



**ENCORE<sup>®</sup>**  
**ELECTRONICS**



## **ENHWI-2AN3**

### **802.11n Wireless Router**

#### **Product Description**

Encore's ENHWI-2AN3 802.11n Wireless Router 2T2R single chip can deliver up to 3x faster speed than of 802.11g devices. ENHWI-2AN3 supports Home, Home Office and Small Business Office network with superior throughput, performance and unparalleled wireless range. With new and easy to use WPS™ or Wireless Protected Setup, users can easily established a wireless connection with just one push of a button and still get a secured wireless connection.

ENHWI-2AN3 is also equipped with a built-in 4-port full-duplex 10/100 Fast Ethernet Switch to connect to your wired-Ethernet computers and devices together to make a LAN. The Router function ties it all together and lets your whole network computers and laptops able to browse the internet and share the high-speed cable or DSL Internet connection using one public IP address your Internet Service Provider provided you. The ENHWI-2AN3 can also be a Wireless Repeater by changing mode to "Repeater Mode".

#### **ENHWI-2AN3 Specification Sheet**

16483 Old Valley Blvd. La Puente, CA 91744

Tel - (626) 336-4567 / Fax - (626) 336-2345

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## Key Features

- Bundled with Setup Wizard that helps you set up your router with ease and user friendly step-by-step screen-guided instructions.
- Supports up to 4 SSID that can be used to separate your wireless sharing with groups such as Guests, Family Members, Neighbors, etc., each group can have own connection policies. Easy to install, no need to be a geek to get this feature up and running.
- Supports URL Filtering (or web site address filtering) and Keyword Filtering. This easy to set up feature can be use to control internet access use for Parental Guidance or Parental Control, web site or URL blocking such as specific web sites containing harmful images, etc. Keyword blocking such as harmful words blocking.
- Uses the latest MIMO (or Multiple-Output-Multiple-Input) technology for faster and accurate wireless multiple input/output of data streams.
- Supports Bandwidth Control or Priority Queuing, use mostly for bandwidth hungry applications such as WiFi Multimedia, Audio/Video Streaming and much more.
- Compatible with IEEE 802.11n Draft 2.0 Specifications, provides wireless speed up to 300 Mbps physical data rate
- 4 x 10/100 Mbps Fast Ethernet port wired LAN with Auto MDI-X function
- 1 x 10/100Mbps WAN port for DSL or Cable Modem with Auto MDI-X function
- Allows auto fallback data rate for optimized reliability, throughput and transmission range
- Supports wireless data encryption with 64/128-bit WEP standard for security
- Supports enhanced security with WPA-PSK, WPA2-PSK, Auto WPA and WPA2
- Supports WPS™ (Wi-Fi Protected Setup Specification Windows) PIN and PBC
- Web-based configuration tools and management using popular WEB Browsers
- Supports PPPoE / PPTP / L2TP protocol for xDSL ISP connection
- Supports NAT feature to share one public IP address to all LAN private users

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- Supports DHCP Server / Client
- Supports Firewall protection, Virtual server mapping, Special application setting
- Supports UPnP
- AP Router to Repeater Mode. ENHWI-2AN3 can be a wireless repeater too. Just switch mode from AP Router to Wireless Repeater.

## HARDWARE SPECIFICATION

<b>MCU (Chipset)</b>	Ralink RT3052, 384 MHz embedded RF/MAC/BBP
<b>Memory</b>	32 MB SDRAM
<b>Flash</b>	4 MB
<b>Interface Ports</b>	<p><i>WAN:</i> One 10/100 Fast Ethernet RJ-45</p> <p><i>LAN:</i> Four 10/100 Fast Ethernet RJ-45</p> <p>Reset Button</p> <p>Power Input Port Jack</p> <p>WPS™ (WiFi Protected Setup) Button</p>
<b>LED Status</b>	<p>Power Status</p> <p>WAN (Internet connection)</p> <p>10/100Mbps LAN1 to LAN4</p> <p>WLAN (Wireless Connection)</p>
<b>Power Requirements</b>	<p>Power Supply: (Full Range)</p> <p>200 to 240 VAC ± 10% (ETSI) Europe</p> <p>100 to 120 VAC ± 10% (FCC) US</p> <p>Device Input Power: 12 VDC / 1A</p>

# RF SPECIFICATION

<b>Frequency Band</b>	2.400~2.484 GHz																																																																																												
<b>Modulation Technology</b>	<ul style="list-style-type: none"> <li>• OFDM: BPSK, QPSK, 16-QAM, 64-QAM</li> <li>• DBPSK, DQPSK, CCK</li> </ul>																																																																																												
<b>Operating Channels</b>	11 for North America, 14 for Japan, 13 for Europe																																																																																												
<b>Wireless Settings</b>	<ul style="list-style-type: none"> <li>• Wireless Mode – 802.11b / 802.11g /802.11n Draft 2.0</li> <li>• Channel Selection (Varies by Country or Region)</li> <li>• Channel Bandwidth (Auto 20/40 MHz, 20MHz, 40MHz)</li> <li>• Transmission Rate</li> </ul> <p>11g: Best=54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, 1 in Mbps</p> <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>20 MHz (Mbps)</th> <th>40 MHz (Mbps)</th> <th>20 MHz (Mbps)</th> <th>40 MHz (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		20 MHz (Mbps)	40 MHz (Mbps)	20 MHz (Mbps)	40 MHz (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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<b>Certifications</b>	FCC, CE and RoHS																																																																																												
<b>Receive Sensitivity (Typical)</b>	<ul style="list-style-type: none"> <li>• IEEE802.11n (2RX) - MCS0@ -91dBm, MCS7@ -74dBm</li> <li>• IEEE802.11g (1RX) - 6Mbps@ -90dBm, 54Mbps@ -70dBm</li> <li>• IEEE802.11b (1RX) - 1Mbps@ -90dBm, 11Mbps@ -87dBm</li> </ul>																																																																																												

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<b>Available Transmit Power</b>	<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>
<b>Antenna - X2</b>	<ul style="list-style-type: none"> <li>• Two Antenna with Peak Gain = 2 dBi each with SMA connector</li> </ul>

## Environmental and Physical

Temperature Range	0 to 45° C - Operating, -10 to 70 ° C - Storage
Humidity (non-condensing)	15%~95% typical
Dimensions	138mm (L) x 97mm (W) x 25mm (H)

## SOFTWARE FEATURES

### Router and Gateway

<b>Topology</b>	Infrastructure	
<b>Operation Modes</b>	AP Router / Repeater Modes	
<b>LAN</b>	<ul style="list-style-type: none"> <li>• DHCP Server / Client</li> <li>• Static Routing Table</li> <li>• UPnP</li> </ul>	
<b>WAN</b>	<ul style="list-style-type: none"> <li>• PPTP</li> <li>• PPPoE</li> <li>• L2TP</li> </ul>	<ul style="list-style-type: none"> <li>• Static IP</li> <li>• DHCP Client</li> <li>• Clone MAC</li> </ul>
<b>Router</b>	<ul style="list-style-type: none"> <li>• NAT/ NAPT</li> <li>• Static Routing</li> <li>• Dynamic Route</li> <li>• Virtual Server Mapping</li> </ul>	<ul style="list-style-type: none"> <li>• Port Triggering</li> <li>• Special Application ALG (Application Layer Gateway), supports</li> </ul>

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	<ul style="list-style-type: none"> <li>• IP Address Mapping</li> <li>• Port Forwarding</li> <li>• DNS Relay</li> <li>• DDNS</li> <li>• Time Zone (NTP client)</li> </ul>	(RTP/RTSP, AOL, FTP, CMP, WMP/MMS, NetMeeting, SIP)
<b>Firewall</b>	<ul style="list-style-type: none"> <li>• Ping blocking</li> <li>• DoS (Blocking Ping, Port scan, Sync Flood)</li> <li>• MAC / IP Filtering</li> <li>• ICMP Blocking</li> <li>• SPI (Stateful Packet Inspection)</li> <li>• DMZ (Demilitarized Zone) Host</li> <li>• Policy Based Parental Controls <ul style="list-style-type: none"> <li>• Port Range / Service Filtering</li> <li>• Internet Domain Restriction</li> <li>• Dynamic URL Filtering / Keyword Filtering</li> </ul> </li> </ul>	
<b>VPN</b>	VPN pass-through (PPTP, L2TP, IPSEC)	
<b>Wireless</b>	<ul style="list-style-type: none"> <li>• <b>Power Saving (Green Technology)</b></li> <li>• 64/128 bit WEP Encryption</li> <li>• WPA Personal (WPA-PSK using TKIP or AES)</li> <li>• WPA Enterprise (WPA-EAP using TKIP)</li> <li>• 802.1x Authenticator</li> <li>• Hide SSID in beacons</li> <li>• Wi-Fi Protected Setup™ (WPS™)</li> <li>• WDS</li> <li>• ACL control</li> <li>• Best channel selection</li> <li>• Speed / Bandwidth monitor</li> </ul>	
<b>QoS</b>	<ul style="list-style-type: none"> <li>• WMM (Wi-Fi Multimedia)</li> <li>• Application base <ul style="list-style-type: none"> <li>○ Priority Queue</li> <li>○ Bandwidth Allocation</li> <li>○ Bandwidth Control</li> </ul> </li> </ul>	

## **ENHWI-2AN3 Management**

Configuration	Web-based configuration (HTTP) using popular web browsers
Firmware Upgrade	<ul style="list-style-type: none"><li>• Via webpage upgrade</li><li>• Auto recovery once firmware upgrade fail</li></ul>
Administrator Setting	<ul style="list-style-type: none"><li>• Administrator password change</li><li>• Idle time out</li></ul>
Reset Setting	<ul style="list-style-type: none"><li>• Reboot</li><li>• Reset to Factory Default</li></ul>
System monitoring	<ul style="list-style-type: none"><li>• Speed and Bandwidth monitoring</li></ul>
Scheduling	<ul style="list-style-type: none"><li>• Enable Firewall</li><li>• Enable power saving</li></ul>
Easy access	<ul style="list-style-type: none"><li>• User can type model name and access to the main page.</li></ul>
Install Smart Wizard	<ul style="list-style-type: none"><li>• Guide users using a user friendly initial router setup</li></ul>