EnGenius®

User Manual

ECM355AP

ECM855AP

ECM955AP
version 1.1

ECM355AP 802.11 abgn/ac Indoor AP

ECM855AP Wireless 802.11 abgn/ac Outdoor AP

ECM955AP AC1300 Wave2 Dual Band Outdoor Cloud Management Base Station

IMPORTANT

To install this Access Point please refer to the
Quick Installation Guide included in the product packaging.

Table of Contents

Chapter 1
Product Overview

Introduction

ECM355AP

Key Features

- Up to 26 dBm transmit power enabling long range connectivity

- Supports IEEE802.11ac/a/b/g/n wireless standards with up to 300 Mbps data rate on 2.4GHz band and 867Mbps on 5GHz band

- Can be monitored after deployment with ezmCloud for Windows

- Can be power up with Proprietary 54V PoE.

- Fast Transition and Handover between Access Points

- Band Steering shifts client devices to a proper frequency band for getting more bandwidth and speed under an Access Point.

- Secured Guest Network option available

Package Contents

The ECM355AP package contains the following items:*

- ECM355AP Access Point

- Ceiling Mount Bracket

- Mounting Screw Set

- Quick Installation Guide

*(all items must be in package to issue a refund):

Physical interface

1 **LAN Port 1 (802.3at PoE Input)**: Ethernet port for RJ-45 cable.

2 **LED Indicators:** LED lights for Power, LAN Port 1, LAN Port 2, 2.4 GHz Connection and 5 GHz Connection.

3 DC in

4 Reset button

Dimensions and Weights

Length: 200mm

Width: 200mm

Depth: 45mm"

Weight: TBD

ECM855AP

Key Features

• Up to 23 dBm transmit power enabling long range connectivity

• Supports IEEE802.11ac/a/b/g/n wireless standards with up to 300 Mbps data rate on 2.4GHz band and 867Mbps on 5GHz band

• Two detachable 4.5 dBi 2.4 GHz Omni-directional antennas

• Two detachable 6.3 dBi 5 GHz Omni-directional antennas

• Can be monitored after deployment with ezmCloud for Windows.

• Can be used with included power adapter or via PoE with Proprietary 54V.

• Fast Transition and Handover between Access Points

• Band Steering shifts client devices to a proper frequency band for getting more bandwidth and speed under an Access Point.

• Secured Guest Network option available

Package Contents

The ECM855AP package contains the following items:*

• ECM855AP Access Point

• 2 detachable 4.5 dBi 2.4 GHz Omni-directional Antenna

• 2 detachable 6.3 dBi 5 GHz Omni-directional Antenna

• Wall Mount Screw set

• Ground cable and Screw for ground use

• Wall Mounting plate, Mounting Bracket, Screw set kit

• Quick Installation Guide

*(all items must be in package to issue a refund)

I

Maximum data rates are based on IEEE 802.11 standards. Actual throughput and range may vary depending on many factors including environmental conditions, distance between devices, radio interference in the operating environment, and mix of devices in the network. Features and specifications subject to change without notice. Trademarks and registered trademarks are the property of their respective owners. For United States of America: Copyright © 2018 EnGenius Technologies, Inc. All rights reserved.

Physical interface

1 **2.4 GHz Antennas:** Detachable 4.5 dBi 2.4 GHz Omni-directional

2 **5 GHz Antennas** Detachable 6.3 dBi 5 GHz Omni-directional

3 **LAN Port 1 (802.3at PoE Input):** Ethernet port for RJ-45 cable.

4 **LED Indicators:** LED lights for Power, LAN Port 1, LAN Port 2, 2.4 GHz Connection and 5 GHz Connection.

5 **Mounting Holes:** Using the provided hardware, the ECM855AP can be attached to a wall or pole.

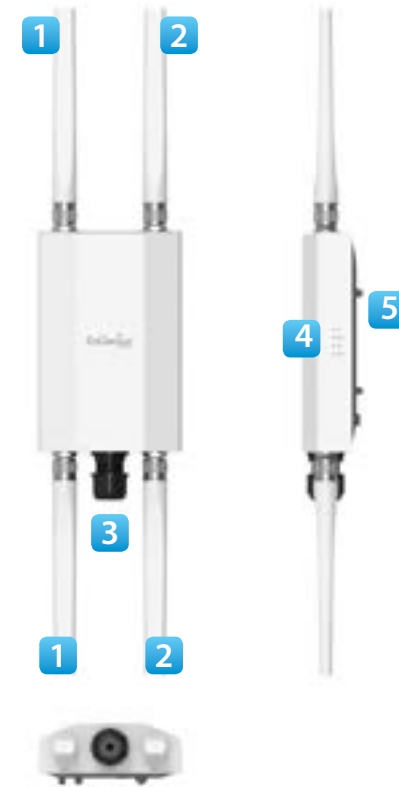*The installation angle of antenna must be vertical to the ground.

Dimensions and Weights
Length: 218.7mm
Width: 124.0mm
Depth: 56.2mm"
Weight: 2.04kg

ECM955AP

Key Features

• Up to 29dBm transmit power enabling long range connectivity

• Supports IEEE802.11ac/a/b/g/n wireless standards with up to 300 Mbps data rate on 2.4GHz band and 867Mbps on 5GHz band

• Two detachable 5 dBi 2.4 GHz Omni-directional antennas

• Two detachable 7 dBi 5 GHz Omni-directional antennas

• Can be monitored after deployment with EnGenius ezmCloud

• Can be used with included power adapter or via PoE with Proprietary 54V.

• Fast Transition and Handover between Access Points

• Band Steering shifts client devices to a proper frequency band for getting more bandwidth and speed under an Access Point.

• Secured Guest Network option available

Package Contents

The ECM955AP package contains the following items:*

• ECM955AP Access Point

• 2 detachable 5 dBi 2.4 GHz Omni-directional Antenna

• 2 detachable 7 dBi 5 GHz Omni-directional Antenna

• 1 LTE Antenna

• 1 GPS Antenna

• Ground cable

• Wall Mounting plate, Mounting Bracket, Screw set kit

• Quick Installation Guide

*(all items must be in package to issue a refund)

Physical interface

1 **2.4 GHz Antennas:** Detachable 5 dBi 2.4 GHz Omni-directional,

2 **5 GHz Antennas** Detachable 7 dBi 5 GHz Omni-directional

3 **LAN Port 1 (802.3at PoE Input)**: Ethernet port for RJ-45 cable.

4 **LAN Port 2 (802.3af PSE Output)**: Ethernet port for RJ-45 cable.

5 **LED Indicators:** LED lights for Power, LAN Port 1, LAN Port 2, 2.4 GHz Connection and 5 GHz Connection.

6 **Locate GPS**

7 **Scanning Radio**

*The installation angle of antenna must be vertical to the ground.

Dimensions and Weights

Length: 285mm
Width: 218mm
Depth: 55.5mm"
Weight: TBD
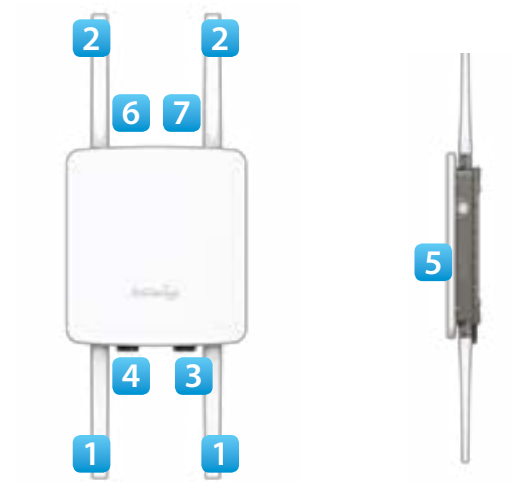
Technical Specifications

Standard:
IEEE802.11ac/a/n on 5 GHz
IEEE802.11b/g/n on 2.4 GHz
IEEE802.3at

LED Indicator
Power
LAN
2.4 GHz
5 GHz

Operation Modes
Access Point
Client Bridge
WDS AP
WDS Bridge
WDS Station

Management
Auto Channel Selection
Multiple SSID: 8 SSIDs per Radio
BSSID
SNMP V1/V2c/V3
MIB I/II, Private MIB
VLAN Tag/VLAN Pass-through
Clients Statistics
Save Configuration as User Default
Fast Roaming
E-Mail Alert
RADIUS Accounting
Guest Network

Control
CLI Supported
Distance Control (Ack Timeout)
802.1X Supplicant (CB Mode)
Multicast Supported
Auto Reboot
Obey Regulatory Power

Security
WPA2 Personal
WPA2 Enterprise
Hides SSID in beacons
MAC address filtering, up to 32 MACs
Wireless STA (Client) connection list
Https Support
SSH Support

QoS (Quality of Service)
Complaint with IEEE 802.11e standard

Physical/Environment Conditions
Operating:
ECM355AP
    Temperature: 32 °F to 122 °F (0 °C to 50 °C)
    Humidity (non-condensing): 0%~90% typical
ECM855AP
    Temperature: -4 °F to 158 °F (-20 °C to 70 °C)
    Humidity (non-condensing): 0%~90% typical
ECM955AP
    Temperature: -4 °F to 158 °F (-20 °C to 70 °C)
    Humidity (non-condensing): 0%~90% typical

WARNING
HOT SURFACE
DO NOT TOUCH

Symbol ... or similar wording ... shown on the Metal enclosure.

Storage:

ECM355AP

      Temperature: -40 °F to 176 °F (-40 °C to 80 °C)

      Humidity (non-condensing): 0%~90% typical

ECM855AP

      Temperature: -40°F to 176 °F (-40 °C to 80 °C)

      Humidity (non-condensing): 0%~90% typical

ECM955AP

      Temperature: -40°F to 176 °F (-40 °C to 80 °C)

      Humidity (non-condensing): 0%~90% typical

System Requirements

The following are the Minimum System Requirements in order to configure the device.

• Computer with an Ethernet interface or wireless network capability

• Windows OS(XP, Vista, 7, 8, 10), Mac OS, or Linux-based operating systems

• Web-Browsing Application (i.e.: Internet Explorer, Firefox, Safari, or another similar browser application)

Chapter 2
Configuring Your Access Point

Configuring Your Access Point

This section will show you the configuration function and status overview on the web-based interface. For more detail settings please use the cloud platform.
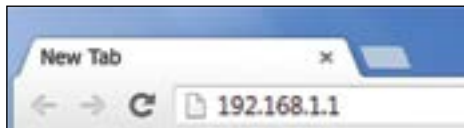
Default Settings

Please use your Ethernet port or wireless network adapter to connect the Access Point.

IP Address	192.168.1.1
Username / Password	admin / admin

Web Configuration

1. Open a web browser (Internet Explorer/Firefox/Safari/Chrome) and enter the IP Address **http://192.168.1.1**

Note: If you have changed the default LAN IP Address of the Access Point, ensure you enter the correct IP Address.

2. The default username and password are **admin**. Once you have entered the correct username and password, click the **Login** button to open the web-base configuration page.

3. If successful, you will be logged in and see the interface of this Access Point.

*The model name will be varied by different models.

Device Status: You can see the device overview and network connectivity status.

Local Setting: You can set the IPv4,IPv6, Spanning Tree Protocal(STP) ,firmware upgrade and Miscellaneous in this page. For other configuration you can implement in cloud platform.

Appendix

Appendix A

Federal Communication Commission Interference Statement-ECM355AP

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Operations in the 5.15-5.25GHz band are restricted to indoor.

IMPORTANT NOTE:
Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Operation of this device is restricted to indoor use only.

Appendix A

Federal Communication Commission Interference Statement-ECM855AP

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:
Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 21 cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Operation of this device is restricted to outdoor use only.

Appendix A

Federal Communication Commission Interference Statement-ECM955AP

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:
Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Operation of this device is restricted to outdoor use only.

Appendix B -Professional installation instruction-ECM855AP

1. Installation personal

This product is designed for specific application and needs to be installed by a qualified personal who has RF and related rule knowledge. The general user shall not attempt to install or change the setting.

2. Installation location

The product shall be installed at a location where the radiating antenna can be kept 21cm from nearby person in normal operation condition to meet regulatory RF exposure requirement.

3. External antenna

Use only the antennas which have been approved by the applicant. The non-approved antenna(s) may produce unwanted spurious or excessive RF transmitting power which may lead to the violation of FCC/IC limit and is prohibited.

4. Installation procedure

Please refer to user's manual for the detail.

5. Warning

Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in relevant rules. The violation of the rule could lead to serious federal penalty.

Appendix B -Professional installation instruction-ECM955AP

1. Installation personal
This product is designed for specific application and needs to be installed by a qualified personal who has RF and related rule knowledge. The general user shall not attempt to install or change the setting.

2. Installation location
The product shall be installed at a location where the radiating antenna can be kept 20cm from nearby person in normal operation condition to meet regulatory RF exposure requirement.

3. External antenna
Use only the antennas which have been approved by the applicant. The non-approved antenna(s) may produce unwanted spurious or excessive RF transmitting power which may lead to the violation of FCC/IC limit and is prohibited.

4. Installation procedure
Please refer to user's manual for the detail.

5. Warning
Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in relevant rules. The violation of the rule could lead to serious federal penalty.