

# ECH502

## WIRELESS HOTSPOT GATEWAY



### INTRODUCTION

The Edgecore ECH502 is an all-in-one wireless hotspot gateway solution that caters primarily to SMBs such as coffee shops or restaurants. As an access point with built-in gateway functionality, the ECH502 is ideal for businesses that wish to have an enterprise-grade Wi-Fi network for their customers, without the associated deployment costs and complexities. Featuring concurrent dual-band 802.11ac wave 2 connectivity, 2x2:2 MU-MIMO with a total data rate of 1.2 Gbps, and many wireless optimization features, the ECH502 is able to provide a wire-like performance. Additionally, the ECH502 offers a comprehensive set of user authentication, policy enforcement, and network traffic monitoring functionality, allowing businesses to gain complete visibility and control over their Wi-Fi network.

The integrated guest Wi-Fi in the ECH502 supports a wide-array of methods for guests to authenticate and obtain Wi-Fi access. Guests can register by e-mail, SMS, or popular social media platforms such as Facebook, for additional access. Alternatively, businesses can choose to integrate an external RADIUS server to easily centralize the user credentials in an existing network environment.

With the ECH502, small business owners can move beyond just providing free Wi-Fi to their customers. Customizable captive portals and social media login are now valuable sources for obtaining direct customer information, which in turn allows for better understanding of customers and more effective marketing campaigns. Manageable Wi-Fi is increasingly becoming a necessity for SMBs that wish to offer a secure and reliable Wi-Fi environment, and the ECH502 is the ideal product to meet these needs.

### HIGHLIGHTS

- All-in-one: built-in Wi-Fi and user access control
- Integrated guest Wi-Fi platform supporting Facebook, Google+, Line and OpenID
- Tiered Wi-Fi service with usage quotas by bandwidth, volume, and duration
- Detailed user browsing histories and network statistics
- 802.11ac wave 2, 2x2:2 MU-MIMO supporting a total data rate of 1.2 Gbps across both radios
- Up to 4 Service Zones, each with completely customizable captive portals and network configurations
- Built-in gateway functionality including DHCP, NAT, and routing profiles

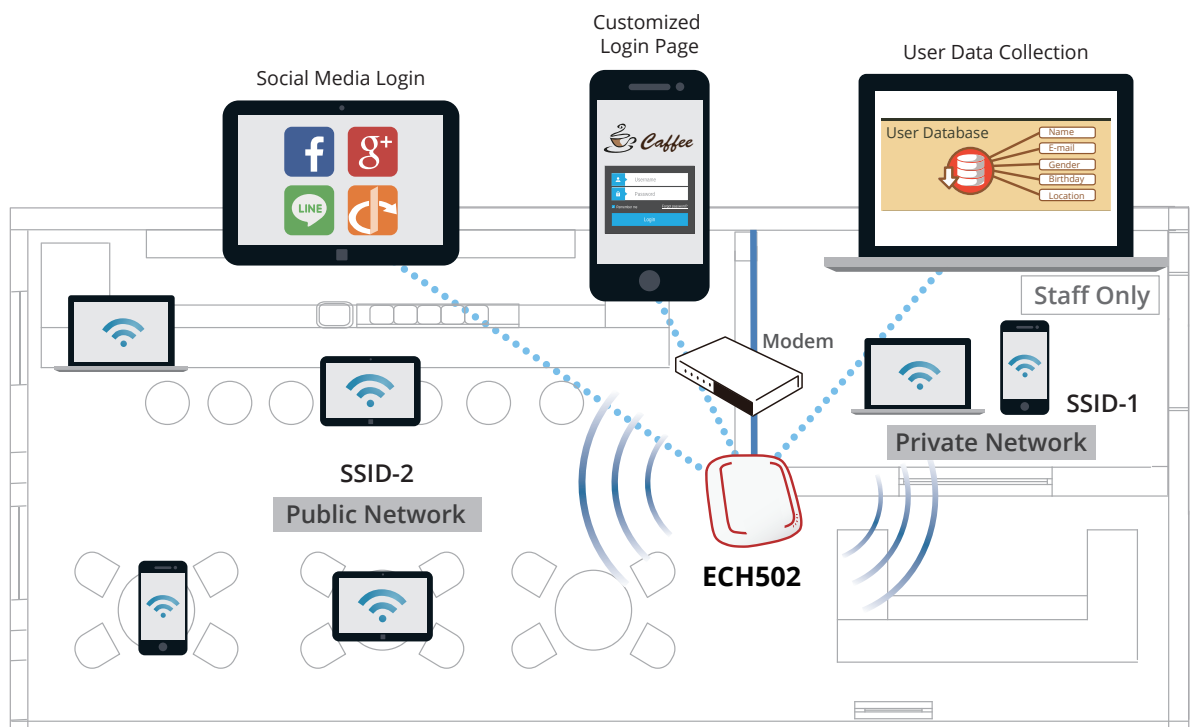
**FEATURES**

**Complete User Management**

The ECH502 provides organizations with the same level of security as large enterprises, such as WPA2-enterprise user authentication with detailed role-based policy enforcement. Through the combination of roles, scheduling, and profiles, network administrators can control each user's bandwidth, traffic priorities, routing, and much more. Furthermore, ECH502 support numerous network logs and reporting mechanisms, such as the HTTP Web Log that records visited website histories of all users. The business owners can easily trace internal to external network addresses when illegal or suspicious activities are performed. Managing user access and user logs and reports are more important than ever for organizations needing to ensure reliable and secure Wi-Fi performance.

**Easy Guest Login with Customer Insights**

The ECH502 provides multiple guest self-registration methods, guests can easily login via their e-mail, or using their Facebook, Google+, Line, or OpenID accounts, while business owners can collect and use user information such as name, e-mail, gender, birthday, and location to implement more effective marketing and advertising campaigns. With these information, business owners can better understand their target audience and optimized product offerings and promotional programs, resulting in more effective campaigns and increased revenue.



## SPECIFICATIONS

### PHYSICAL

Power	<ul style="list-style-type: none"> <li>DC Input: 12V / 1.5A</li> <li>PoE: 802.3af compliant (PoE injector optional)</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>14.6 cm (L) x 14.6 cm (W) x 3.5 cm (H)</li> </ul>
Weight	<ul style="list-style-type: none"> <li>0.55k g (1.21 lbs)</li> </ul>
Interfaces	<ul style="list-style-type: none"> <li>Uplink: 1 x 10/100/1000Base-T Ethernet, Auto MDIX, RJ-45 with 802.3af PoE</li> <li>LAN: 1 x 10/100/1000Base-T Ethernet, Auto MDIX, RJ-45</li> <li>USB: 1 x USB 2.0; 4G LTE dongle support</li> </ul>
LED Indicators	<ul style="list-style-type: none"> <li>Power</li> <li>2G-WiFi</li> <li>5G-WiFi</li> <li>LAN</li> </ul>
Buttons	<ul style="list-style-type: none"> <li>Reset / Restart</li> </ul>
Environmental Conditions	<ul style="list-style-type: none"> <li>Operating Temperature: 0°C (32°F) to 50°C (122°F)</li> <li>Operating Humidity: 5% to 95% non-condensing</li> </ul>
Power Consumption	<ul style="list-style-type: none"> <li>9.0W max.</li> </ul>
Antenna	<ul style="list-style-type: none"> <li>Type: 5 x Built-in PIFA (2 x 2.4 GHz, 2 x 5 GHz, 1 x Bluetooth Low Energy)</li> <li>Gain: 3 dBi (2.4 GHz), 5 dBi (5 GHz), 3 dBi (BLE)</li> </ul>
Mounting	<ul style="list-style-type: none"> <li>Wall/ceiling mount (Mounting bracket included)</li> </ul>

#### Tamperproof Mounting Kit Lock

### WIRELESS PERFORMANCE

Physical Data Rate	<ul style="list-style-type: none"> <li>Up to 300 Mbps (2.4 GHz)</li> <li>Up to 867 Mbps (5 GHz)</li> </ul>
--------------------	--

### WIRELESS SECURITY

Wireless Security	<ul style="list-style-type: none"> <li>WEP</li> <li>WPA/WPA2 Mixed</li> <li>WPA2-Personal (PSK)</li> <li>WPA2-Enterprise (EAP)</li> <li>TKIP and AES Encryption</li> </ul>
-------------------	--

VLAN Tagging(802.1Q)

Station Isolation

Layer 2 Firewall

DHCP Snooping

\*1: Maximum power is limited by local regulatory requirements

\*2: Some channels are restricted by local regulatory requirements

### WI-FI

Standards	<ul style="list-style-type: none"> <li>802.11 a/b/g/n/ac; wave 2</li> <li>Concurrent dual-band 2.4 &amp; 5 GHz</li> </ul>
Supported Data Rates	<ul style="list-style-type: none"> <li>802.11b: 1, 2, 5.5, 11 Mbps</li> <li>802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li> <li>802.11n: 6.5 – 144 Mbps (20 MHz)</li> <li>802.11n: 13.5 – 300 Mbps (40 MHz)</li> <li>802.11ac: 6.5 – 173.4 Mbps (20 MHz)</li> <li>802.11ac: 13.5 – 400 Mbps (40 MHz)</li> <li>802.11ac: 29.3 – 866.6 Mbps (80 MHz)</li> </ul>
Radio Chains	<ul style="list-style-type: none"> <li>2 x 2</li> </ul>
Spatial Streams	<ul style="list-style-type: none"> <li>2; MU-MIMO support</li> </ul>
Output Power	<ul style="list-style-type: none"> <li>2.4 GHz: Up to 22 dBm*1</li> <li>5 GHz: Up to 22 dBm*1</li> </ul>
Channelization	<ul style="list-style-type: none"> <li>20 / 40 / 80 MHz</li> </ul>
Frequency Band	<ul style="list-style-type: none"> <li>2.412 – 2.472 GHz</li> <li>5.180 – 5.825 GHz</li> </ul>
Operating Channels	<ul style="list-style-type: none"> <li>2.4 GHz: 1 – 11 (US), 1 – 13 (Europe), 1 – 13 (Japan)</li> <li>5 GHz*2: 36 – 165 (US), 36 – 140 (Europe), 36 – 140 (Japan)</li> </ul>
ESSIDs	<ul style="list-style-type: none"> <li>Up to 8</li> </ul>

### USER AUTHENTICATION

Authentication Types	<ul style="list-style-type: none"> <li>UAM (browser-based)</li> <li>IP or MAC-based</li> </ul>
Authentication Servers	<ul style="list-style-type: none"> <li>Local</li> <li>On-Demand</li> <li>Guest</li> <li>RADIUS (encrypted)</li> </ul>
Billing Quota Type	<ul style="list-style-type: none"> <li>Duration Time</li> <li>Cut-off Time</li> <li>Volume</li> <li>Usage Time</li> </ul>
Social Media Login	<ul style="list-style-type: none"> <li>Facebook</li> <li>Google+</li> <li>Line</li> <li>Open ID</li> </ul>
Customizable Captive Portal	<ul style="list-style-type: none"> <li>Yes</li> </ul>
Customizable Walled Garden	<ul style="list-style-type: none"> <li>Yes</li> </ul>
Integrated Guest Access	<ul style="list-style-type: none"> <li>Yes</li> </ul>
User Blacklisting	<ul style="list-style-type: none"> <li>Yes</li> </ul>
HTTPs Login Redirect	<ul style="list-style-type: none"> <li>Yes</li> </ul>

**USER MANAGEMENT**

User Policy Assignment	<ul style="list-style-type: none"> <li>• Role-based</li> <li>• Time &amp; location dependent</li> </ul>
Bandwidth Limitations	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Traffic Classification / Remarking	<ul style="list-style-type: none"> <li>• Yes; 802.1p / DSCP</li> </ul>
Stateful Firewall	<ul style="list-style-type: none"> <li>• Yes; each role with individual enforcement schedules</li> </ul>
Static Route Assignment	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Concurrent Session Limit	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Client Change Password Privilege	<ul style="list-style-type: none"> <li>• Allow authenticated users to modify their own login password</li> </ul>

**NETWORK SERVICES**

Internet Protocols Supported	<ul style="list-style-type: none"> <li>• Static / DHCP / PPPoE</li> </ul>
DHCP Server	<ul style="list-style-type: none"> <li>• Yes; IPv4 / IPv6</li> </ul>
DHCP Relay	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Network Address Translation	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Built-in HTTP Proxy Server	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Local DNS Records	<ul style="list-style-type: none"> <li>• Yes</li> </ul>

**DEVICE MOBILITY**

Multiple Device Logins per Account	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
------------------------------------	---

**SYSTEM CAPACITY**

Local Accounts	<ul style="list-style-type: none"> <li>• Up to 2,000</li> </ul>
On-Deman Accounts	<ul style="list-style-type: none"> <li>• Up to 2,000</li> </ul>

**RECEIVE SENSITIVITY**

Operating Mode	Data Rate	Receive Sensitivity (dBm)
802.11b	1 Mbps	-95
	11 Mbps	-86
802.11a	6 Mbps	-87
	54 Mbps	-70
802.11g	6 Mbps	-89
	54 Mbps	-72
802.11n (HT20)	MCS0	-88
	MCS7	-67
	MCS8	-88
	MCS15	-67
802.11n (HT40)	MCS0	-85
	MCS7	-66
	MCS8	-85
	MCS15	-66
802.11ac (VHT20)	MCS0	-86
	MCS8	-64
802.11ac (VHT40)	MCS0	-83
	MCS9	-61
	MCS0	-81
802.11ac (VHT80)	MCS0	-81
	MCS9	-57

**SYSTEM MANAGEMENT**

Browser-Based Configuration	<ul style="list-style-type: none"> <li>• Administer the system from any standard web browser</li> </ul>
Administrator Accounts	<ul style="list-style-type: none"> <li>• Multiple tiered access privileges</li> <li>• Monitor each admin's current accessed page</li> </ul>
System Time	<ul style="list-style-type: none"> <li>• Automatic synchronization (NTP)</li> </ul>
System Backup & Restore	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
SNMP	<ul style="list-style-type: none"> <li>• Yes; v1/v2c</li> </ul>
Network Utilities	<ul style="list-style-type: none"> <li>• Yes; built-in packet capture</li> </ul>

**SYSTEM & NETWORK STATUS**

Traffic Volume Reports	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Online Device Monitoring	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Active Sessions List	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
SMTP (E-mail) Notifications	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Multiple Concurrent E-mail Notification Receivers	<ul style="list-style-type: none"> <li>• Yes</li> </ul>

**NETWORK ACTIVITY LOGS**

System Log (SYSLOG)	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Configuration Change Log	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
RADIUS Server Log	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Web-based User Authentication Log	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
User Events Log	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
User Browsing History	<ul style="list-style-type: none"> <li>• Yes</li> </ul>