

SpeedTouch™ 110g Wireless 802.11g PC Card



SpeedTouch 110g

The SpeedTouch 110g is a PC Card which enables wireless networking systems to attain data transmission speeds up to 54 megabits-per-second (Mbps), while remaining backward compatible to the existing installed base of over 15 million Wi-Fi systems worldwide. It supports operation with both the IEEE 802.11b and IEEE 802.11g standards, and features support for Wi-Fi Protected Access (WPA).

The SpeedTouch 110g enables a next generation of high-data-rate platforms for operation in the 2.4 GHz band that deliver a five-fold speed increase. The cost and performance advantages make it an ideal solution for high bandwidth enterprise applications, such as wireless video conferencing and large file transfers. SpeedTouch 110g is compatible with 802.11g standard's mandatory modulation schemes—Complementary Code Keying (CCK), which is used in 802.11b, and Orthogonal Frequency Division Multiplexing (OFDM), used in 802.11g. Using CCK ensures backward-compatibility with the installed Wi-Fi 802.11b base, while OFDM provides the speed required for today's high-bandwidth applications.

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▶ Product Features

- Compatible with SpeedTouch Wireless Home Install Wizard
- High speed for wireless LAN connection, up at 54Mb/s data rate.
- Backward compatible to the existing IEEE 802.11b WLAN infrastructure.
- User-friendly utility to configure SSID, security setup and site survey.
- Wireless data encryption with 64, 128 encryption for security.
- WPA encryption and authentication (WPA personal).
- Hardware built-in dual diversity antenna.
- Firmware upgradeable.

▶ Applications

- Home networking for device sharing
- Wireless multimedia
- Wireless office for extension Ethernet range.
- Mobile networking for notebook PC, PDA, Web Pad or Wireless Gateway Built-in Application.

▶ Hardware

General Overview

- Power: 3.3V, DC input
- Antenna: Built-in antenna

▶ Software

Operating System Supported

- Windows 98SE, ME, 2000 and XP

Security

- Wired Equivalent Privacy (WEP) supports modes that have 64, and 128 bit keys.
- Support for WPA in Windows XP, 2000, ME and 98SE

Configuration Utility

- A Utility to set SSID, WEP/WPA key and dynamically view configuration and receiving signal quality.
- Support worldwide country channel selection.

▶ Appearance

	LINK LED_2 (Green)	ACTIVE LED_1 (Green)
OFF	All other states	All other states
ON	Radio On and Associated	-
Blink	Radio On and Scanning	-
Flash	-	TX/RX Data

▶ Specifications

- Frequency Band:
 - 802.11g Radio: 2.4 GHz
 - 802.11b Radio: 2.4 GHz
 - USA – FCC 2412~2462MHz (Ch1~Ch11)
 - Canada – IC 2412~2462MHz (Ch1~Ch11)
 - Europe – ETSI 2412~2472MHz (Ch1~Ch13)
 - France 2457~2472MHz (Ch10~Ch13)
 - Japan – STD-T66/STD-33 2412~2484MHz (Ch1~Ch14)
- Modulation TYPE: OFDM, CCK
- Operating Channels:
 - IEEE 802.11b compliant:
 - 11 channels (US, Canada)
 - 13 channels (ETSI)
 - IEEE 802.11g compliant:
 - 11 channels (US, Canada)
 - 13 channels (ETSI)
- Security: Hardware 64/128-bit WEP, WPA
- Operating Voltage: 3.0V ~ 3.6V
- Transmitted Power: See Table 1
- Rates/Sensitivity/Allowable Path Loss: See Table 2
- Mechanical specification: CardBus Type II
- Regulatory compliance: ETSI/CE, FCC, Australia
- Current consumption: TX: 480mA Max; RX: 420mA Max; Power Saving: 20mA
- Operating Temperature: 0 ~ 55°C ambient
- Storage Temperature: -20 ~ 75°C ambient
- Humidity: 5 ~ 90% and must be non-condensing
- ESD: EN61000-4-2, which specifies 4kV contact and 8kV air discharge.

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Table 1: Modulation Scheme and Transmit Power

MODULATION RATE	OUTPUT POWER 2.4-2.5GHz (DBM)
802.11b – 1Mb/s	16
802.11b – 2Mb/s	16
802.11b – 5.5Mb/s	16
802.11b – 11Mb/s	16
MODULATION RATE	OUTPUT POWER 2.4-2.5GHz (DBM)
802.11g – 6Mb/s	16
802.11g – 9Mb/s	16
802.11g – 12Mb/s	16
802.11g – 18Mb/s	16
802.11g – 24Mb/s	15
802.11g – 36Mb/s	15
802.11g – 48Mb/s	12
802.11g – 54Mb/s	12

Table 2: Typical Range at Which Frame (1000 Bytes PDUs) Packet Error Rate < 10%

MODULATION RATE	RECEIVER SENSITIVITY (DBM) 2.412 ~ 2.484 GHz
802.11b – 1Mb/s	-88
802.11b – 2Mb/s	-86
802.11b – 5.5Mb/s	-84
802.11b – 11Mb/s	-82
MODULATION RATE	RECEIVER SENSITIVITY (DBM)
802.11g – 6Mb/s	-88
802.11g – 9Mb/s	-87
802.11g – 12Mb/s	-84
802.11g – 18Mb/s	-82
802.11g – 24Mb/s	-79
802.11g – 36Mb/s	-75
802.11g – 48Mb/s	-68
802.11g – 54Mb/s	-68

► For more information: www.speedtouch.com

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