

# ERB9250

802.11b/g/n Range Extender

- 2.4 GHz
- 300Mbps
- 11N Repeater/  
client bridge



## PRODUCT DESCRIPTION

ERB9250 is a 2.4GHz 802.11b/g/n 300Mbps Repeater & Client Bridge (Range Booster / Extender). Range Extender solves the signal attenuation (limited coverage) problem by literally repeating / extending AP radio signal to dead-spots. While repeater clones AP and serves as a subsidiary entity to its clients, client bridge offers an extension of wired network to the AP.

## PACKAGE CONTENT

- 1\* 802.11n SOHO Router (ESR-9250)
- 1\* 12V/1A Power Adapter
- 1\*QIG
- 1\*CD (User's Manual)

## TECHNICAL SPECIFICATION

### > HARDWARE SPECIFICATIONS

MCU	RT3052, 384MHz embedded RF/MAC/BBP
Memory	32MB SDRAM
Flash	4MB
PCB dimension	100mm * 90mm
Physical Interface	Ethernet: One 10/100 Fast Ethernet RJ-45
	Rest button
	Power Jack
LEDs Status	Power Status
	LAN (Internet connection)
	WLAN(Wireless connection)
Power Requirements	Power Supply: 200 to 240 VDC $\pm$ 10% (ETSI) 100 to 120 VDC $\pm$ 10% (FCC)
	Device: 12V/1A

ERB9250 Datasheet Version 19062009

\*Theoretical wireless signal rate based on IEEE standard of 802.11 a, b, g, n chipset used. Actual throughput may vary. Network conditions and environmental factors lower actual throughput rate.

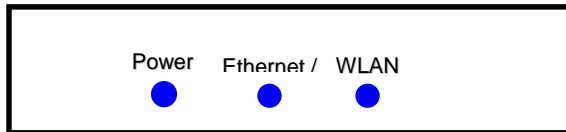
\*\* All specifications are subject to change without notice

HOME AND HOME OFFICE

# ERB9250

> Top Panel (LED status)	
LAN	1 ( Link-> blue on, traffic->blink)
WLAN	1 ( Link-> blue on, traffic->blink)
Power/Status	1 ( On-> red Test/reset default->blink)

- LED indicator will be “Power”, “WLAN” and “WAN”
- One RJ45 port only
- Bottom cover→ECB9300



RF SPECIFICATION																																																																																										
Frequency Band	2.400 ~ 2.484 GHz																																																																																									
Modulation Technology	<ul style="list-style-type: none"> <li>• OFDM: BPSK, QPSK, 16-QAM, 64-QAM</li> <li>• DBPSK, DQPSK, CCK</li> </ul>																																																																																									
Operating Channels	11 for North America, 14 for Japan, 13 for Europe																																																																																									
Wireless Setting	<ul style="list-style-type: none"> <li>• Wireless Mode – 11b/ 11g /11n</li> <li>• Channel Selection (Setting varies by Country)</li> <li>• Channel Bandwidth (Auto, 20Mhz, 40Mhz)</li> <li>• Transmission Rate -11g: Best. 54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, 1 in Mbps</li> </ul> <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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Receive Sensitivity (Typical)	<ul style="list-style-type: none"> <li>● IEEE802.11n(2RX) MCS0/8 @ -91dBm MCS7/15@ -74dBm</li> <li>● IEEE802.11g (2RX) 6Mbps@ -92dBm 54Mbps@ -75dBm</li> <li>● IEEE802.11b (1RX) 1Mbps@ -93dBm 11Mbps@ -91dBm</li> </ul>
Available transmit power	<ul style="list-style-type: none"> <li>● IEEE802.11N MCS 0~15@ &gt;16dBm</li> <li>● IEEE802.11g 6~54 Mbps@ 16dBm</li> <li>● IEEE802.11b 1, 11Mbps@ 19dBm</li> </ul>
Antenna *2	Peak Gain = 2 dBi

#### SOFTWARE FEATURES

<b>&gt; System</b>		
System OS	Linux OS	System boot up time is <= 45 Sec
<b>&gt; Utility</b>		
Easy Setup Wizard	Y	

#### ROUTER USER INTERFACE

Access method	Web Based (HTTP 1.0 / 1.1)	
Browser Compatibility	Microsoft Internet Explorer 5.5/6/7 , Safari Ver1.2,Firefox 2.0 or later	
System Status	System Information	System Up Time, Device Name, Wireless MAC, LAN MAC, Country, Current Time, Firmware Version, Management VLAN ID
	Current IP Setting	IP Address, Subnet Mask, Default Gateway, DHCP TX/RX: packet counts & traffics in Kbytes
	Current Wireless Setting	Operation mode, Wireless Mode, Channel/ Frequency, L2 Isolation, MSSID Setting
Client List	Repeater mode: List current associated clients. Show only authorized and associated clients	
	SSID	
	MAC address	
	Channel	
	Security Type	
	Mode (Infrastructure / Ad-hoc)	
	Traffic in Kbytes	

AP List	Client Bridge Mode: show available AP
	SSID
	MAC address
	Channel
	Security Type
	Mode (Infrastructure / Ad-hoc)
	Traffic in Kbytes
System Log	displays a list of events that are triggered on the Ethernet and Wireless interface. This log can be referred to when an unknown error occurs on the system or when a report needs to be sent to the technical support department for debugging purposes

Operation mode	CB (2.5 NAT)	
	Repeater	
Switch of 802.11 modes	B/G/N	
Channel setting	Manual	
	Auto / Best Channel Selection	
Transfer rate setting	Auto and Manual	
Output Power Control	<b>10% / 25% / 50% / 75% / 100%</b>	
WiFi QoS	WMM	
Power Saving	Wireless LAN power saving	
Security	WEP	WEP(64/128bit)
	WPA/ WPA2	WPA-PSK(Personal), WPA2-PSK(Personal), WPA/WPA2-PSK(Personal), WPA-EAP(Enterprise), WPA2-EAP(Enterprise), WPA/WPA2-EAP(Enterprise)
	TKIP/ AES	TKIP / AES
	Hidden ESSID	
	MAC address filtering	MAC address filtering (Both in WLAN and LAN), up to 50 field
	L2 Isolation	
	802.1x Authenticator	MD5/ TLS/ TTLS, PEAP (Nice to Have)
	802.1x Supplicant	TTLS, PEAP (Nice to Have)
Desired / Preferred SSID BSSID Support	<ul style="list-style-type: none"> <li>Profile item can be arranged for preference</li> <li>Profile on the top represents higher preference</li> <li>User is allowed to move profile UP/Down</li> </ul>	
Site Survey	<ul style="list-style-type: none"> <li>Scan current AP, display information:</li> <li>SSID, MAC, Channel, Security, Signal, Mode (Infra/Adhoc)</li> <li>Allow to add to AP profile (preferred SSID)</li> </ul>	
Channel Bandwidth Selection	N Mode: 20, 40, Auto	
	B/G Mode: 5, 10, 20, Auto	
LAN Settings	<ul style="list-style-type: none"> <li>IP (check validity and DHCP server IP range)</li> <li>MAC</li> </ul>	

Administration	Password
Remote Login	Confirmed Password
	Enable / Disable Checkbox
	Management Port
Backup/ Restore Setting	<ul style="list-style-type: none"> <li>• Save Current Setting</li> <li>• Restore Saved Setting</li> <li>• Reset to Factory Default</li> </ul>
Firmware Upgrade	<ul style="list-style-type: none"> <li>• Firmware Upgrade</li> <li>• Firmware Recovery</li> <li>• <b>Allow User to decide to Keep current setting or reset to default.</b></li> </ul>
Diagnosis	<ul style="list-style-type: none"> <li>• Address to Ping :</li> <li>• Ping Frequency : 1 / 3 / 5 / 10 / 15 / 20</li> </ul>
	Telnet Server
Emergency Recovery Page	A self-aid page for users in case of firmware upgrade failure

ENVIRONMENT & PHYSICAL	
Temperature Range	0 to 45° C - Operating, -10 to 70 ° C - Storage
Humidity (non-condensing)	15% ~ 95% typical
Dimensions	125mm (L) x 98mm (W) x 25mm (H)