

# PRODUCT DATASHEET

Atheros 6<sup>th</sup> G Mini-PCI Adapter

NMP-8602

2.4 / 5.0 GHz

802.11a/b/g

54 Mbps

NMP-8602 is a mini-PCI type III B High-Power card supporting dual-band (2.4GHz & 5GHz) radio operation. It provides high-speed wireless connection with data rate up to 54Mbps. The shirking dimension and light weight can easily integrate into a wide range of AP/Bridge device.

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



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	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

\* 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.

\*\* All specifications are subject to change without notice.

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## 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/UL, ETSI 300/328/CE

### Operating Voltage

3.3V±0.15V

### Current consumption

- Tx Current ≤ 1A  
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, 2 for Spain, 4 for France

#### 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:**  
-90dBm @ 6Mbps,  
-72dBm @ 54Mbps  
**802.11g:**  
-91 dBm @ 6Mbps,  
-74 dBm @ 54Mbps  
**802.11b:**  
-95 dBm @ 1Mbps  
-90 dBm @ 11Mbps

### Available transmit power (Typical)

#### NMP-8602 (FCC)

- 5.15~5.24 GHz  
17 dBm @6Mbps  
15 dBm @54Mbps
- 5.26~5.35 GHz  
20 dBm @6Mbps  
15 dBm @54Mbps
- 5.725~5.825 GHz  
18 dBm @6Mbps  
13 dBm @54Mbps
- 2.412~2.462 GHz (IEEE802.11g)  
23 dBm @6Mbps  
20 dBm @54Mbps
- 2.412~2.462 GHz (IEEE802.11b)  
23 dBm @1~11Mbps

#### NMP-8602 (ETSI)

- 5.15~5.35 & 5.47~5.6 GHz  
20 dBm @6Mbps  
15 dBm @54Mbps
- 5.62~5.725 GHz  
19 dBm @6Mbps  
14 dBm @54Mbps
- 5.725~5.85 GHz  
18 dBm @6Mbps  
13 dBm @54Mbps
- 2.412~2.472 GHz (IEEE802.11g)  
20 dBm @6~54Mbps
- 2.412~2.472 GHz (IEEE802.11b)  
20 dBm @1~11Mbps

### NMP-8602 PLUS (FCC)

- 5.15~5.24 GHz  
17 dBm @6Mbps  
15 dBm @54Mbps
- 5.26~5.35 GHz  
20 dBm @6Mbps  
15 dBm @54Mbps
- 5.725~5.825GHz  
18 dBm @6Mbps  
13 dBm @54Mbps
- 2.412~2.462 GHz (IEEE802.11g)  
Up to 26 dBm @6Mbps  
Up to 23 dBm @54Mbps
- 2.412~2.462 GHz (IEEE802.11b)  
Up to 26 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: -0°C to 55°C  
Storage: -20°C to 70°C

#### Humidity (non-condensing)

5% ~ 95% typical

### Related Product(s)

NMP-560 (802.11a)  
NMP-360 (802.11b/g)  
NMP-352 (802.11b/g)  
NL-2511MP+ (802.11b)

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