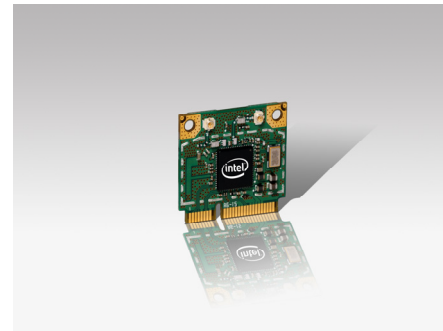intel®
Leap ahead™

Intel® WiFi Link 1000

Product Description

The Intel® WiFi Link 1000 is an IEEE 802.11b/g/Draft-N[1] wireless network adapter that operates in the 2.4 GHz spectrum. This adapter, available in both PCIe* Mini Card and Half Mini Card form factors, delivers up to 300 Mbps of receive bandwidth. It also delivers a host of features to enhance today's mobile lifestyle. Fanless netbooks and thin value notebooks are the primary target for this low profile, one sided one-sided design. The Intel® WiFi Link 1000 has qualified for the Centrino brand.

Connect with intel® Centrino®

Features
- Over 5X faster[2]
- 2X greater range[2]
- IEEE 802.11b/g and Draft-N[1] compliant
- Advanced security via 802.11i
- Industry-leading power consumption[3]
- Includes WiFi PAN – Intel My WiFi Technology
- Easy to use Intel® PROSet v12.5 WLAN Software[4]
- Support for Cisco Compatible Extensions* v4
- "Connect with Intel® Centrino®" program eligible

Feature	Benefit
Performance, Flexibility, and Mobility	
Over 5X performance increase[2] Up to 300 Mbps[2] Draft-N[1] receive data rates compared to 54 Mbps for 802.11a/b/g solutions	Minimizes the time needed to transfer large files and enables applications such as High Definition (HD) video streaming, Voice over IP (VoIP), and multi-player gaming
Up to 2X greater range[2] MIMO, diversity, and support for up to two antennas enable better wireless reception at greater distances compared to 802.11b/g solutions	Reduces the number of "dead zones", network re-connects, and dropped data packets; dramatically improving connection throughout the home and enabling more consistent coverage in the enterprise
Intel® My WiFi Technology - Personal Area Network (PAN) Intel® My WiFi Technology offers seamless connection to Wi-Fi consumer electronic devices	Enables wireless connectivity to selected consumer devices such as digital cameras, MP3 players, or game players for file sharing or file streaming activities. Any standard Wi-Fi consumer device with a corresponding PC application is expected to work with My WiFi[4]
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
PCIe Mini Card and Half Mini Card form factor	Support for the PCIe Half Mini Card form factor enables the Intel® WiFi Link 1000 to be designed into next generation laptops while support for the PCIe Mini Card form factor enables current generation laptops
Single-Sided Printed Board Assembly Single chip design allows for single-sided PBA	Reduced Z-height allows for inclusion in the thinnest and lightest netbooks and notebooks

Validation Leverage	
Common adapter software across Intel WiFi Links	Reduces the time spent validating Intel WiFi Link adapters across customer platforms by establishing a single software package for all WiFi drivers and applications
Management and Security	
Advanced Security via 802.11i Wireless security supporting AES encryption	Ensures enterprise wireless networks are protected from unauthorized access via stronger authentication and encryption mechanisms
Intel PROSet v12.5[4] Intel WLAN management software	Simplifies client deployments and allows remote management of wireless settings and profiles by IT managers
Interoperability	
IEEE 802.11b/g/Draft-N[1] compliant **Compliant to the existing IEEE** 802.11b, and .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®" Intel certification that focuses on interoperability between IEEE 802.11 Draft-N[1] devices	Selection of Access Points with the Intel "Connect with Centrino" label ensures that both the Access Point and the Intel Centrino laptop has passed numerous interoperability tests

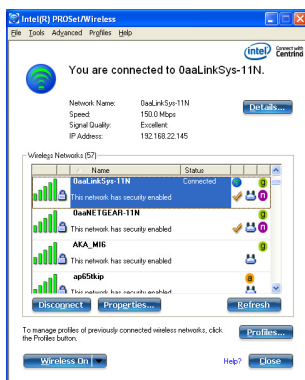**Intel® My WiFi Technology[4]**

Intel® My WiFi Technology
Designed for Intel® Ultimate N WiFi Link 5300, Intel® WiFi Link 5100 and Intel® WiFi Link 1000:
- Basic Wi-Fi Personal Area Network with the "My WiFi" GUI
- Wi-Fi PAN operates in 802.11bg
- WLAN can operate in 802.11bgn
- WLAN and Wi-Fi PAN can operate concurrently
- Integrated DHCP/DNS
- Microsoft Windows Vista* and Microsoft Win7*
- PAN-connected devices connect to the Internet via Microsoft Windows Vista Internet Connection Sharing (ICS)
  - ICS can be disabled for security purposes
- Wi-Fi Protected Setup*
  - Both Push-Button Configuration (PBC) and PIN-based configuration
- Security on WPAN
  - Open, WEP 64 & 128, WPA-PSK (TKIP), WPA2-PSK (AES and TKIP)
- User configurable settings included such as SSID, network name, IP filtering, etc...

Intel® PROSet/Wireless for Windows Software[4]

Intel® PROSet/Wireless Software[4] v12.5
Intel® PROSet/Wireless Software v12.5 is available for users of Intel® WLAN hardware**
The latest version of the software helps enable a superior experience by providing enhancements for end users as well as IT administrators who deploy and manage wireless networks. Features include:
- Enhanced simple User Interface
- IT Administration Tool capabilities
  - Install Package Creator
  - Central Control over driver & application settings
  - Single Sign On for Microsoft and Novell networks
- Additional Profile management capabilities
- Support for Wi-Fi Protected Setup
- Support for high rate Draft-N[1] WiFi networks

**Note: Some features may only be supported on the latest hardware

Intel® WiFi Link 1000 Series Technical Specifications

Technical Specifications	
Dimensions (H x W x D)	PCIe Mini Card: 2.00 in x 1.18 in x 0.12 in (50.95 mm x 30.00 mm x 3.10 mm) PCIe Half Mini Card: 1.06 in x 1.18 in x 0.12 in (26.80 mm x 30.00 mm x 3.10 mm)
Weight	PCIe Mini Card: 5.25 g PCIe Half Mini Card: 3.4 g
Receive Diversity	On-board diversity support for systems designed with two antennas
Radio ON/OFF Control	Supported in both hardware and software
Connector Interface	Mini Card form factor, based on PCIe electrical interface
LEDs output	Link, Activity
Operating Temperature	0 to +80° Celsius (Tshield covering silicon components at hotspot above Radio/PA silicon area)
Humidity Non-Operating	50% to 90% RH non-condensing (at temperatures of 25℃ to 35℃)
Operating Systems	Microsoft Windows Vista* 32/64-bit, Microsoft Windows XP* 32/64-bit, Ubuntu Linux*, Microsoft Win7 planned
Wi-Fi Alliance	Wi-Fi Certified* for 802.11b, 802.11g, WMM*, WPA*, and WPA2*
Microsoft WHQL	YES
IEEE WLAN Standard	IEEE 802.11b/g/Draft-N[1], 802.11d, 802.11e, 802.11i (no 802.11a/h/j/k)
Architecture	Infrastructure or ad hoc (peer-to-peer)
Roaming #	Supports seamless roaming between respective access points (802.11b, 802.11g, 802.11b/g, and 802.11b/g/Draft N[1])
Security §	
Authentication	WPA[7] and WPA2[7], 802.1X, LEAP, EAP-TLS, PEAP-TLS, and PEAP-MSCHAPv2*
Authentication Protocols	PAP, CHAP, MD5, GTC, MS-CHAP*, MS-CHAPv2*
Encryption	64-bit and 128-bit WEP, AES-CCMP, CKIP, TKIP
Product Safety	UL, C-UL, CB (IEC 60950)

Products Available	Model Code	Description
Intel® WiFi Link 1000	112BNHMW	112BNHMW (supports PCIe Half MiniCard form factor)
Intel® WiFi Link 1000	112BNMMW	112BNMMW (supports MiniCard form factor)
Intel® WiFi Link 1000	112BGHMW	112BGHMW (BG only supports PCIe Half MiniCard form factor)
Intel® WiFi Link 1000	112BGMMW	112BGMMW (BG only supports MiniCard form factor)

(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) Based on the theoretical bandwidth maximum enabled by 1x2 Draft-N implementations with 1 transmit and 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 manufacturer for details.

(3) References to improved battery life as measured by MobileMark* 2005, refer to platform comparisons versus competing Draft-N[1] 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 ® My WiFi Technology and/or PROSet for Wireless software may not be supported by your PC manufacturer. Check with your PC manufacturer for details on availability. Intel® My WiFi Technology is designed to work with the Microsoft Windows Vista and Win7 operating systems.

(5) 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. See http://www.intel.com/products/centrino/centrino/index.htm?iid=prod_pt+c_centrino for more information.

(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.