

ESR9850

802.11b/g/n SOHO Router

- 2.4GHz
- 300 Mbps
- 11N AP/Router
- Gigabit



This is a 2T2R Wireless Single chip 11N repeater that delivers up to 6x faster speeds than 802.11g devices so it can drive superior performance and unparalleled wireless range. With easy to use WPS function it makes wireless connection quickly.

Just leave power adapter behind and enjoy the convenience that embedded power brings. The device can be easily installed with internal power module inside and its attractive palm size.

TECHNICAL SPECIFICATION

> Hardware specification	
Physical Interface	WAN: One 10/100/1000 Fast Ethernet RJ-45
	LAN: Four 10/100/1000 Fast Ethernet RJ-45
	Rest button
	Power Jack
	WPS (WiFi Protected Setup)
LEDs Status	Power Status
	WAN (Internet connection)
	LAN1~LAN4
	WLAN(Wireless connection)
Power Requirements	Power Supply: 200 to 240 VDC \pm 10% (ETSI) 100 to 120 VDC \pm 10% (FCC)
	Device: 12V/1A
> RF Specification	
Frequency Band	2.400~2.484 GHz
Modulation Technology	<ul style="list-style-type: none"> • OFDM: BPSK, QPSK, 16-QAM, 64-QAM • DBPSK, DQPSK, CCK
Operating Channels	11 for North America, 14 for Japan, 13 for Europe

ESR9850 Data sheet Version 01112011

*Theoretical wireless signal rate based on IEEE standard of 802.11 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

ESR9850

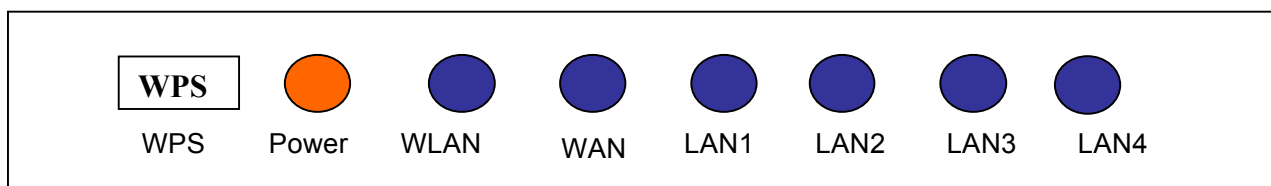
Wireless Setting	<ul style="list-style-type: none"> • Wireless Mode – 11b/ 11g /11n • Channel Selection (Setting varies by Country) • Channel Bandwidth (Auto, 20Mhz, 40Mhz) • Transmission Rate -11g: Best. 54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, 1 in Mbps <table border="1" data-bbox="564 517 1409 1066"> <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"> • IEEE802.11n(2RX) MCS0/8 @ -91dBm MCS7/15@ -74dBm • IEEE802.11g (2RX) 6Mbps@ -92dBm 54Mbps@ -75dBm • IEEE802.11b (1RX) 1Mbps@ -93dBm 11Mbps@ -91dBm 																																																																																									
Available transmit power	<ul style="list-style-type: none"> • IEEE802.11N MCS 0~15@ typical 16 dBm • IEEE802.11g 6~54 Mbps@ typical 16 dBm • IEEE802.11b 1, 11Mbps@ typical 17 dBm 																																																																																									
Antenna *2	Peak Gain = 2 dBi																																																																																									
> Wireless Functional List																																																																																										
Wireless Radio On/Off button	Software button / Disable or Enable WiFi radio																																																																																									
Operation mode	AP																																																																																									
	Router																																																																																									
	WDS AP																																																																																									
	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	10% / 25% / 50% / 75% / 100%	
WiFi QoS	WMM	
Power Saving	Wireless LAN power saving	
Multiple BSSID (Multi AP)	4 BSSID for 2.4Ghz	
	Each BSSID should has its own WiFi & security settings	
WPS	<p>WPS : Enable / Disable</p> <p>Wi-Fi Protected Setup Information</p> <ul style="list-style-type: none"> - WPS Current Status: Not Configured - Self Pin Code: - SSID: - Authentication Mode: Disable - Passphrase Key: - WPS Via Push Button: - WPS via PIN: 	
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	<p>Profile item can be arranged for preference</p> <p>Profile on the top represents higher preference</p> <p>User is allowed to move profile UP/Down</p>	
Site Survey	<p>Scan current AP, display information:</p> <p>SSID, MAC, Channel, Security, Signal, Mode (Infra/Adhoc)</p> <p>Allow to add to AP profile (preferred SSID)</p>	
Channel Bandwidth Selection	N Mode: 20, 40, Auto	
	B/G Mode: 5, 10, 20, Auto	
Maximum Client User	<p>Max: 32 Min: 1.</p> <p>The "maximum client user" is defined by RF chipset</p>	

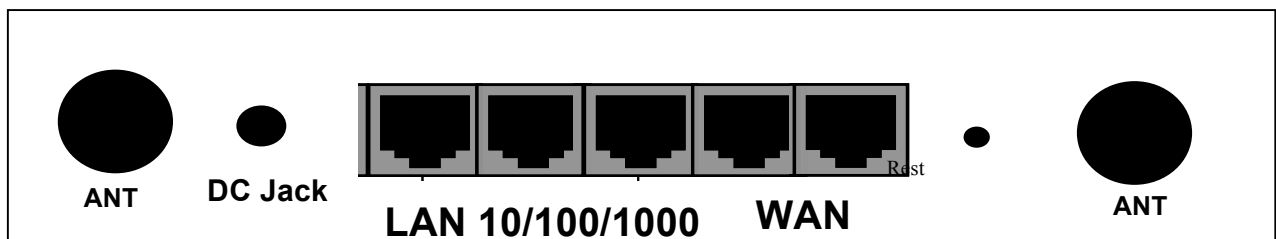
FUNCTIONAL LIST			
Router function On/Off Button		Router function on/off * (in web UI) --UI option to enable/disable routing function --when routing function disabled, WAN port setting will NT be shown. (DHCP also disable) ON: Full wireless router function (Default Router IP:192.168.1.1) OFF: Wireless AP & Switching HUB function(Default Router IP:192.168.1.1)	
LAN Settings		IP (check validity and DHCP server IP range) MAC	
DHCP server		DHCP Range, Lease Time, Client list IP range check for validity Device IP should never be released	
Router	NAT/ NAPT		
	Port Forwarding		
	Port Mapping		Virtual Server: every single IP should support more than one service port (UI forbids that)
	Port Tagging		
	ALG		FTP and Popular network applications (TBD)
	VPN	VPN pass-thru	PPTP, IPSEC, L2TP pass through
		Server Type	PPTP, IPSEC, L2TP
		Encryption	56bit (DES), 168bit (3DES), 256bit (AES)
		Max tunnels	
		Key management	Preshare key
		Authentication	MD5/SHA-1
	QoS		MAC/ IP/ Port base bandwidth control
	Filtering	URL	URL-Keyword blocking, 20 site can be registered
		IP	IP Filtering with scheduling function
		Port	TCP / UDP
ICMP			
Block Ping From WAN		Enable / Disable option box	
DMZ		Multiple DMZ records	
Firewall	SPI		
	Anti-DoS attack	Hacker Shield	
Dynamic DNS			
Setting and change of MTU/MSS value		MSS value is always "MTU-40"	
Change in WAN side MAC address		Clone WAN port MAC supported	
WAN side form	PPPoE	PAP/CHAP/MS-CHAP / MS-CHAPV2	
		Always (keep trying if fail)	
		On demand / Manual	
	Idle Time Out(disconnect if idled for a certain time)		
	DHCP Client		
	Fixed IP		
Remote Login	Enable / Disable Checkbox		
	Management Port		

Backup/ Restore Setting		Save Current Setting Restore Saved Setting Reset to Factory Default
Firmware Upgrade		Firmware Upgrade Firmware Recovery Allow User to decide to Keep current setting or reset to default.
Display at time	NTP	Display at time
	Manual setting for Time Server	
E-mail Notification function		(Email Alert Setting)
UPnP		
Discovery Tool Power Saving	A scanner for existing devices Must list device IP and MAC	
	Save energy for WLAN and LAN interfaces. - WLAN : Enable / Disable - Ethernet : Enable / Disable	
Diagnosis		Address to Ping : Ping Frequency : 1 / 3 / 5 / 10 / 15 / 20
> Top Panel (LED status)		
WAN		1 (Link-> blue on, traffic->blink)
LAN		4 (Link-> blue on, traffic->blink)
WLAN		1 (Link-> blue on, traffic->blink)
Power/Status		1 (On-> red Test/reset default->blink)

> Front Panel



> Rear Panel (Interface)



ENVIRONMENTAL AND MECHANICAL	
Temperature Range	0 to 45° C - Operating, -10 to 70 ° C - Storage
Humidity (non-condensing)	15%~95% typical
Dimensions	PCB TBD
	Housing 170mm (L) x 111mm (W) x 26mm (H)

PACKAGE CONTENT
• 1*802.11n SOHO Router (ESR9850)
• 1* 12V/1A Power Adapter
• 1* AC Plug
• 1* CD (User's Manual)
• 2* 2dBi SMA antenna