

OA200 Outdoor 802.11ag AP

Quick Installation Guide

Version 1.0

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1. Introduction

1.1 Purpose

This document provides information and procedures on hardware installation, setup and management of the IEEE 802.11ag AP Bridge.

1.2 Overview

Access Point with Rugged Housing for Application

OA200 Wireless11ag AP Bridge provides quality connectivity for Wi-Fi networks. This device is ideal for rugged environments and application.

Multiple Operating Modes

OA200 Wireless11ag AP Bridge provides 3 operating modes. There are AP, AP Repeater and Wireless Client. When it is set to AP mode, it connects wireless clients to a wired network. In AP Repeater mode, it can extend the communication distance of wireless connection. Finally, in Wireless Client mode, AP auto scan for specific AP (remote AP's SSID), then set up connection to it as a client.

Wi-Fi Compliant Device

OA200 is Wi-Fi compliant device which ensures the network compatibility.

High Performance for Wireless Coverage

OA200 designs to support large areas. This unit is built-in high power RF module.

Installation

OA200 is very easy to install and set up. Power over Ethernet support offers the power for this unit and decreases most effort on installation.

2. Operating Mode

OA200 provides 3 kinds of operating mode for application.

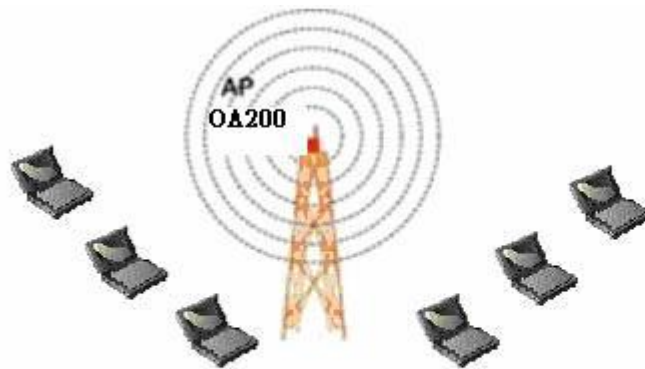
- AP mode

- AP Repeater mode

- WDS mode

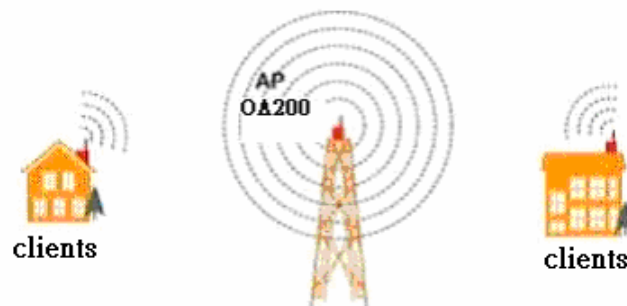
2.1 AP mode

In AP mode, it can connect multiple wireless clients to a wired network.



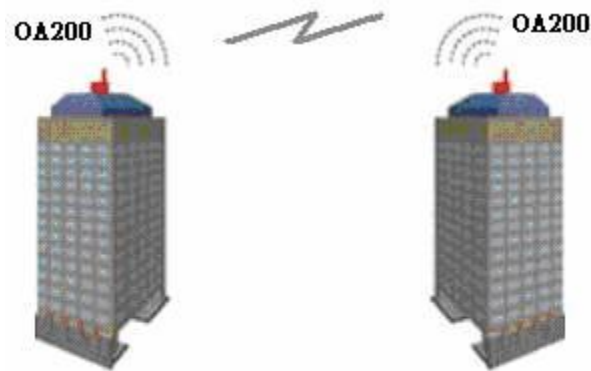
2.2 AP Repeater mode

AP Repeater mode allows OA200 to communicate with other 802.11ag APs while functioning in AP mode, and to extend your Wireless Network coverage. It is set by SSID



2.3 WDS mode

In this mode, it allows wireless connection between two or more wired and wireless networks, such as two networks with the same sub-network in different buildings. For building-to-building wireless connection, each building should implement one OA200 as WDS. In this case, the OA200 can act as a wireless bridge between the two wired and wireless networks. Please fill in remote AP's MAC address in "WDS links" space.



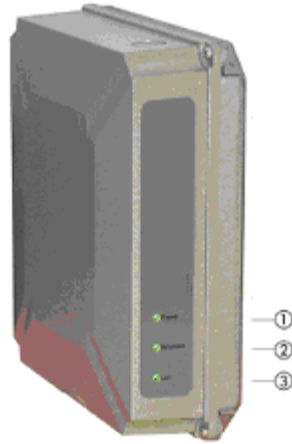
2.4 Wireless Client mode

AP auto scan for specific AP (remote AP's SSID), then set up connection to it as a client.

3. Hardware Installation

3.1 LED Description

There are 3 LEDs on the right side of OA200.



1. Link LED

Off: No LAN connection available

On: LAN connection OK

2. 11g LED

Off: no activity

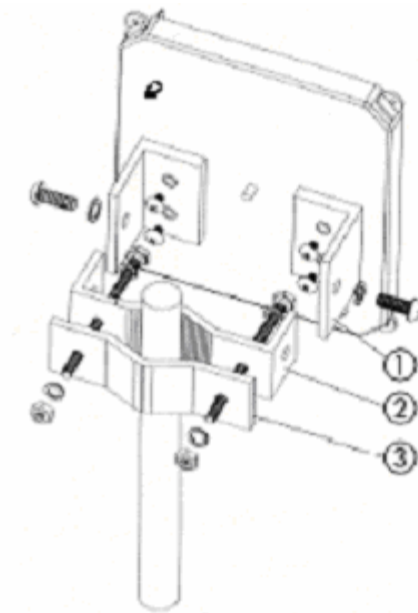
Blinking: sending and receiving data

3. 11a LED

Off: no activity

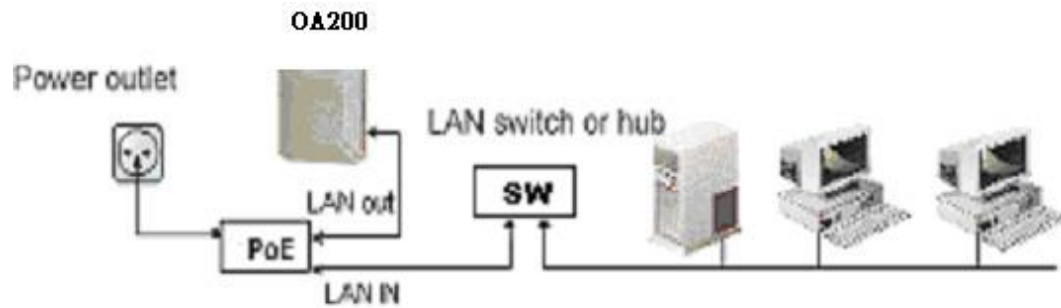
Blinking: sending and receiving data

3.2 Mount Kit Installation



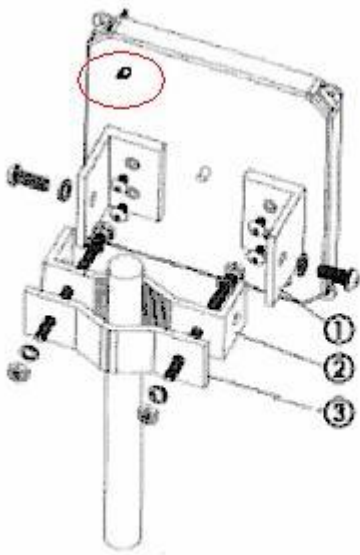
1. Assemble part **1** of the mount kit at the rear of OA200, shown in the above figure.
2. If you are mounting the Access Point on a wall, first install the bracket **2** of the mounting kit to a suitable position. Assemble the back of the OA200 housing to the bracket subsequently.
3. If you are mounting the OA200 to a pole, first install the bracket **2** and the clip **3** of the mounting kit to a strong pole. Assemble the rear of the OA200 housing to the bracket subsequently.
4. Insert the LAN cable to a Power over Ethernet socket. Make sure the power LED and LAN link LED is light up.

3.3 Power over Ethernet Installation

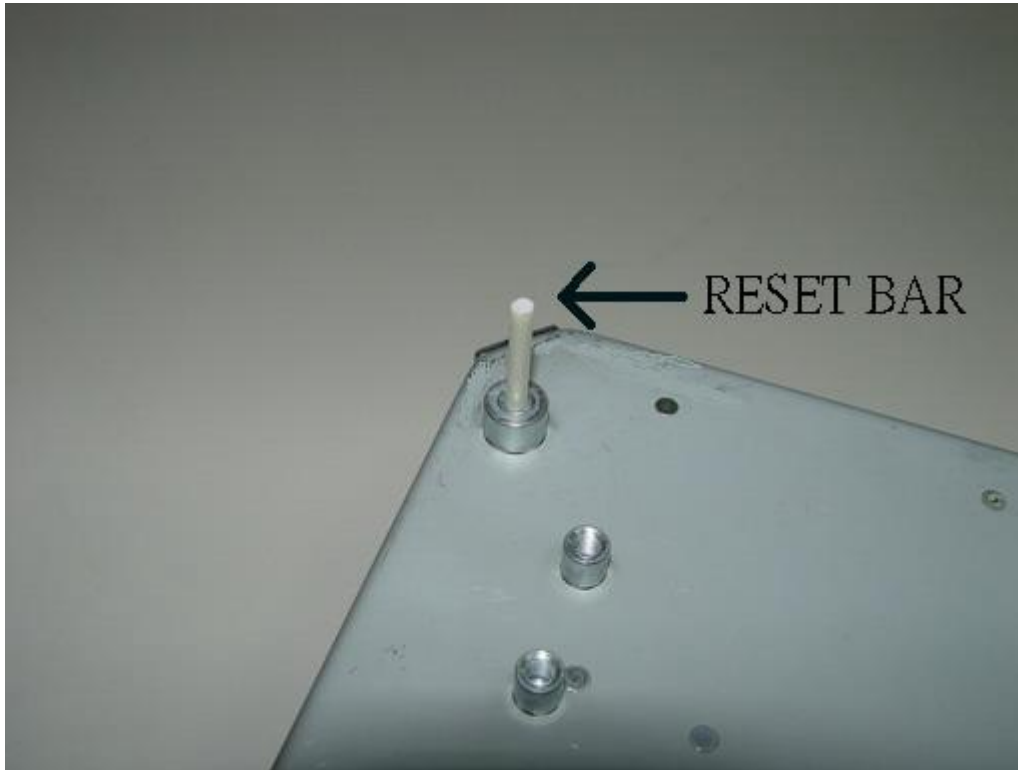


1. Connect the Ethernet cable from the OA200 to PoE hub (LAN out).
2. Connect a second Ethernet cable from the LAN-IN port of the PoE adapter to a free port of a switch or hub within the local network. Please refer to the above figure.

3.4 Hardware Reset to default settings



You can reset the wireless bridge unit's settings to factory defaults by pushing reset button using reset bar. The reset button is located and hidden inside of the rear panel as above figure. Please refer to the following steps to perform the Hardware Reset.



1. Please unscrew the screw part as above figure.
2. Please use the reset bar to reach the reset button. Press it and hold on for approx 10 seconds.
3. Release the reset button, the device will reboot and all configurations will be set to factory default settings automatically.

3.5 Antenna installation on OA200

OA200 is one 11ag AP series with external antenna. The cable with male to male N-type connector will be used to connect with OA-200 physical utility. The cable with female to female reverse N-type connector shall be used as extension cable to establish connection with RSMA converter, The Antenna will be connecting to RSMA converter.

4. Quick Setup Guide

AP Default Settings

The default settings are shown **as the following:**

User	
Password	admin
IP Address	192.168.1.250
Subnet Mask	255.255.255.0
RF ESSID	A band: wlan-a G band: wlan-g
Channel	A band: Auto G band: 6
Mode	G band: Mixed
Encryption	Disabled

Step1

START UP & LOGIN

In order to configure the OA200, you must use your web browser and manually input <http://192.168.1.250> into the Address Box and press Enter. The Main Page will appear.



To start configure the OA200, you must input password "**admin**" on the password section.

Once you have logged-in as administrator, it is ideal to change the administrator password to ensure a secure protection to the Wireless 11ag AP. Please refer to the Security Settings in the later section, which describes how to change the password.

Once you have input the correct password and logged-in, the screen will change to the Setup page screen.

Step2

Local Area Network: This is OA200 IP Address and Subnet Mask as seen on the internal LAN. The default value is 192.168.1.250 for IP Address and 255.255.255.0 for Subnet Mask.

Please Click **“Apply”** button to save your settings once you have any change.

The screenshot shows the 'Network Setup' page of a device's configuration interface. The top navigation bar includes 'Setup', 'Wireless', 'Administration', and 'Status'. The 'Setup' tab is active, showing 'Network Setup'. On the left, a sidebar lists 'Network Setup' and 'Device Name'. The main area contains a 'Device Name' field with 'ap30' and a 'Configuration Type' dropdown set to 'Static IP'. Below this are input fields for IP Address (192.168.1.250), Subnet Mask (255.255.255.0), and Default Gateway (192.168.1.1). At the bottom are 'Apply', 'Cancel', and 'Help' buttons.

Field	Value
Device Name	ap30
Configuration Type	Static IP
IP Address	192 . 168 . 1 . 250
Subnet Mask	255 . 255 . 255 . 0
Default Gateway	192 . 168 . 1 . 1

Step3

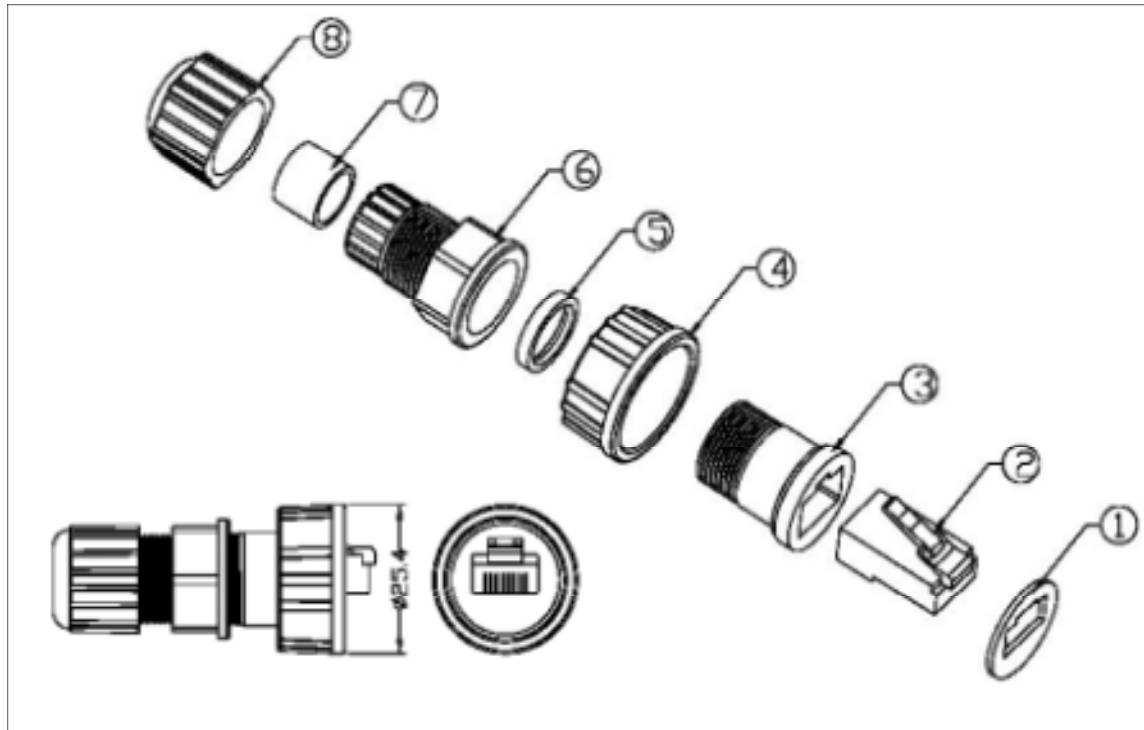
Please select the antenna for each band.

The screenshot displays the 'Wireless A+G' configuration page. It features a top navigation bar with tabs: Setup, Wireless, Administration, Status, and Advanced Wireless Settings. The 'Wireless' tab is active, showing sub-tabs for Wireless Settings, Wireless Mode, Wireless MAC Filter, Wireless Security, and Advanced Wireless Settings. The main content area is divided into two sections: 'Wireless-A Settings' and 'Wireless-B/G Settings'. Both sections have identical settings for most parameters, including Authentication Type (Open System), Transmission Rate (best), Transmission Power (Full), ACK Timeout (48), Beacon Interval (100), DTIM Interval (1), Fragmentation Threshold (2346), and RTS/CTS Threshold (2346). The 'Antenna Select' dropdown menu is highlighted with a red circle in both sections and is set to 'Diversity'. The 'Wireless-B/G Settings' section includes additional options: Short Preamble (radio buttons for Disable and Enable, with Enable selected), Allow 2.4GHz 54Mbps Stations Only (radio buttons for Disable and Enable, with Disable selected), RTS/CTS Protection Mode (Auto), and RTS/CTS Protection Rate (11 Mbps).

Setting	Wireless-A Settings	Wireless-B/G Settings
Authentication Type	Open System (Default)	Open System (Default)
Transmission Rate	best	best
Transmission Power	Full	Full
Antenna Select	Diversity	Diversity
ACK Timeout	48 (Default: 48, Range: 0 ~ 372)	48 (Default: 48, Range: 0 ~ 372)
Beacon Interval	100 (Default: 100 Milliseconds, Range: 20 ~ 1000)	100 (Default: 100 Milliseconds, Range: 20 ~ 1000)
DTIM Interval	1 (Default: 1, Range: 1 ~ 16384)	1 (Default: 1, Range: 1 ~ 16384)
Fragmentation Threshold	2346 (Default: 2346, Range: 256 ~ 2346)	2346 (Default: 2346, Range: 256 ~ 2346)
RTS/CTS Threshold	2346 (Default: 2346, Range: 256 ~ 2346)	2346 (Default: 2346, Range: 0 ~ 2346)
Short Preamble		☐ Disable ☒ Enable
Allow 2.4GHz 54Mbps Stations Only		☒ Disable ☐ Enable
RTS/CTS Protection Mode		Auto
RTS/CTS Protection Rate		11 Mbps

After completed the setting and hardware installation, please adjust the direction of OA200 to remote site OA200 for a high quality transmission.

5. Waterproof RJ-45 Connector Assembly



NO.	NAME
1	Gasket
2	PLUG
3	BODY
4	SCREW NUT
5	Gasket
6	Clamp Ring
7	SEALS
8	SEALING NUT

Recommendation:

Please prepare one CAT-5 or better quality Ethernet cable then get through the parts of waterproof connector before this assembly.

The equipment has been tested and found to comply with FCC and CE Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received including interference that may cause undesired operation.



REMARK: 5150MHz~5250MHz, 5250MHz ~ 5350MHz frequency will be disabled by firmware.

Federal Communication Commission Interference Statement

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.

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.

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.

IMPORTANT NOTE:

FCC 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 minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The OA200 (FCC ID: RYK-OA200) is limited in CH1~CH11 for 2.4 GHz by specified firmware controlled in U.S.A.