

**EMC Technologies Report Number: M060244\_Cert\_WM3945ABG\_DTS\_BT**

## **APPENDIX G**

### **WLAN Specifications**



# Specifications: Intel PRO/Wireless 3945ABG Network Connection User Guide

## Intel PRO/Wireless 3945ABG Network Connection

Form Factor	PCI Express (TM) Mini Card	
Dimensions	Width 1.175 in x Length 2.039 in x Height 0.148 in (29.85 mm x 51.80 mm x 3.76 mm)	
Antenna Interface Connector	Hirose U.FL-R-SMT mates with cable connector U.FL-LP-066	
Dual Diversity Antenna	On-board dual diversity switching	
Connector Interface	53-pin Mini Card edge connector	
Voltage	3.3 V	
Operating Temperature	0 to +80 degrees Celsius	
Humidity	50 to 92% non-condensing (at temperatures of 25 °C to 55 °C)	
<b>Frequency Modulation</b>	<b>5 GHz (802.11a)</b>	<b>2.4 GHz (802.11b/g)</b>
Frequency band	5.15 GHz to 5.85 GHz	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	4 to 12 non-overlapping, dependent on country	Channel 1-11 (US only) Channel 1-13 (Japan, Europe)
Data Rates	54, 48, 36, 24, 18, 12, 9, 6 Mbps	11, 5.5, 2, 1 Mbps
<b>General</b>		
Operating Systems	Microsoft Windows XP, Microsoft Windows 2000	
Wi-Fi(R) Alliance certification	Wi-Fi(R) certification for 802.11b, 802.11g, 802.11a, WPA, WPA2, WMM, EAP-SIM, LEAP, PEAP, TKIP, EAP-FAST, EAP-TLS, EAP-TTLS, MD5	
Cisco Compatible Extensions certification	Cisco Compatible Extensions, v4.0	
WLAN Standard	IEEE 802.11g, 802.11b, 802.11a	
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, MD5	
Product Safety	UL, C-UL, CB (IEC 60590)	

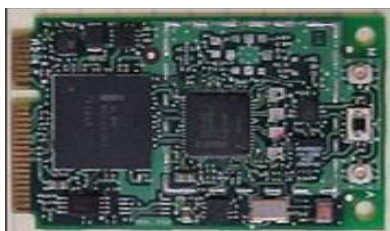
# Intel® PRO/Wireless 3945ABG Network Connection



Intel in  
Communications

## Product Description:

An embedded 802.11a/b/g network adapter operating in the 2.4 GHz and 5 GHz spectrum. This solution is based on the Mini Card form factor designed to meet the space and size requirements for thin and light notebook PCs.



## Key Features:

- IEEE 802.11a/b/g standard tri-mode Wi-Fi CERTIFIED\* Wireless LAN support (2.4GHz and 5 GHz) \*
- Up to 54 Mbps data rates (Note: 802.11b up to 11Mbps and 802.11a/g up to 54 Mbps data rates)
- Industry standard wireless LAN security support is available (802.1X, WEP, WPA, AES) †
- Cisco\* Compatible Extensions (such as LEAP and CKIP) support available on certain models. Check with your PC manufacturer for Cisco security support. §
- Support for antenna diversity enables optimized WLAN performance for multi-antenna systems.
- Intel® Wireless Coexistence System capability enables Bluetooth\* co-existence
- Support for QoS through 802.11e EDCA with Admission Control
- Flexible Roaming with multiple triggers and sensitivity

## Technical Specifications

<b>Model Name</b>	Intel® PRO/Wireless 3945ABG Network Connection
<b>Dimensions (H x W x D)</b>	2.00 in x 1.18 in x 0.18 in (50.95mm x 30mm x 4.5mm)
<b>Weight</b>	0.006 KG
<b>Antenna Interface Connector</b>	Hirose* U.FL-R-SMT mates with cable connector U.FL-LP-066
<b>Dual Diversity Antenna</b>	On-board dual diversity switching support for systems designed with two antennas
<b>Radio ON/OFF control°</b>	Supported by both hardware and software
<b>Connector Interface</b>	Mini Card form factor, based on PCI-E electrical interface
<b>LEDs output</b>	Link, Activity
<b>Operating Temperature</b>	0 to +80° Celsius
<b>Humidity Non-Operating</b>	50 to 92% RH non-condensing (at temperatures of 25°C to 80°C)

Intel® PRO  
Network Connections

## Technical Specifications continued

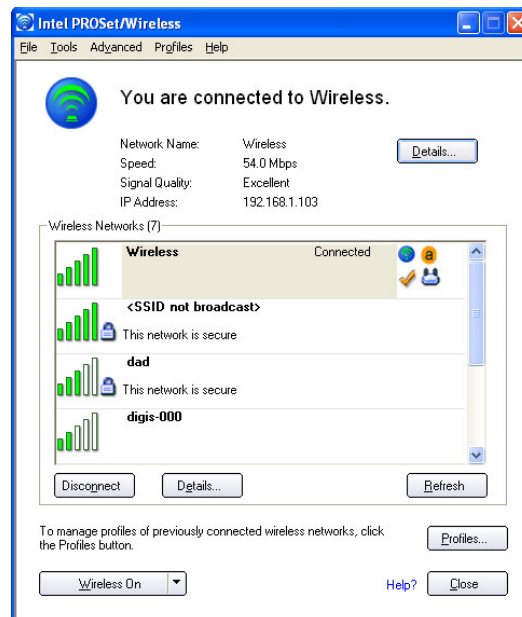
<b>Operating System</b>	Microsoft® Windows® XP (Professional, Home, Tablet), 2000
<b>Wi-Fi Alliance</b>	Wi-Fi CERTIFIED® for 2.4 GHz and 5 GHz band and WPA®
<b>WHQL</b>	YES

<b>WLAN Standard</b>	IEEE 802.11a, IEEE 802.11g, and IEEE 802.11b
<b>Architecture</b>	Infrastructure or ad hoc (peer-to-peer)
<b>Roaming<sup>1</sup></b>	802.11a, 802.11g, and 802.11b compliant for roaming between respective access points (802.11b, 802.11g, 802.11a/b/g)
<b>Security<sup>8</sup></b>	
<b>AUTHENTICATION</b>	LEAP <sup>9</sup> , WPA <sup>9</sup> , 802.1X, EAP-TLS,
<b>ENCRYPTION</b>	CKIP, TKIP, 128-bit and 64-bit WEP
<b>Product Safety</b>	UL, C-UL, CB (IEC 60590)

<b>Products Available</b>	<b>Model Name</b>
Intel® PRO/Wireless 3945ABG Network Connection	WM3945ABG

## Intel® PROSet for Wireless Software<sup>◇</sup>

As part of Intel® PRO Network Connection Software, Intel® PROSet for Wireless software provides driver consistency. Intel PROSet for Wireless software helps enable a superior mobile experience by providing:



### Intel® PROSet/Wireless Software v10.0

- Enhanced even simpler User Interface
- Added IT Administration Tool capabilities
  - Install Package Creator
  - Central Control over driver & app settings
  - Single Sign On for Microsoft and Novell networks
- Enhanced VoIP usage model
  - New VoIP API for QoS
  - VoIP Profiles and Statistic reporting
  - Wide band codec support
- Additional Profile mgmt capabilities
- New ISV applications via API (central mgmt, VoIP – Softphone applications, hotspots)
- OS: Windows XP\*, Windows 2000\*, Longhorn capable, Linux driver
- H/W Support: 2200BG, 2915ABG, 3945ABG
- Note: Some features only supported on 3945ABG

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

+Wireless connectivity and some features may require you to purchase additional software, services or external hardware. Availability of public wireless LAN access points limited and some hotspots may not support Linux-based Intel Centrino mobile technology systems. System performance measured by MobileMark® 2002. System performance, battery life, wireless performance and functionality will vary depending on your specific operating system, hardware and software configurations. See [http://www.intel.com/products/centrino/more\\_info](http://www.intel.com/products/centrino/more_info) for more information.

<sup>8</sup> 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.

<sup>9</sup> Intel® PROSet for Wireless software may not be supported by your PC manufacturer. Check with your PC manufacturer for details on availability.

<sup>9</sup> AES requires PC software upgrade that will be available in 2H'04 and requires access point support. Available on 802.11 b/g only. Check with your PC manufacturer for availability.

<sup>1</sup> WME support requires a WME enabled access point and requires a PC software upgrade that will be available in 2H'04. Available on 802.11 b/g only. Check with your PC manufacturer for details on availability.

<sup>1</sup> Roaming is supported only between each respective band and mode of access points.

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