

WLAN 802.11a/b/g mini-PCI Module

DCMA-81



- **Single-Chip 802.11a/b/g mini-PCI Design for Embedded Application**
- **Extremely Small Size (59.75 x 25.5 x 5mm)**
- **Industry Leading 802.11a/g Throughput & Range**
- **Super A/G™ Throughput of 60+ Mbps with Typical Data**
- **eXtended Range XR™ Technology**
- **Integrated 802.11i/WPA2 Supplicant**
- **802.11e Compatible Bursting**
- **Internal Low Frequency Oscillator for Low Power Sleep Mode**
- **Host Interface PCI 2.3 Compatible**
- **WHQL Certified**
- **RoHS Compliant**

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SPECIFICATION

Frequency Band	<ul style="list-style-type: none">➤ 2.312 – 2.472GHz, 2.484 GHz➤ U-NII: 5.15 - 5.35GHz, 5.725 - 5.825GHz➤ ISM: 5.725 – 5.850 GHz➤ DSRC: 5.850 – 5.925 GHz➤ Europe: 5.15 - 5.35GHz, 5.47 - 5.725GHz➤ Japan: 4.90 – 5.00GHz, 5.03 – 5.091GHz, 5.15 – 5.35GHz
Modulation technique	<ul style="list-style-type: none">➤ 802.11 a/b/g DSSS (DBPSK, DQPSK, CCK) OFDM (BPSK,QPSK, 16-QAM, 64-QAM)
Host interface	Half size Mini PCI Type 3A
Channels support	<ul style="list-style-type: none">➤ 802.11b/g US/Canada: 11 (1 ~ 11) Major European country: 13 (1 ~ 13) France: 4 (10 ~ 13) Japan: 11b: 14 (1~13 or 14th), 11g: 13 (1 ~ 13)➤ 802.11a US/Canada:12 non-overlapping channels Europe: 19 non-overlapping channel Japan: 4 non-overlapping channels
Operation voltage	<ul style="list-style-type: none">➤ 3.3V +/- 5%
Power consumption	<ul style="list-style-type: none">➤ A Mode: FTP Tx: 310mA (typical)~360mA (max) FTP Rx: 290mA (typical)~330mA (max) Stand by: 270mA (typical)~300mA (max) Cont. Tx: 470mA(typ.)~ 540mA(max) Cont. Rx: 220mA(typ.)~ 260mA(max)➤ B Mode: FTP Tx: 300mA (typical)~360mA (max) FTP Rx: 270mA (typical)~300mA (max) Stand by: 230mA (typical)~250mA (max) Cont. Tx: 270mA(typ.)~ 320mA(max) Cont. Rx: 180mA(typ.)~ 220mA(max)➤ G Mode: FTP Tx: 300mA (typical)~350mA (max) FTP Rx: 280mA (typical)~310mA (max) Stand by: 290mA (typical)~330mA (max) Cont. Tx: 310mA(typ.)~ 360mA(max) Cont. Rx: 220mA(typ.)~ 260mA(max)➤ Power saving: 35mA (typical)~55mA (max)➤ Radio off: 40mA (typical)~50mA (max)



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Output power	<ul style="list-style-type: none">➤ A Mode: +17dBm at 6, 9, 12, 18, and 24Mbps +16dBm at 36Mbps +14dBm at 48Mbps +13dBm at 54Mbps➤ B Mode: +19dBm at 1,2, 5.5, and 11Mbps➤ G Mode: +17dBm at 6, 9, 12, 18, 24 and 36Mbps +16dBm at 48Mbps +15dBm at 54Mbps
Operation distance	<ul style="list-style-type: none">➤ 802.11a: Outdoor: 85m@54Mbps, 250m@6Mbps Indoor: 20m@54Mbps, 40m@6Mbps➤ 802.11b: Outdoor: 250m@11Mbps, 300m@1Mbps Indoor: 30m@11Mbps, 50m@1Mbps➤ 802.11g: Outdoor: 80m@54Mbps, 250m@6Mbps Indoor: 15m@54Mbps, 35m@6Mbps
Operation System supported	➤ Windows® 2K, XP
Dimension	➤ 59.75mm(L) * 25.50mm (W) * 5mm (H)
Security	<ul style="list-style-type: none">➤ 64-bit,128-bit, 152-bit WEP Encryption➤ 802.1x Authentication➤ AES-CCM & TKIP Encryption
Operation mode	➤ Infrastructure & Ad-hoc mode
Operation temperature	➤ 0°C ~ 70°C
Storage temperature	➤ -20°C ~ 70°C
Wi-Fi® Alliance	➤ WECA Compliant
WHQL	➤ Microsoft® 2K, XP Compliant
FAA	➤ S/W radio On/Off support
EMC certificate	<ul style="list-style-type: none">➤ FCC part 15 (USA)➤ IC RSS210 (Canada)➤ Telec (Japan)➤ ETSI, EN301893, EN60950 (Europe)
Media access protocol	➤ CSMA/CA with ACK architecture 32-bit MAC
Advance Function	<ul style="list-style-type: none">➤ Super AG➤ Extended Range➤ Support JumpStart V1.0 on Microsoft® 2K, XP
Antenna connector	➤ 2 x SMT Ultra-miniature coaxial connectors

Specifications are preliminary and information only.

Subject to change without notices.



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