Product Brief

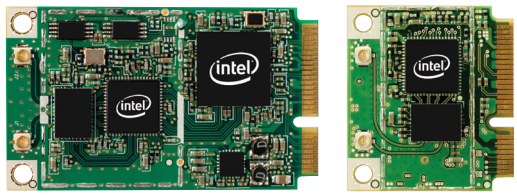
Intel® WiMAX/WiFi Link 5150

Mobile Computing

Intel® WiMAX/WiFi Link 5150

Product Description

The Intel® WiMAX/WiFi Link 5150 is an IEEE 802.16e and 802.11a/b/g/Draft-N[1] wireless network adapter that operates in the 2.5 GHz spectrum for WiMAX and 2.4 GHz and 5.0 GHz spectra for Wi-Fi. This adapter, available in both Mini Card and Half Mini Card form factors, delivers up to 13 Mbps+ downlink and 3 Mbps+ uplink performance over WiMAX and up to 300 Mbps Tx/Rx[2] over Wi-Fi. This integrated module, embedded in new Intel® Centrino® 2 processor technology notebooks, provides flexible and convenient connectivity to both WiMAX and Wi-Fi networks to enhance today's mobile lifestyle.



WiMAX

Feature	Benefit
IEEE 802.16e-2005 Wave 2 compliant. Mobile WiMAX Release 1 Wave 2 system profile ready	Broadband connectivity for rich Internet experience while on the go with open-standards-based WiMAX networks
Over-the-air provisioning, management and upgrade support	Activate and stay connected on broadband with minimal effort
Secure broadband connectivity	Peace of mind with secure access to critical information and applications when you need it
USB power optimization	Stay connected longer
Quality of service and optimized handover support	Enjoy better voice quality while on the move
Intel® PROSet Wireless WiMAX Connection Utility v1.1	Scan for and securely connect to available WiMAX networks

Wi-Fi

Feature	Benefit
Mobile Performance	
300 Mbps ready[2]	5x performance over existing 802.11a/b/g solutions
Up to 2x greater range[2] MIMO, diversity, and support for up to two antennas enable better wireless reception at the same distance when compared to 802.11a/b/g solutions	Reduces the number of "dead zones," network re-connects, and dropped data packets; improves connectivity throughout the home and enables more consistent coverage in the enterprise
Industry-leading power consumption[3] Optimized power modes (sleep states) reduce power consumption during periods of inactivity	Reduced WLAN power consumption results in longer platform battery life[3] for greater utility, enjoyment, and convenience
Manageability and Security	
Intel® Active Management Technology[Δ] Asset management, remote system diagnostics, network protection, and network security technology	Provides IT managers the capability to remotely discover, heal, and protect wireless notebooks regardless of the functional state of the operating system which can result in reduced on-site support costs
Advanced Security via 802.11 Wireless security supporting AES encryption	Ensures enterprise wireless networks are protected from unauthorized access via stronger authentication and encryption mechanisms
Intel® PROSet v12.2[4] Intel WLAN management software	Simplifies client deployments and allows remote management of wireless settings and profiles by IT managers
Interoperability	
IEEE 802.11a/b/g/Draft-N[1] compliant Compliant to the existing IEEE 802.11a, 802.11b, and 802.11g standards; 802.11n compliance expected when the standard is ratified	Enables interoperability with other IEEE-based wireless access points and wireless network adapters
Support for Cisco Compatible Extensions* v4 Cisco Centralized Key Management, Call Admission Control, Unscheduled Automatic Power Save Delivery (U-APSD), and Voice Metrics	Helps prevent delays in VoIP calls when roaming between access points; enables improved network diagnostics
Connect with Intel® Centrino® processor technology Intel certification that focuses on interoperability between IEEE 802.11 Draft-N[1] devices	Selection of access points with the Connect with Intel® Centrino® processor technology label ensures that both the access point and the Intel Centrino processor technology-based laptop have passed numerous interoperability tests

Intel® PROSet/Wireless WiMAX Connection Utility

Intel PROSet/Wireless WiMAX Connection Utility v1.1 allows users to easily and securely connect to service providers' WiMAX network.

- Simplifies activation with over-the-air activation support

Intel® PROSet/Wireless Software[4] v12.2

Intel® PROSet/Wireless Software v12.2 is available for users of Intel WLAN hardware.[4] The latest version of the software provides a simple user interface to help end users and IT administrators deploy and manage wireless networks. Specific features include:

- IT Administration Tool capabilities
  - Install Package Creator
  - Central control over driver and application settings
  - Single Sign On for Microsoft and Novell networks
- Additional Profile Management capabilities
- Support for Wi-Fi Protected Setup (WPS)
- Support for high-rate Draft-N[1] Wi-Fi networks
- Support Intel® Active Management Technology[Δ]

Intel® WiMAX/WiFi Link 5150 Technical Specifications

General

Dimensions (H x W x D)	PCIe Mini Card: 50.95 mm x 30.00 mm x 4.75 mm; PCIe Half Mini Card: 26.80 mm x 30.00 mm x 4.75 mm
Weight	PCIe Mini Card: 6.8 g; PCIe Half Mini Card: 4.5 g
Radio ON/OFF Control[5]	Supported in both hardware and software
Connector Interface	PCIe electrical interface for Wi-Fi, USB 2.0 for WiMAX
LED Output	2 LED indicators, one for Wi-Fi and one for WiMAX (LED behavior per Mini Card specification)
Operating Temperature	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 XP* 32/64-bit, Microsoft Windows Vista* 32/64-bit
Wi-Fi Alliance	Wi-Fi Certified* for 802.11a, 802.11b, 802.11g, WMM*, WPA*, and WPA2* (Wi-Fi Alliance Draft-N[1] and 802.11n certifications expected when available)
WiMAX Forum	WiMAX Certifiable for 802.16e Wave 2
Microsoft WHQL	YES
IEEE WLAN Standard	IEEE 802.11a/b/g/Draft-N[1], 802.11d, 802.11e, 802.11i, 802.11h
Architecture	Infrastructure or ad hoc (peer-to-peer)
Roaming[6]	Supports seamless roaming between respective access points (802.11b, 802.11g, 802.11a/b/g, and 802.11a/b/g/Draft-N[1])

Security

Authentication	**Wi-Fi:** WPA[7] and WPA2[7], 802.1X, LEAP, EAP-TLS, PEAP-TLS, and PEAP-MSCHAPv2*; **WiMAX:** EAP, CMAC, X.509
Protocols Encryption	**Wi-Fi:** CKIP, TKIP, 64-bit and 128-bit WEP (for 802.11a/b/g), AES-CCMP (for 802.11a/b/g/Draft-N[1]); **WiMAX:** AES-CCM, Key Binding, Microsoft Crypto API
Product Safety	UL, C-UL, CB (IEC 60590)

Products Available	Model Code	Version
Intel® WiMAX/WiFi Link 5150	512ANX MMW	Supports 802.16e and 802.11a/b/g/Draft-N[1] in a PCIe Mini Card form factor
Intel® WiMAX/WiFi Link 5150	512ANX HMW	Supports 802.16e and 802.11a/b/g/Draft-N[1] in a PCIe Half Mini Card form factor
Intel® WiMAX/WiFi Link 5150	512AGX MRU	Supports 802.16e and 802.11a/b/g in a PCIe Mini Card form factor
Intel® WiMAX/WiFi Link 5150	512AGX HRU	Supports 802.16e and 802.11a/b/g in a PCIe Half Mini Card form factor

* Results based on conductive test data, actual results may vary based on your specific hardware, connection rate, site conditions, network service and software configurations. See http://www.intel.com/performance/mobile/index.htm for more information. WiMAX connectivity requires a WiMAX enabled device and subscription to a WiMAX broadband service. WiMAX connectivity may require you to purchase additional software or hardware at extra cost. Availability of WiMAX is limited, check with your service provider for details on availability and network limitations. Broadband performance and results may vary due to environment factors and other variables. See www.intel.com/go/wimax for more information.

Δ Intel® Active Management Technology (Intel® AMT) requires the computer system to have an Intel® AMT-enabled chipset, network hardware and software, as well as connection with a power source and a corporate network connection. Setup requires configuration by the purchaser and may require scripting with the management console or further integration into existing security frameworks to enable certain functionality. It may also require modifications of implementation of new business processes. For more information, see www.intel.com/technology/platform-technology/intel-amt/.

[1] "Draft-N" refers to: IEEE P802.11 n*/D2.0 Draft Amendment to STANDARD [FOR] Information Technology-Telecommunications and information exchange between systems-Local and Metropolitan networks-specific requirements-Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications: Enhancements for Higher Throughput.

[2] Up to 2x greater range and up to 5x better performance enabled by 1x2 Draft N implementations with 2 receive spatial streams. Actual wireless throughput and/or range will vary depending on your specific operating system, hardware, and software configurations. Check with your PC and access point manufacturer for details.

[3] References to improved battery life as measured by MobileMark* 2005, refer to platform comparisons versus competing Draft-N WLAN solutions. Actual platform battery life savings will vary depending on your specific operating system, hardware and software configurations. Check with your PC manufacturer for details.

[4] Intel® PROSet for Wireless and WiMAX Connection Utility software may not be supported by your PC manufacturer. Check with your PC manufacturer for details on availability.

[5] Wi-Fi and WiMAX radios do not operate simultaneously. Wireless connectivity and some features may require the purchase of additional software, services, or external hardware. Availability of public wireless LAN access points is limited, wireless functionality may vary by country.

[6] Roaming is supported only between each respective band and mode of access points.

[7] Some security solutions may not be supported by your PC's operating system and/or by your PC manufacturer. Check with your PC manufacturer for details on availability.

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