

EOR-7550

Dual Radio Multi-Function Repeater

- 2.4 GHz / 5 GHz
- 300Mbps
- 802.11a/b/g/n
- Multi Function



Package Content

- 1 x Dual Radio Multi-Function Repeater (EOR7550)
- 1 x PoE injector with Power Adapter
- 1 x Wall Mounting kit
- 1 x 1.8m Grounding Cable
- 1 x CD with User's Manual
- 1 x QIG

PRODUCT DESCRIPTION

EOR7550 equips with two powerful independent RF interfaces which support 802.11a/b/g and 802.11b/g/n. With certified IP-65 protection, it is designed to deliver high reliability under harsh outdoor environment.

Built-in advanced multi-functions provide flexibility in constructing scalable WiFi networks for all possible applications. With two individual interfaces, each can be configured into 6 different modes with maximum of 18 combinations. With 802.11n support, EOR7550 offers bandwidth up to 300Mbps to accommodate heavy traffic services such as multimedia streaming. Establishing backbone network using 802.11a ensures stability and reduces interference while 802.11b/g offers great compatibility to all wireless clients.

EOR7550 provides wide-range of authentication and encryption standards (including WEP, WPA, WPA2, TKIP/AES and IEEE 802.1X) to enforce maximum security. Furthermore, friendly security management user interface reduces configuration complexity. EOR7550 is a true carrier-grade product which is guaranteed to fulfill any business proposals.

Features

Wireless

- **Dual Radio** Two radio for independent backhaul(a/b/g, Radio1) and local access(b/g/n, Radio2).
- **High Data Rate** High speed physical transmitting rate up to 300Mbps with 11n, support large payload such as MPEG video streaming
- **Multifunction application** Defining each radio configuration for different application
- **Wireless Distributed System (WDS)** Supporting WDS to bridge repeater
- **Multiple SSID** 4 BSSID supported. Primary(1st) BSSID for normal setting follow this router's main default setting for security setting. Each SSID can set itself wireless or WAN access setting.

Networking

- **Public wireless solution** An AP interface that is especially useful in public areas such as hotspots and enterprise
- **Bandwidth Selection** Provides 5MHz/ 10MHz/ 20MHz for 802.11a/b/g and 20MHz/ 40MHz for 802.11n
- **Signal Strength** Display 0%~100% to show the signal condition for more convenient installation and setup.
- **QoS(WMM)** Enhance performance and density

Security

- **802.11i** WPA, WPA2
- **802.1x** EAP-TLS/TTLS, IEEE 802.1x Supplicant support in CB mode
- **MAC address functions** MAC address access control list, MAC address filter

Management

- **Firmware Upgrade** Upgrading firmware via web browser, setting are reserved after upgrade
- **Reset & Backup** Reset to factory default. User can export all setting into a file via WEB
- **MIB** MIB I, MIB II(RFC1213) and private MIB
- **SNMP** V1, V2c

EOR7550 Datasheet Version 02062009

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

** All specifications are subject to change without notice

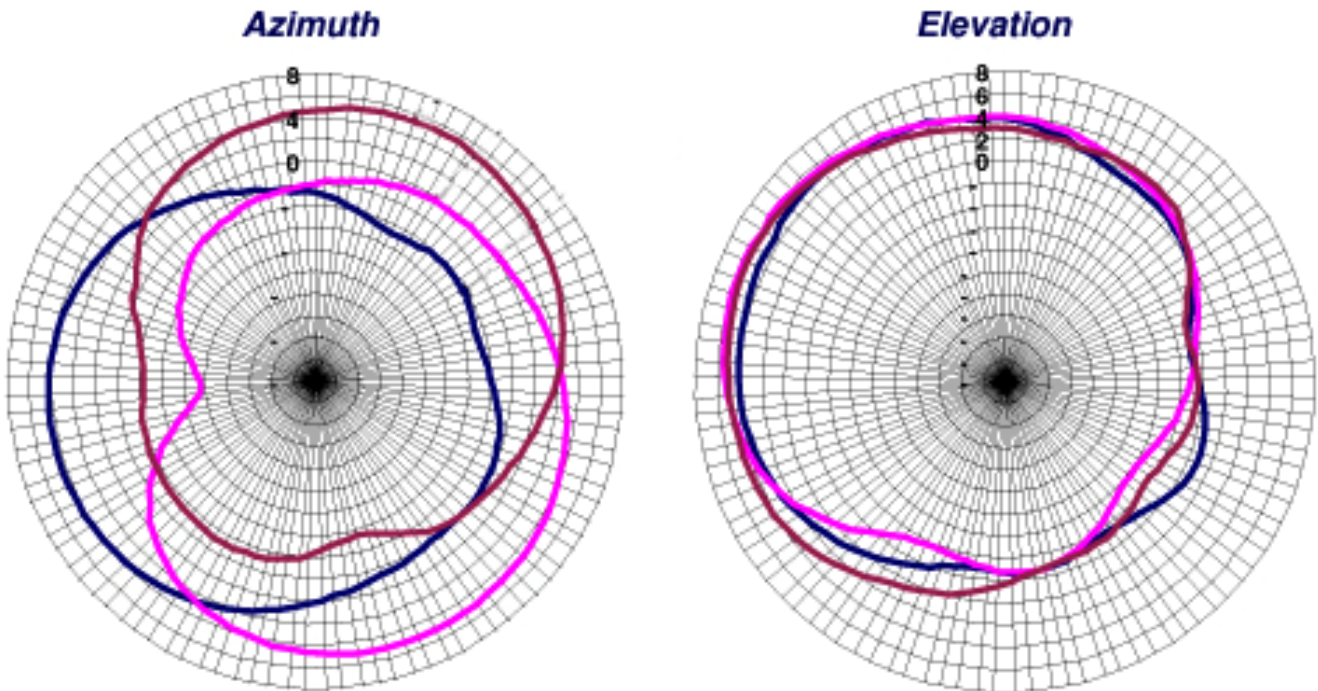
BUSINESS CLASS

EOR-7550

TECHNICAL SPECIFICATION				
> Hardware Specification				
RF	Atheros AR5414 (Radio1) + Ralink RT2820 (Radio2)			
Physical Interface	One 10/100 Fast Ethernet RJ-45 One Reset Button			
Power Requirements	Power over Ethernet, 48V DC/0.375A			
Regulation Certifications	FCC Part 15C/15B/15E, EN301 893, EN 300 328, EN 301 489-1/-17, EN60950			
> RF Specifications				
Frequency Band	802.11a 5.15 ~ 5.35GHz, 5.47 ~ 5.725GHz, 5.725~5.825GHz 802.11b/g/n U.S., Europe and Japan product covering 2.400 to 2.484 GHz, programmable for different country regulations			
Modulation Technology	OFDM = BPSK, QPSK, 16-QAM, 64-QAM DSSS = DBPSK, DQPSK, CCK			
Operating Channels	802.11a US/Canada:12 non-overlapping channel (5.15~5.35GHz, 5.725~5.825GHz) Europe:19 non-overlapping channel (5.15~5.35GHz, 5.47~5.825GHz) Japan:4 non-overlapping channel (5.15~5.25GHz) China:5 non-overlapping channel (5.725~5.85GHz) 802.11b/g 11 for North America, 14 for Japan, 13 for Europe			
Receive Sensitivity (Typical)	802.11a -92dBm @ 6Mbps, -73dBm @ 54Mbps	802.11g -94 dBm @ 6Mbps, -74 dBm @ 54Mbps	802.11b -97 dBm @ 1Mbps -92 dBm @ 11Mbps	802.11n -91 dBm @ MCS8 -74 dBm @ MCS15

Available transmit power	Radio 1 (WLAN1)			
	F C C		E T S I	
	Frequency	Power	Frequency	Power
	5.150~5.350 GHz IEEE802.11a	28dBm@6~24Mbps	5.150~5.350 GHz IEEE802.11a	28dBm@6~24Mbps
		26dBm@36Mbps		26dBm@36Mbps
		24dBm@48Mbps		24dBm@48Mbps
		22dBm@54Mbps		22dBm@54Mbps
	5.470~5.725 GHz IEEE802.11a	28dBm@6~24Mbps	5.470~5.725 GHz IEEE802.11a	28dBm@6~24Mbps
		26dBm@36Mbps		26dBm@36Mbps
		24dBm@48Mbps		24dBm@48Mbps
		22dBm@54Mbps		22dBm@54Mbps
	5.725~5.825 GHz IEEE802.11a	28dBm@6~24Mbps	5.725~5.825 GHz IEEE802.11a	28dBm@6~24Mbps
		26dBm@36Mbps		26dBm@36Mbps
24dBm@48Mbps		24dBm@48Mbps		
22dBm@54Mbps		22dBm@54Mbps		
2.412~2.462 GHz IEEE802.11g	28dBm@6~24Mbps	2.412~2.462 GHz IEEE802.11g	28dBm@6~24Mbps	
	26dBm@36Mbps		26dBm@36Mbps	
	25dBm@48Mbps		25dBm@48Mbps	
	24dBm@54Mbps		24dBm@54Mbps	
2.412~2.462 GHz IEEE802.11b	28dBm@1~11Mbps	2.412~2.462 GHz IEEE802.11b	28dBm@1~11Mbps	
Radio 2 (WLAN2)				
FCC		ETSI		
Frequency	Power	Frequency	Power	
2.412~2.462 GHz IEEE802.11g/n	19dBm@6~24Mbps	2.412~2.472 GHz IEEE802.11g/n	19dBm@6~9Mbps	
	18dBm@36Mbps		18dBm@12~18Mbps	
	17dBm@48Mbps		17dBm@24~36Mbps	
	16dBm@54Mbps		16dBm@48~54Mbps	
2.412~2.462 GHz IEEE802.11b	18dBm@1~11Mbps	2.412~2.472 GHz IEEE802.11b	18dBm@1~11Mbps	
Internal Antenna	1 x Simulated 6dBi Omni Antenna (2.4GHz) for 802.11b/g/n			
External Antenna	1 x N type (female) connector for 802.11a and 802.11b/g			

> Internal Antenna Pattern



The pattern of embedded antenna shows the peak gain up to 6dBi

> Software Features																																																																																											
General																																																																																											
Topology	Infrastructure																																																																																										
Protocol / Standard	IEEE 802.3 (Ethernet) IEEE 802.3u (Fast Ethernet) IEEE 802.11a (5GHz WLAN) IEEE 802.11b/g (2.4GHz WLAN) RFC 768 UDP RFC 791 IP RFC 792 ICMP RFC 793 TCP RFC 826 ARP RFC 1034, 1035 DNS RFC 1058 RIP RFC 1305 NTP RFC 1541 / 2131 / 3046 DHCP client / Server RFC 2068 / 2616 HTTP RFC 2516 PPPoE RFC 2865,2866 RADIUS																																																																																										
Operation Mode	<p>18 modes</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #1a3d4d; color: white;"> <th style="background-color: #1a3d4d; color: white;">EOR7550</th> <th colspan="8" style="background-color: #1a3d4d; color: white;">Radio1(11a/b/g)</th> </tr> <tr style="background-color: #1a3d4d; color: white;"> <th style="background-color: #1a3d4d; color: white;">Radio2 (11b/g/n)</th> <th style="background-color: #1a3d4d; color: white;">AP</th> <th style="background-color: #1a3d4d; color: white;">CB</th> <th style="background-color: #1a3d4d; color: white;">CR</th> <th style="background-color: #1a3d4d; color: white;">WDS Bridge</th> <th style="background-color: #1a3d4d; color: white;">WDS Repeater</th> <th style="background-color: #1a3d4d; color: white;">UR(AP)</th> <th style="background-color: #1a3d4d; color: white;">UR(STA)</th> <th style="background-color: #1a3d4d; color: white;">Disable</th> </tr> </thead> <tbody> <tr> <td style="background-color: #1a3d4d; color: white;">AP</td> <td>○ (LAN/WAN)</td> <td>○ (LAN/WAN)</td> <td>○ (LAN)</td> <td>○ (LAN)</td> <td>○ (LAN/WAN)</td> <td>X</td> <td>X</td> <td>○ (LAN/WAN)</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">CB</td> <td>○ (LAN/WAN)</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>○ (LAN/WAN)</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">CR</td> <td>○ (LAN)</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>○ (LAN)</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">WDS Bridge</td> <td>○ (LAN)</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>○ (LAN)</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">WDS Repeater</td> <td>○ (LAN/WAN)</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>○ (LAN/WAN)</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">UR(AP)</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>○ (LAN/WAN)</td> <td>X</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">UR(STA)</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>○ (LAN/WAN)</td> <td>X</td> <td>X</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">Disable</td> <td>○ (LAN/WAN)</td> <td>○ (LAN/WAN)</td> <td>○ (LAN)</td> <td>○ (LAN)</td> <td>○ (LAN/WAN)</td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>	EOR7550	Radio1(11a/b/g)								Radio2 (11b/g/n)	AP	CB	CR	WDS Bridge	WDS Repeater	UR(AP)	UR(STA)	Disable	AP	○ (LAN/WAN)	○ (LAN/WAN)	○ (LAN)	○ (LAN)	○ (LAN/WAN)	X	X	○ (LAN/WAN)	CB	○ (LAN/WAN)	X	X	X	X	X	X	○ (LAN/WAN)	CR	○ (LAN)	X	X	X	X	X	X	○ (LAN)	WDS Bridge	○ (LAN)	X	X	X	X	X	X	○ (LAN)	WDS Repeater	○ (LAN/WAN)	X	X	X	X	X	X	○ (LAN/WAN)	UR(AP)	X	X	X	X	X	X	○ (LAN/WAN)	X	UR(STA)	X	X	X	X	X	○ (LAN/WAN)	X	X	Disable	○ (LAN/WAN)	○ (LAN/WAN)	○ (LAN)	○ (LAN)	○ (LAN/WAN)	X	X	X
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Radio2 (11b/g/n)	AP	CB	CR	WDS Bridge	WDS Repeater	UR(AP)	UR(STA)	Disable																																																																																			
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LAN	DHCP Server DHCP Client																																																																																										

<p>Wireless</p>	<ul style="list-style-type: none"> - Auto Channel Selection (Setting varies by Regular Domains) - Transmission Rate <p>11 a/b/g : 54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, 1 in Mbps</p> <p>11n :</p> <table border="1" data-bbox="509 510 1272 1200"> <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>20 MHz</th> <th>40 MHz</th> <th>20 MHz</th> <th>40 MHz</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> <ul style="list-style-type: none"> - Distance Control (802.1x Ack timeout) for Radio2 - Signal Strength indication using LEDs - Bandwidth Selection 	MCS Index	Guard Interval 800ns		Guard Interval 400ns		20 MHz	40 MHz	20 MHz	40 MHz	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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<p>Security</p>	<p>Authentication:</p> <ul style="list-style-type: none"> - 802.11i (WPA, WPA2) - 802.1x (including EAP-TLS/TTLS) <p>IEEE 802.1x Supplicant support in CB mode</p> <p>Encryption: Open, WEP-64/128, TKIP, AES</p> <p>MAC address access control list</p> <p>MSSID Support in client access mode</p> <p>Hide SSID in beacons</p> <p>User isolation</p> <p>MAC address Filtering</p> <p>NAT in Client Router mode</p> <p>Multiple SSID (4 SSID)</p>																																																																																									
<p>QoS</p>	<p>WMM</p>																																																																																									

> Management	
Configuration	Web-based configuration (HTTP)/Telnet
Firmware Upgrade	Upgrade firmware via web browser Fix latest setting parameter when firmware upgrading
Administrator Setting	Administrator password can be changed
System monitoring	Status in hand , useful statistic and Event log
Reset Setting	Reset to factory default and reboot
MIB	MIB I , MIB II(RFC1213) and Private MIB
SNMP	V1 , V2c
Backup	Save all setting and condition to a file by web
Temperature Range	Operating -20°C~70°C Storage -30°C to 80°C
Humidity (non-condensing)	0% ~ 95% typical
Dimensions	260mm (L) x 175mm (W) x 65mm (H)
Weight	600g

> Application 18 Modes

Radio1 a/b/g AP SSID1	Radio2 b/g/n AP SSID2
LAN	

Radio1 a/b/g AP SSID1	Radio2 b/g/n AP SSID2
WAN	

Radio1 a/b/g AP SSID1	Radio2 b/g/n CB
LAN	

Radio1 a/b/g AP SSID1	Radio2 b/g/n CB
WAN	

Radio1 a/b/g CB	Radio2 b/g/n AP SSID2
LAN	

Radio1 a/b/g CB	Radio2 b/g/n AP SSID2
WAN	

Radio1 a/b/g AP SSID1	Radio2 b/g/n CR SSID2
LAN	

Radio1 a/b/g AP SSID1	Radio2 b/g/n WDS Bridge SSID2
LAN	

Radio1 a/b/g CR SSID1	Radio2 b/g/n AP SSID2
LAN	

Radio1 a/b/g WDS Bridge SSID1	Radio2 b/g/n AP SSID2
LAN	

Radio1 a/b/g AP SSID1	Radio2 b/g/n WDS Repeater SSID2
LAN	

Radio1 a/b/g AP SSID1	Radio2 b/g/n WDS Repeater SSID2
WAN	

Radio1 a/b/g WDS Repeater SSID1	Radio2 b/g/n AP SSID2
LAN	

Radio1 a/b/g WDS Repeater SSID1	Radio2 b/g/n AP SSID2
WAN	

Radio1 a/b/g UR(AP) SSID1	Radio2 b/g/n UR(STA)
LAN	

Radio1 a/b/g UR(AP) SSID1	Radio2 b/g/n UR(STA)
WAN	

Radio1 a/b/g UR(STA)	Radio2 b/g/n UR(AP) SSID2
LAN	

Radio1 a/b/g UR(STA)	Radio2 b/g/n UR(AP) SSID2
WAN	