Market Specifications for model DCMA-82 High Power

WLAN 802.11a/g Mini-PCI Adapter(MMCX)

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Subject to change without notices

Feature List

1. **High Power Design, peak power up to 30dBm**
2. **RoHS compliant product**
3. **Atheros AR5414A, Dual Band MAC/BB/Radio single chip solution supports super mode**
4. **RF connector: 2*MMCX**
5. **Heat sink design provide reliable high power RF performance**
6. **Two DC supply options: +3.3Vdc only or +3.3Vdc plus +5Vdc.**
7. **Screw hole reserved for assembly with AP main board for AP application**
8. **High speed for wireless LAN connection: IEEE802.11b 11Mbps data rate by incorporating Direct Sequence Spread Spectrum (DSSS); IEEE802.11a 54Mbps data rate with Orthogonal Frequency Division Multiplexing (OFDM) and up to 108Mbps with Turbo mode; IEEE802.11g 54Mbps date rate with OFDM (108Mbps in Turbo mode) and 11Mbps with DSSS. Provide seamless roaming within the IEEE 802.11a/b WLAN infrastructure**
9. **IEEE 802.11a/b/g compatible: allowing inter-operation among multiple vendors**
10. **Support Atheros Super A/G^{TM} Mode**
11. **Provide seamless roaming within the IEEE 802.11 a/b/g WLAN infrastructure**
12. **Site survey function**
13. **Support MicroSoft Windows XP, 2000**
14. **Interoperability – Complying with WiFi**
15. **Extended range supporting**
16. **Support 802.1x, AES-CCM & TKIP, Power Saving Mode**
17. **64/128/152-bit WEP Encryption**
18. **802.11e standard compatible bursting**
19. **Wireless multimedia enhancements quality of service support (QoS)**
20. **Support for draft IEEE 802.11e,h,I and j standards**

DCMA-82 Market Product Specification, WLAN 802.11a/b/g® Mini-PCI Adapter

Item	Key specifications
Main Chipset	➢ DCMA-82: AR5414A-BGA Single Chip (with Super AG function)

Frequency Band	➢ **A Mode:**
	    5.15~5.35 & 5.725~ 5.85 GHz for US
	    5.15~5.35 GHz for Japan
	    5.15~5.35 & 5.47~5.725 GHz for ETSI
	    5.725~5.85 GHz for China
	    4.94~4.989Ghz for US safety band
	➢ **B/G Mode:**
	    2400~2483.5 MHz (for US, Canada, EU, China and Japan)

Modulation technique	➢ **802.11 a/b/g**
	   DSSS (DBPSK, DQPSK, CCK)
	   OFDM (BPSK,QPSK, 16-QAM, 64-QAM)

Host interface	➢ Mini-PCI form factor; Mini-PCI Version 1.0 type 3A

Channels support	➢ **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)
	   China: 13 (1 ~ 13)
	➢ **802.11a**
	   1). US/Canada: 12 non-overlapping channels (5.15~5.35GHz, 5.725~5.825GHz)
	   2). Europe: 19 non-overlapping channel (5.15~5.35GHz, 5.47~5.725GHz)
	   3). Japan: 8 non-overlapping channels (5.15~5.35GHz)
	   4). China: 5 non-overlapping channels (5.725 ~ 5.85GHz)

Operation voltage	➢ 3.3V +/- 10%

Power consumption	➢ A Mode: Cont. Tx: 1100mA (typical)~1300mA (max)
	                    Cont. Rx: 250mA (typical)~270mA (max)
	                    Stand by: 280mA (typical)~290mA (max)
	➢ G Mode: Cont. Tx: 730mA (typical)~780mA (max)
	                    Cont. Rx: 240mA (typical)~260mA (max)
	                    Stand by: 280mA (typical)~290mA (max)
	➢ B Mode: Cont. Tx: 730mA (typical)~780mA (max)
	                    Cont. Rx: 200mA (typical)~220mA (max)
	                    Stand by: 230mA (typical)~240mA (max)
	➢ Power saving: 40mA (typical)

Output power	➢ A Mode: +22.5dBm at 6, 9, 12, 18Mbps
	                  +21.5dBm at 36Mbps
	                  +19dBm at 48Mbps
	                  +18dBm at 54Mbps
	➢ B Mode: +24dBm at 1,2, 5.5, and 11Mbps
	➢ G Mode: +23dBm at 6, 9, 12, 18Mbps
	                  +22.5dBm at 36Mbps
	                  +20dBm at 48Mbps
	                  +19.5dBm at 54Mbps

Operation distance	➢ **802.11a**
	   Outdoor: 85m@54Mbps, 350m@6Mbps
	   Indoor: 25m@54Mbps, 60m@6Mbps
	➢ **802.11b**
	   Outdoor: 350m@11Mbps, 400m@1Mbps
	   Indoor: 45m@11Mbps, 70m@1Mbps
	➢ **802.11g**
	   Outdoor: 90m@54Mbps, 400m@6Mbps
	   Indoor: 30m@54Mbps, 65m@6Mbps

Operation System	➢ Windows® 98SE, ME, 2K, XP, NT4.0

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supported	
Dimension	➢ 59.6mm(L) * 50.8mm (W) * 5.5mm (H)
Security	➢ 64-bit,128-bit, 152-bit WEP Encryption ➢ 802.1x Authentication ➢ AES-CCM & TKIP Encryption
Operation mode	➢ Infrastructure & Ad-hoc mode

Transfer data rate	➢ **802.11b/g**
	   11b: 11, 5.5, 2, 1 Mbps, auto-fallback,
	   11g: 54, 48, 36, 24, 18, 12, 9, 6Mbps, auto-fallback
	➢ **802.11g (Super mode)**
	   up to 108 Mbps
	➢ **802.11a (Normal mode)**
	   54, 48, 36, 24, 18, 12, 9, 6Mbps, auto-fallback
	➢ **802.11a (Super mode)**
	   108,96,72,54, 48,36,24,18,12 Mbps, auto-fallback

Operation temperature	➢ 0° ~ 70° C(AR5414A)
Storage temperature	➢ -10° ~ 80° C(AR5414A)
Wi-Fi® Alliance	➢ WECA Compliant
WHQL	➢ Microsoft® 2K, XP Complaint
FAA	➢ S/W radio On/Off support
EMC certificate	➢ FCC part 15 (USA) ➢ Telec (Japan) ➢ ETSI, EN301893, EN60950 (Europe)
Media access protocol	➢ CSMA/CA with ACK architecture 32-bit MAC
Advance Function	➢ Super AG ➢ Extended Range ➢ Support JumpStart V1.0 on Microsoft® 2K, XP
Antenna connector	➢ 2 x SMT MMCX