

**Mini-PCI WiFi Module : DCMA-82**  
**Industrial grade high power 802.11a/b/g 108Mbps wifi mini-PCI module, RoHS compliance**

Specifications	Mini-PCI WiFi Module : DCMA-82
Standard conformace	IEEE 802.11a, 802.11b, 802.11g
Frequency Range	<ul style="list-style-type: none"> <li>A mode: 5.15 ~ 5.35GHz &amp; 5.725 ~ 5.825GHz for US 4.9 ~ 5.25GHz for Japan 5.15 ~ 5.35GHz &amp; 5.47 ~ 5.725GHz for ETSI</li> <li>B/G mode: 2.400 ~ 2.4835GHz for US, Canada, ETSI and Japan 2.471 ~ 2.497GHz for Japan</li> </ul>
Interface	32-bit mini-PCI Type IIIA
Operation Voltage	3.3VDC (5VDC optional by project)
Modulation Technique	<ul style="list-style-type: none"> <li>802.11a: OFDM with BPSK, QPSK, QAM, and 64QAM</li> <li>802.11b: DSSS with CCK, DQPSK, DBPSK</li> <li>802.11g: OFDM with BPSK, QPSK, QAM and 64QAM DSSS with CCK, DQPSK, DBPSK</li> </ul>
Data Rate	<ul style="list-style-type: none"> <li>802.11a (Normal mode): 54, 48, 36, 24, 18, 12, 9, 6Mbps, auto-fallback</li> <li>802.11a (Turbo mode): 108,96,72,48,36,24,18,12 Mbps, auto-fallback</li> <li>802.11b/g: 11, 5.5, 2, 1 Mbps, auto-fallback, up to 54 Mbps</li> <li>802.11g (Super mode): up to 108 Mbps</li> </ul>
Operating Range (subject to the environment and antenna)	<ul style="list-style-type: none"> <li>802.11a Outdoor: over 350meter@6Mbps Indoor: 35 ~ 100meter@6Mbps</li> <li>802.11b Outdoor: over 350meter@11Mbps Indoor: 35 ~ 100meter@11Mbps</li> <li>802.11g Outdoor: over 350meter@6Mbps Indoor: 35 ~ 100mete@6Mbps</li> </ul>
Operating Channels	<ul style="list-style-type: none"> <li>802.11a US/Canada: 12 non-overlapping channels (5.15 ~ 5.35GHz, 5.725 ~ 5.825GHz) Europe: 19 non-overlapping channels (5.15 ~ 5.35GHz, 5.47 ~ 5.725GHz) Japan: 4 non-overlapping channels (5.15 ~ 5.25GHz)</li> <li>802.11b/g US/Canada: 11 (1 ~11) Major European country: 13 (1 ~ 13) France: 4 (10 ~ 13) Japan: 14 for 11b (1 ~ 13 or 14th), 13 for 11g (1 ~ 13)</li> </ul>
Power Consumption	<ul style="list-style-type: none"> <li>3.3V DC: 802.11a mode: 850mA (min.), 950mA(typical), 1050mA(max.) 802.11g mode: 700mA (min.), 800mA(typical), 900mA(max.) 802.11b mode: 700mA (min.), 800mA(typical), 900mA(max.)</li> </ul>

Antenna	Dual Hirose U.FL antenna connectors (optional MMCX connector by request)
Transmit Power Settings	<ul style="list-style-type: none"> <li>● [ Average power ] <ul style="list-style-type: none"> <li>○ 802.11a: <p>16dBm(min.), 18dBm(typical), 19dBm(max.) @ 54Mbps  17dBm(min.), 19dBm(typical), 20dBm(max.) @ 48Mbps  19dBm(min.), 20dBm(typical), 21dBm(max.) @ 36Mbps  21dBm(min.), 22dBm(typical), 23dBm(max.) @ 6,9,12,18Mbps</p> </li> <li>○ 802.11g: <p>18dBm(min.), 20dBm(typical), 21dBm(max.) @ 54Mbps  19dBm(min.), 21dBm(typical), 22dBm(max.) @ 48Mbps  21dBm(min.), 22dBm(typical), 23dBm(max.) @ 36Mbps  22dBm(min.), 23dBm(typical), 24dBm(max.) @ 6,9,12,18Mbps</p> </li> <li>○ 802.11b: <p>22dBm(min.), 23dBm(typical), 24dBm(max.) @ 1,2,5.5,11Mbps</p> </li> </ul> </li> <li>● [ Peak power ] <ul style="list-style-type: none"> <li>○ 802.11a: <p>23dBm(min.), 24dBm(typical), 25dBm(max.) @ 54Mbps  24dBm(min.), 25dBm(typical), 26dBm(max.) @ 48Mbps  25dBm(min.), 26dBm(typical), 27dBm(max.) @ 36Mbps  27dBm(min.), 28dBm(typical), 29dBm(max.) @ 6,9,12,18Mbps</p> </li> <li>○ 802.11g: <p>25dBm(min.), 26dBm(typical), 27dBm(max.) @ 54Mbps  25dBm(min.), 27dBm(typical), 28dBm(max.) @ 48Mbps  27dBm(min.), 28dBm(typical), 29dBm(max.) @ 36Mbps  28dBm(min.), 29dBm(typical), 30dBm(max.) @ 6,9,12,18Mbps</p> </li> <li>○ 802.11b: <p>25dBm(min.), 26dBm(typical), 27dBm(max.) @ 1,2,5.5,11Mbps</p> </li> </ul> </li> </ul>
Sensitivity	<ul style="list-style-type: none"> <li>● 802.11a: <p>-92 ~ -85dBm@ 6/9/12Mbps  -91 ~ -84dBm@ 18Mbps  -87 ~ -80dBm@ 24Mbps  -84 ~ -77dBm@ 36Mbps  -79 ~ -72dBm@ 48Mbps  -74 ~ -66dBm@ 54Mbps</p> </li> <li>● 802.11b: <p>-92 ~ -85dBm@ 6/9/12Mbps  -91 ~ -84dBm@ 18Mbps  -87 ~ -80dBm@ 24Mbps  -84 ~ -77dBm@ 36Mbps  -79 ~ -72dBm@ 48Mbps  -75 ~ -68dBm@ 54Mbps</p> </li> <li>● 802.11g: <p>-96 ~ -89dBm@ 1Mbps  -94 ~ -86dBm@ 2Mbps  -93 ~ -85dBm@ 5.5Mbps  -90 ~ -83dBm@ 11Mbps</p> </li> </ul>
MAC Protocol	CSMA/CA with ACK architecture 32-bit MAC
Security	<ul style="list-style-type: none"> <li>● 64-bit,128-bit, 152-bit WEP Encryption</li> <li>● 802.1x Authentication</li> <li>● AES-CCM &amp; TKIP Encryption</li> <li>● WPA, WPA2</li> </ul>
Operation Systems Supported	Windows 98 SE, Windows Me, Windows 2000, Windows XP, MADWiFi Linux
WHQL	Windows XP (Windows 2000 support)
Wi-Fi Compliance	by customer's request

Radio Option	hardware radio on/off support
Dimension	To be informed
Storage Temperature Range	-40°C ~ 80°C
Operation Temperature Range	-40°C ~ 80°C
Environment-Friendly Compliance	RoHS

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