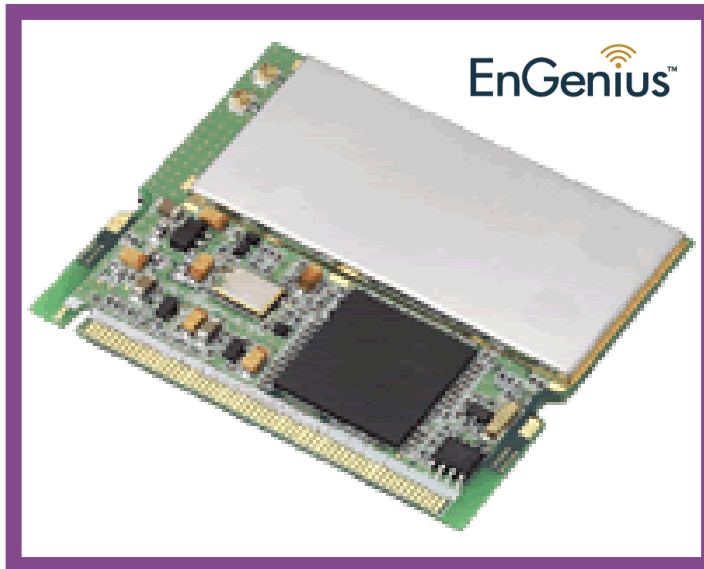




a/b/g 54Mbps



Mini PCI WIFI cards



EMP-8602 is a mini-PCI, type III B, high power card supporting dual-band (2.4GHz & 5GHz) radio operations, with a 6th generation Atheros chipset. It provides a high-speed wireless connection with a data rate up to 54Mbps. The small form factor, light weight & lower power consumption design can easily integrate into a wide range of AP/Bridge devices.

The 802.11g standard is backwards compatible with 802.11b standard. You do not need to change your entire network to maintain connectivity. You may sacrifice some 802.11g speed when you mix 802.11b and 802.11g devices, but you will not lose the ability to communicate with your 802.11b network.

For more security, the mini-PCI can support 802.1x, WPA and WPA2 (IEEE 802.11i), and offers the highest power in its class to improve distance and performance.

Features	Benefits
High Speed Data Rate up to 54Mbps	Capable of handling heavy data payloads such as MPEG video streaming
High Output Power up to 26 dBm & 20 dBm	More high power can advance the distance.
Advanced Power Management	Low power consumption in power saving mode.
Support eXtended Range technology	eXtended Range technology give Wi-Fi products twice the range of existing designs
802.11i security specifications, provides WPA/WPA2 and WEP 64/128 bit encryption	Enhances authentication and security.
Site Survey Utility	Allows users to browser the available active access points which users can connect
802.11e Standard Support	Wireless Multimedia Enhancements Quality of Service support (QoS)
Seamless roaming	Full mobility for users in any scenario



Technical Specifications

Data Rates

- 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps
 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps
 802.11b: 1, 2, 5.5, 11Mbps

Standards / Compliance

WECA (Wi-Fi & Wi-Fi5 compliance), IEEE802.11, IEEE802.11a, IEEE802.11g, IEEE802.11b

Regulation Certifications

FCC Part 15, IC, RoHS and WEEE compliant

Operating Voltage

3.3V±0.15V

Current consumption

- Tx Current ≤ 1.3A (PLUS FCC/PLUS ETSI)
 Tx Current ≤ 650mA (ETSI)
 Rx Current ≤ 400mA
 Card on Current ≤ 400mA
 Sleep Current ≤ 100mA

RF Information

Frequency Band

802.11a:
 5.15~5.35GHz,
 5.47~5.725GHz,
 5.725~5.825GHz

802.11b/g:

U.S., Europe and Japan product covering 2.4 to 2.484 GHz, programmable for different country regulations

Modulation Technology

- 802.11a/g:
 OFDM (64-QAM, 16-QAM, QPSK, BPSK)
 802.11b:
 DSSS (DBPSK, DQPSK, CCK)

Operating Channels

- 802.11b/g
 11 for North America, 14 for Japan, 13 for Europe
 802.11a
 US/Canada: 12 non-overlapping channel (5.15~5.35GHz, 5.725~5.825GHz)

Europe: 19 non-overlapping channel (5.15~5.35GHz, 5.47~5.825GHz)

Japan: 4 non-overlapping channel (5.15~5.25GHz)

China: 5 non-overlapping channel (5.725~5.85GHz)

Receive Sensitivity (Typical)

- 802.11a:
 -88dBm @ 6Mbps,
 -70dBm @ 54Mbps
 802.11g:
 -90 dBm @ 6Mbps,
 -74 dBm @ 54Mbps
 802.11b:
 -95 dBm @ 1Mbps
 -90 dBm @ 11Mbps

Available transmit power (Typical)

NMP-8602 (ETSI)

- 5.15~5.32 & 5.5~5.6 GHz
 18 dBm @6~24Mbps
 16 dBm @36Mbps
 14 dBm @48Mbps
 13 dBm @54Mbps
- 5.62~5.725 GHz
 17 dBm @6~24Mbps
 15 dBm @36Mbps
 13 dBm @48Mbps
 12 dBm @54Mbps

- 5.745~5.85 GHz
 17 dBm @6~24Mbps
 15 dBm @36Mbps
 13 dBm @48Mbps
 12 dBm @54Mbps
- 2.412~2.472 GHz (IEEE802.11g)
 20 dBm @6~36Mbps
 19 dBm @48Mbps
 18 dBm @54Mbps
- 2.412~2.472 GHz (IEEE802.11b)
 20 dBm @1~11Mbps

NMP-8602 PLUS (FCC)

- 5.18~5.24 GHz
 17 dBm @6~36Mbps
 16 dBm @48Mbps
 15 dBm @54Mbps
- 5.26~5.32 GHz

20 dBm @6~24Mbps

18 dBm @36Mbps

16 dBm @48Mbps

15 dBm @54Mbps

- 5.745~5.825GHz
 18 dBm @6~24Mbps
 16 dBm @36Mbps
 14 dBm @48Mbps
 13 dBm @54Mbps
- 2.412~2.462 GHz (IEEE802.11g)
 25 dBm @6~24Mbps
 23 dBm @36Mbps
 22 dBm @48Mbps
 21 dBm @54Mbps
- 2.412~2.462 GHz (IEEE802.11b)
 25 dBm @1~11Mbps

Antenna

Two antenna connectors (U.FL)

Form Factor

Mini-PCI type III B

Dimensions (LxWxH)

59.60mm X 44.45mm

Weight

15g (0.53 oz)

Environmental

Temperature Range

Operating: -20°C to 85°C
 Storage: -30°C to 90°C

Humidity (non-condensing)

5% ~ 95% typical

Related Product(s)

NMP-8601 (802.11a/b/g)
 NMP-3601/NMP-3602 (802.11b/g)
 NL-2511MP+ (802.11b)

* Theoretical wireless signal rate based on IEEE standard of 802.11a, b, g chipset used. Actual throughput may vary. Network conditions and environmental factors lower actual throughput rate.



- 2.412~2.472 GHz (IEEE802.11g)
25 dBm @6~24Mbps
23 dBm @36Mbps
22 dBm @48Mbps
21 dBm @54Mbps
- 2.412~2.472 GHz (IEEE802.11b)
25 dBm @1~11Mbps

Antenna

Two antenna connectors (IPEX)

Form Factor

Mini-PCI type III B

Dimensions (LxWxH)

59.60mm X 44.45mm

Weight

15g (0.53 oz)

Environmental

Temperature Range

Operating: -20°C to 85°C

Storage: -30°C to 90°C

Humidity (non-condensing)

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Related Product(s)

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