

# ECB9500

## Business Class Long Range, Wireless N, Gigabit Client Bridge/Access Point



### Key Differentiators

#### WIRELESS N MULTI-FUNCTIONAL DEVICE

Offers multi operation modes for different network topologies  
7 modes: Access Point/Client Bridge/Repeater/Router/Client Router/WDS  
Flexible solution for various wireless applications

#### MULTIPLE WIRELESS NAMES (AP MODE)

Broadcasts multiple SSID's in one device  
Permits different levels of network access (VLAN Tagging)

#### GIGABIT ETHERNET PORT

Optimized for up to 10X faster data transfer than Fast Ethernet  
Ideal for large data streaming like online gaming, VoIP, video multimedia applications

#### HIGH GAIN DETACHABLE MULTI-ANTENNA DESIGN

Three 5dBi MIMO antennas for wider wireless coverage  
Upgradeable antennas to increase range and receive sensitivity

#### POWER-OVER-ETHERNET (802.3AF) CAPABLE

Power and data over one single cable for convenient installation

#### INTELLIGENT QUALITY OF SERVICE (QoS) TECHNOLOGY

Facilitates bandwidth priority for VoIP, video streaming, online gaming

### Ideal For:



CLIENT BRIDGE



ACCESS POINT



UNIVERSAL REPEATER



ROUTER



# ECB9500 – Technical Specifications

Specifications may change without notice.

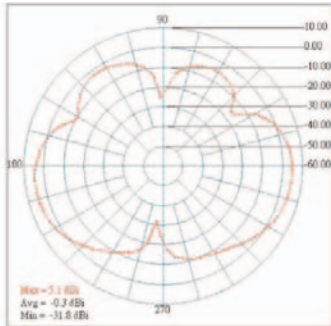
## HARDWARE SPECIFICATION

MCU	RT2880, 266MHz
Memory	32MB SDRAM
Flash	8MB
Physical Interface	LAN: One 10/100/1000 Fast EthernetMbps Reset Button Power Jack WPS push button (Wi-Fi Protected Setup)
LED's Status	Power/ Status LAN (10/100/1000Mbps) WLAN (Wireless Connection)
Power Requirements	Power Supply: 90 to 240 VDC ± 10% 50/60 Hz (depends on different countries) Active Ethernet (Power over Ethernet, IEEE802.3af) - 48 VDC/0.375A Device: 12V/1A
Regulation Certifications	FCC Part 15/UL, CE

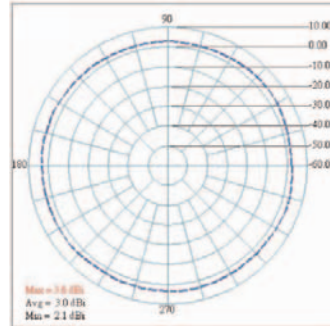
## RF SPECIFICATION

Frequency Band	2.400 – 2.484 GHz	
Media Access Protocol	Carrier sense multiple access with collision avoidance (CSMA/CA)	
Modulation Technology	OFDM: BPSK, QPSK, 16-QAM, 64-QAM DBPSK, DQPSK, CCK	
Operation Channels	11 for North America	
Receive Sensitivity (Typical)	IEEE 802.11n MCS8 @ -91dBm • MCS15@ -74dBm IEEE 802.11g (3RX) 6Mbps@ -92dBm • 54Mbps@ -75dBm IEEE 802.11b (1RX) 1Mbps@ -93dBm • 11Mbps@ -91dBm	
Available transmit power	IEEE 802.11n/g 19dBm@6~9 Mbps/MCS9 18dBm@12~18 Mbps/MCS11 17dBm@24~36 Mbps/MCS13 16dBm@48~54 Mbps/MCS15 IEEE 802.11b 18dBm@1, 11Mbps	
Antenna *3	Omni-directional external antenna TNC type; Peak Gain=5dBi Impedance 50 ohm Frequency Range 0~6GHz V.S.W.R. 1.5 (Max.) Working Voltage ≤ 500 Vrms Dielectric Withstanding Voltage ≤ 1500 Vrms Insulation Resistance ≥ 5000 Megohms Contact Resistance Center contact: 1.5 Milliohms (Max.) Outer contact: 0.2 Milliohms (Max.)	

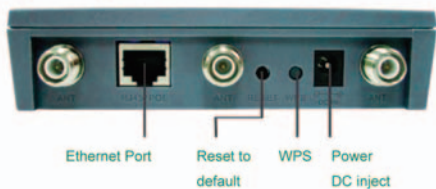
E-Plan 2.4 GHz



H-Plan 2.4 GHz



## Rear Panel (Interface)



## SOFTWARE FEATURES

Topology	Infrastructure																																																																																									
Operation Mode	Client Bridge/Access Point/WDS AP/WDS Bridge/ Client Router/Router/Universal Repeater																																																																																									
LAN	DHCP Server • DHCP Client																																																																																									
Wireless	Wireless Mode –11b/11g/11n/Disable Channel Selection (Setting varies by Country) Transmission Rate 11b/g: 54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, 1 in Mbps 11n: <table border="1"> <thead> <tr> <th rowspan="2">MCS Index</th> <th colspan="2">Guard Interval 800ns</th> <th colspan="2">Guard Interval 400ns</th> </tr> <tr> <th>20MHz (Mbps)</th> <th>40MHz (Mbps)</th> <th>20MHz (Mbps)</th> <th>40MHz (Mbps)</th> </tr> </thead> <tbody> <tr><td>0</td><td>6.5</td><td>13.5</td><td>7.2</td><td>15</td></tr> <tr><td>1</td><td>13</td><td>27</td><td>14.4</td><td>30</td></tr> <tr><td>2</td><td>19.5</td><td>40.5</td><td>21.7</td><td>45</td></tr> <tr><td>3</td><td>26</td><td>54</td><td>28.9</td><td>60</td></tr> <tr><td>4</td><td>39</td><td>81</td><td>43.3</td><td>90</td></tr> <tr><td>5</td><td>52</td><td>108</td><td>57.8</td><td>120</td></tr> <tr><td>6</td><td>58.5</td><td>121.5</td><td>65</td><td>135</td></tr> <tr><td>7</td><td>65</td><td>135</td><td>72.2</td><td>157.5</td></tr> <tr><td>8</td><td>13</td><td>27</td><td>14.4</td><td>30</td></tr> <tr><td>9</td><td>26</td><td>54</td><td>28.9</td><td>60</td></tr> <tr><td>10</td><td>39</td><td>81</td><td>43.3</td><td>90</td></tr> <tr><td>11</td><td>52</td><td>108</td><td>57.8</td><td>120</td></tr> <tr><td>12</td><td>78</td><td>162</td><td>86.7</td><td>180</td></tr> <tr><td>13</td><td>104</td><td>216</td><td>115.6</td><td>240</td></tr> <tr><td>14</td><td>117</td><td>243</td><td>130</td><td>270</td></tr> <tr><td>15</td><td>130</td><td>270</td><td>144.4</td><td>300</td></tr> </tbody> </table>	MCS Index	Guard Interval 800ns		Guard Interval 400ns		20MHz (Mbps)	40MHz (Mbps)	20MHz (Mbps)	40MHz (Mbps)	0	6.5	13.5	7.2	15	1	13	27	14.4	30	2	19.5	40.5	21.7	45	3	26	54	28.9	60	4	39	81	43.3	90	5	52	108	57.8	120	6	58.5	121.5	65	135	7	65	135	72.2	157.5	8	13	27	14.4	30	9	26	54	28.9	60	10	39	81	43.3	90	11	52	108	57.8	120	12	78	162	86.7	180	13	104	216	115.6	240	14	117	243	130	270	15	130	270	144.4	300
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Security	Signal Strength Bandwidth Selection - 40/20 MHz WEP Encryption-64/128 bit WPA Personal (WPA-PSK using TKIP or AES) WPA Enterprise (WPA-EAP using TKIP) 802.1x Authenticator 802.1x Supplicant-MD5/TTLS (CB & CR mode) Hide SSID in beacons Multiple SSID with 802.1q VLAN tagging (up to 4 SSIDs) in AP mode MAC Filter (AP mode) WLAN L2 isolation (AP mode) Wireless STA (Client) connected list (Idle/Connection Time, Pkt statistics)																																																																																									
QoS	WMM																																																																																									

## MANAGEMENT

Configuration	Web-based configuration (HTTP)/Telnet
Firmware Upgrade	Upgrade firmware via web-browser Keep latest setting when f/w update
Administrator Setting	Administrator password change
Reset Setting	Reboot • Reset to Factory Default
System monitoring	Status, Statistics and Event Log
SNMP	v1, v2c
MIB	MIB I, MIB II (RFC1213) and Private MIB
Traffic Measurement	Per interface
Bandwidth Measurement	IP range and bandwidth management
Backup & Restore	Settings through Web

## ENVIRONMENT & PHYSICAL

Temperature Range	Operating: 0°C to 45°C (32°F to 113°F) Storage: -20°C to 70°C (-4°F to 158°F)
Humidity (non-condensing)	5% ~ 95% typical
Dimensions	L: 4.92" (125mm) x W: 4.25" (108mm) x H: 1.22" (31mm)
Weight	0.77 lb. (350g)

## EnGenius Technologies

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