Padrão
5150 a 5350	0,0639	OFDM	BPSK, QPSK, 16/64 QAM	54	802.11a

Organismo de Certificação /
Certification Body

UL do Brasil Certificações

Av. Engenheiro Luís Carlos Berrini, 105 – 24º Andar
04571-010 – São Paulo – SP – Brasil
T: 55 11 30498300 / W: brazil.ul.com

41-IC-F0035 Rev. 7.0

CERTIFICADO DE CONFORMIDADE

CERTIFICATE OF CONFORMITY

Certificado No. / Certificate No. UL-BR 22.0225

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5470 a 5725	0,0661	OFDM	BPSK, QPSK, 16/64 QAM	54	802.11a
5150 a 5350	0,0492	OFDM	BPSK, QPSK, 16/64 QAM	144,4	802.11 n BW 20 MHz
5470 a 5725	0,0455	OFDM	BPSK, QPSK, 16/64 QAM	144,4	802.11 n BW 20 MHz
5150 a 5350	0,0230	OFDM	BPSK, QPSK, 16/64 QAM	300	802.11 n BW 40 MHz
5470 a 5725	0,0600	OFDM	BPSK, QPSK, 16/64 QAM	300	802.11 n BW 40 MHz
5150 a 5350	0,0239	OFDM	BPSK, QPSK, 16/64 QAM	173,3	802.11ac (BW 20 MHz)
5470 a 5725	0,0670	OFDM	BPSK, QPSK, 16/64 QAM	173,3	802.11ac (BW 20 MHz)
5150 a 5350	0,0229	OFDM	BPSK, QPSK, 16/64 QAM	400	802.11ac (BW 40 MHz)
5470 a 5725	0,0610	OFDM	BPSK, QPSK, 16/64 QAM	400	802.11ac (BW 40 MHz)
5150 a 5350	0,0201	OFDM	BPSK, QPSK, 16/64/256 QAM	866,7	802.11ac (BW 80 MHz)
5470 a 5725	0,0520	OFDM	BPSK, QPSK, 16/64/256 QAM	866,7	802.11ac (BW 80 MHz)

Tensão de alimentação: 5 Vcc

Antena interna.

Ganho da antena:

BT:2dBi;

2.4G:3dBi;

5G:4dBi;

Ensaio de SAR não aplicável: produto não acabado, cuja incorporação em outro equipamento requer nova avaliação.

LABORATÓRIO DE ENSAIO / TESTING LABS

Relatório de ensaio emitido por	Número	Data
Laboratório IBEC	IBEC 212695	19/01/2022

INFORMAÇÕES ADICIONAIS / ADDITIONAL INFORMATION

- Os produtos objeto do certificado de conformidade estão sujeitos à comprovação periódica de que mantém as características originalmente certificadas. Para fins de comercialização e uso é necessária a homologação da Anatel conforme resolução nº 715 de 23 outubro 2019.
The products covered by the certificate of conformity, can be periodically evaluated in order to check if it maintains its original characteristics. Before the commercialization and use of the product covered by this certificate, it must be homologated by ANATEL, according resolution nº 715 from October 23th 2019.
- Este certificado aplica-se aos produtos ou equipamentos de telecomunicações idênticos à amostra avaliada e certificada, quaisquer modificações no projeto ou no processo de fabricação obrigam o responsável a informar a UL do Brasil.
This certificate applies to products or telecommunications equipment identical to sample assessed and certified. any changes in design or manufacturing undertake the responsible to inform at UL do Brasil Certificações.
- O requerente apresentou declaração em conformidade com os Requisitos de Segurança Cibernética para Equipamentos para Telecomunicações.
The applicant has submitted a declaration in compliance with the Cyber Security Requirements for Telecommunications Equipment.

Organismo de Certificação /
Certification Body

UL do Brasil Certificações

Av. Engenheiro Luís Carlos Berrini, 105 – 24º Andar
04571-010 – São Paulo – SP – Brasil
T: 55 11 30498300 / W: brazil.ul.com

41-IC-F0035 Rev. 7.0

CERTIFICADO DE CONFORMIDADE

CERTIFICATE OF CONFORMITY

Certificado No. / Certificate No. UL-BR 22.0225

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HISTÓRICO DE REVISÕES / REVISION DESCRIPTION

16/02/2022

Emissão inicial

A última revisão substitui e cancela as anteriores
The last review cancel and substitutes the previous on

Organismo de Certificação /
Certification Body

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41-IC-F0035 Rev. 7.0

Fotos externas

External pictures

Fabricante: **HUIZHOU GAOSHENGDA TECHNOLOGY CO.,LTD.**

Manufacturer:

Modelo: **WCT2GM2511**

Model:



ESTE PROJETO NÃO APRESENTA FOTOS EXTERNAS DEVIDO À
PRODUTO INACABADO



Fotos externas

External pictures

Fabricante: **HUIZHOU GAOSHENGDA TECHNOLOGY CO.,LTD.**

Manufacturer:

Modelo: **WCT2GM2511**

Model:



ESTE PROJETO NÃO APRESENTA FOTOS EXTERNAS DEVIDO À
PRODUTO INACABADO

