

# EWS4502

## Wireless Controller



### Product Overview

Wireless Controller and Unified Access Point offer the integrated affordable solutions for business users in the SMBs and enterprise as well as the wireless solutions fitting to hotel and school users.

With the scalable and distributed architectures, IT managers can easily design and deploy the wireless networks with centralized management capability.

### Key Features and Benefits

#### Scalability with Advanced Distributed Architecture

Easy on your budget, simple to install and use dynamic rate shifting automatically matches the best connection speed. Separate control path and data path gives you flexibility and configurability.

One controller can manage up to 500 units access point, with up to 4 access controllers in one clustering, with total 2000 access point in total. Through 3+1 redundant allocation, with up to 3 access controllers in one clustering, with 1500 access point in total, which is about 5 to 10 times of the same level of traditional wireless controller.

ECW5110L includes 16 VAP per radio. Each radio can co-work to different data tunnel switch\*. Thus users can re-use their infrastructure investment and provide multiple WISP by multiple data tunnel gateways as flexibility to extend the services.

#### Load Balance Design

The network is easily scale to accommodate the growth in a cost effective manner. EWS4502 comes with 1+3 clustering design, which eases the customers to seamlessly purchase more Access Control share the increased heavy loading when customer business growth. The device is also equipped with the mechanism to balance wireless traffic in between APs, such as maximum station limitation per SSID .

#### Fault Tolerance in Redundant AC & AP

The high availability is the key requirement for enterprise/SMB/Campus networks . To achieve the high availability, whenever there's one specific AC failed, all APs managed by this fail AC will detect this fail case and then discover and link to other AC automatically, the Radio and SSID configuration of the managed AP are also synchrony among clustering AC, so the WLAN service and operation can transfer to new AC seamlessly.

While one specific AP failed, the AC will detect this fail case automatically and increase neighbor AP's transmit power to extend neighbor AP coverage, so all stations associated to this failed AP will connect to neighbor AP with enough wireless signal strength and data rate. the wireless service and operation still be available to WLAN user.

## Smart Wireless

### 5GHz Wi-Fi Backhaul

With dual band design, 5GHz backhaul provides more stable and durable interconnection between APs than 2.4GHz.

### Auto connection (Zero-configuration)

Automatically configuration by AP itself when start up. After setting the same SSID in AP, the WDS link can connect/build-up automatically, it provide easy maintain effort and fail-over feature.

### Multiple WDS link hop

Connect multiple access points without a wire, up to 4 hop of WDS links.

### CAPWAP over WDS

Control and provisioning of wireless access points, now available over WDS. Combining the standard provision protocol (CAPWAP) and flexible WDS backhaul connection, the deployment of WLAN will be more flexible and smart management.

### Dual radio 2.4GHz/5GHz services

Provide 2.4GHz 802.11b/g/n and 5GHz 802.11a/n services simultaneously. Concurrent dual band service allow users have more flexible association capability and provide more stable and high data rate via 5G band. And, EWS4502 and the unified APs also provide band steering feature to guide the wireless station to connect to 5GHz band first if station own dual band capability\*.

## 3G Offload Capability

### EAP-SIM/EAP-AKA

To support 3G offload, ECW5110-L provide EAP-SIM (GSM) and EAP-AKA (UMTS) pass-through features. Which offers:

Streamlined network access: Mobile devices will be automatically granted access to the network based upon credentials such as SIM cards, which are widely used in cellular devices today. No user intervention will be required.

Security: Over-the-air transmissions will be encrypted using the latest-generation security technology (Wi-Fi Certified WPA2-Enterprise).

### Captive portal

Use Web Browser as an authentication device. All mobile device with Web browser can be authenticated by AP/AC and zero foot-print and client-side installation before join to WLAN. the authentication server can be AC built-in captive portal or external customer existed captive portal with Disconnect Message (DM) for pre-pay user and Change of Authorization (CoA) for external Captive Portal\*.

### Hotspot 2.0 compatible

Access points provides 802.11u compliant hotspot 2.0\* features in access points to ease connectivity for wireless ISP.

### Accounting

Access points provides classic Radius attributor and customization per customer's request is available in the design.

## Solutions

EWS4502  
Access Controller

Aggregation Switch

L2 PoE Switch  
Smart PoE Switch

ECW5110L  
Unified Enterprise Access Points

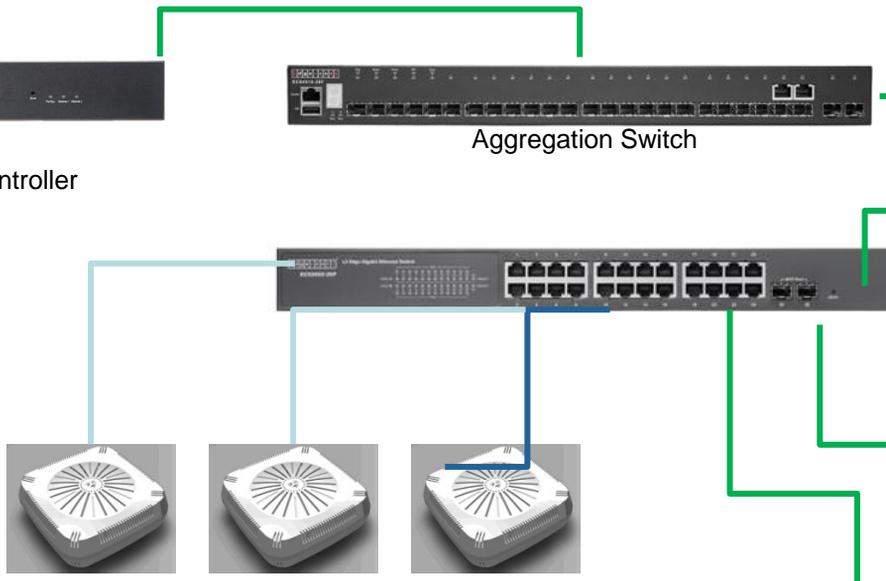
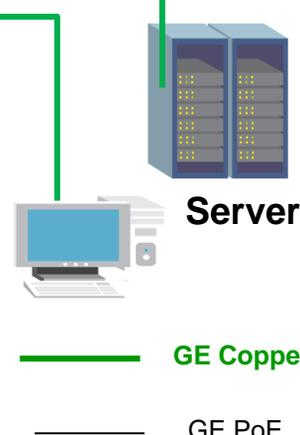
Server

Laptop

— GE Copper

— GE PoE

Outdoor or Ethernet  
cable



# Features

## Technical Features

### Interfaces

- Console RJ45
- 2 Gigabit Ethernet ports
- 1 Reset bottom
- 3 LEDs: Power/Diag, Ethernet 1, Ethernet 2

### WLAN Management Capability

- Up to 500 APs per controller
- Up to 2000 APs per cluster
- Up to 20000 wireless users per controller
- Up to 80000 wireless users per cluster

### Access Point Management

- Auto Discovery
- Auto provisioning
- Auto download profile after registration
- Auto AP firmware
- DTLS encryption
- Discovery and keep alive

### Central Radio Management

- Profile configuration
  - Radio; VAP; QoS
- Radio configuration(802.11abgn,VAP,data rate)
  - RF management and control.
  - Auto/manual AP channel planning assignment.
  - Auto channel adjustment to avoid interference.
  - Auto/manual RF output power adjustment
- Self healing around failed AP(auto cell recovery)
- Utilization-based load balance\*

### WLAN Security

- Security
  - 802.1X authentication
  - 802.11i,WEP,WPA/WPA2(enterprise, personal, pre -share key).
  - Local/remote MAC authentication.
  - Web based captive portal
- Wireless Intrusion Detection System
  - Rogues AP detection, protection, and report.
  - Rogues client detection and report.
  - Wireless threat classification and mitigating.
  - DOS attack detection\*.
- ACL(access control list).
- MAC address black list white list

### Management Method

- CLI
- Telnet /SSH(v2)
- TFTP
- HTTP, HTTPS
- Web-based
- SNMP v1/v2C/v3
- Admin user account management
- Password management
- Email alarm
- IPv4/IPv6 dual stack

### VLAN

- Configure the VLAN for each SSID, and support the management VLAN

### Quality of Service

- QoS,CoS and voice support.
- 802.11e,WMM
- IP DSCP mapping
- 802.1p DSCP mapping wireless user priority
- ACL rule
- Client access rate constraint\*
- Maximum concurrent clients association limit
- Airtime performance protection\*
- Bandwidth control

### Network Monitor (status and statistics)

- Controller status and statistics:
  - View global (total) status and statistics for wireless controller.
  - Total number of management APs
  - Rogues APs
  - Associated clients
  - Traffic statistics.
  - Network utilization.
- Clustered peer controller status and statistics
- AP status and statistics
- Wireless client status and statistics
- Remote packet troubleshooting

### Roaming

- Support L2 roaming and L3 roaming between the ACs in the same cluster

### 2 Features

- Bridge function
- Spanning Tree Protocol
- L2 ACL
- L2 Isolation (prevent STAs communication in the same AP
- DHCP Relay

### Network Management System

- IPv4/IPv6 for SNMP
- Provision
- MAP , heat maps, & status
- Channel info, Rx/Tx rate info, Threshold setting and Alarm
- email alarm & report
- AP traffic statics for the 2 Ethernet ports
- neighbor AP list
- radio status[2] radio coverage [3] radio performance & group report
- configuration backup
- STA session record and statistics
- history statistics
- Group management

### Regulatory and Safety Compliance

- EMC: FCC Part 15 (Class A), EN55022 (Class A)
- Safety: UL60950, CSA

### Operating Specifications and Dimensions

- Power: AC input: 100-240V/50~60Hz, DC output: 12V/1A
- Operating temperature: 0 to 50 degree C
- Storage temperature: -20 to 70 degree C
- Dimensions: 4.22 (H) x17.00 (D) x32.82 (W)cm
- Weight: 3.19lb (1.44Kg)
- Humidity: 5%~ 95%

1. "\*" means future release

2. Information is subject to change without notice

## Ordering Information

■EWS4502-4

Wireless access controller with 4 AP licenses

■ECW5110L

Dual radio 802.11a/b/g/n unified enterprise access points