# Radisys

Quick Installation Guide

AP1064B

Document Revision 1.0

1   Introduction

The Radisys AP1064B is an advanced Ethernet based Access Point (AP) with integrated Wi-Fi 6, able to support consumer services and high-speed data over wireless. The Access Point can operate as either a Home Gateway device for complete management and security of the subscriber's network, or as a wireless Extender using EasyMesh for whole-home or business coverage.

2.1   Contents

- AP1064B Access Point
- Quick Installation Guide
- Ethernet Cable
- Power Adaptor
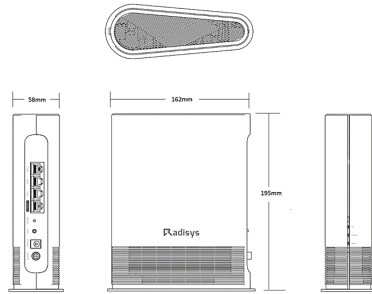
2.2   Product Specifications

Interfaces	Specification
WAN Uplink	1 10/100/1G Base-T port (RJ45)
Ethernet LAN	3 10/100/1G Base-T ports (RJ45)
WIFI	2x2/2x2 Wi-Fi6 (internal antennas)
Power Adaptor Input	90-240VAC, 50/60Hz
Power Adaptor Output	+12VDC nominal, 1.5A
Operating Temperature	0 to 40°C (32 to 104°F)
Operating Humidity	10 to 90% (non-condensing)
Dimensions	195mm x 162mm x 58mm (H x W x D)
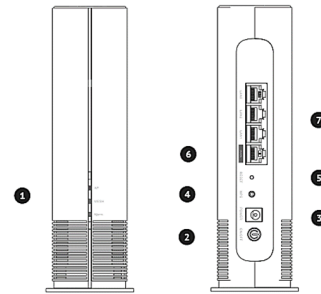
2.3   Interfaces

Item	Description
1 LEDs	Status LEDs
2 ON/OFF Button	Turn power ON or OFF
3 POWER	Power port for external Power Adaptor
4 WPS	Press to initiate WPS connection
5 RESET	Reboot AP (quick push) Reset to factory (press and hold for 10 seconds)
6 WAN	1GE Ethernet ports for WAN upink (RJ45)
7 LAN1-3	1GE Ethernet ports for PC or LAN (RJ45)
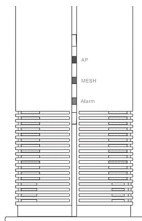
2.4 LED Status Indicators

Label	Color	Status	Definition
AP	Green	ON	The operation mode of AP is Gateway
		OFF	The Gateway operation mode is disabled
		Slow Blink	Initializing, start of boot process
MESH	Blue	ON	The operation mode of AP is Extender AND The RSSI signal strength between the Gateway and the Extender is greater than -70dbm
		Slow Blink	The AP is in the process of WPS pairing OR The Mesh signal strength between the Gateway and the Extender is less than -70dBm
		Fast Blink	Pairing successful, operation mode of AP will change from Gateway to Extender
		OFF	The AP is not Mesh networked with the Gateway

Label	Color	Status	Definition
ALARM	Red	OFF	No alarms or AP is powered off
		ON	Power is on, AP is starting self-check OR The AP cannot access the Internet

3.1 Gateway Installation - First Access Point

For AP1064B installations as an Access Point Gateway unit when directly connected to an Ethernet modem or wireless router.

1. Remove Access Point (AP) from packaging.

2. Place AP on a desktop or flat surface near an existing modem or router with an active Internet connection.

3. Connect Ethernet cable with RJ45 termination from Modem or Router LAN port to AP 1G WAN port. Recommend CAT5e or CAT6 Ethernet cable between devices.

4. Connect Power Adaptor cable with 2-pin barrel to POWER port.

5. Plug in Power Adaptor into electrical outlet.

6. Push ON/OFF button. Check LED power up sequence.

When in auto-mode, the first Access Point will operate as a Home Gateway with default Wi-Fi settings. A service technician or customer can enter the Web GUI to change default settings or operational mode as needed. The Wire-less LAN (WLAN) security default setting should be WPA2. If not, security can be changed to WPA2 using Web GUI.

4 Adding Wireless Extenders–Wired Activation

To improve wireless coverage throughout the home, one or more AP1064B Access Points can be connected to the network and associated to the Home Gateway unit via EasyMesh.

1. Remove additional Access Points from packaging.

2. Place AP on a desktop or flat surface in proximity to the Gateway (same room).

3. Connect Power Adaptor cable with 2-pin barrel to POWER port.

4. Plug in Power Adaptor into electrical outlet.

5. Push ON/OFF button. Check LED power up sequence.

6. With the proposed Extender close enough to the Access Point Gate way, connect an Ethernet cable with RJ45 termination from the Gateway LAN port to the Extender WAN port. Recommend CAT5e or CAT6 Ethernet cable between devices.

7. Allow 2-3 minutes for the Extender to pair and auto synchronize with the Gateway unit. When the EasyMesh function is complete the Extender AP Green LED will turn off and MESH Blue LED will turn on.

8. The Extender can now be disconnected from the Gateway, powered off and placed in another location within your home. When powered on in a difference location, the Extender will remember its settings and now operate as a Mesh Extender.

5 Adding Wireless Extenders–Wireless Activation

Additional AP064B Access Points can be connected to the network and associated to the Gateway unit via EasyMesh using the WPS push-button.

1. Remove additional Access Points from packaging.

2. Place an AP on a desktop or flat surface in proximity to the Gateway (same room or adjacent room).

3. Connect Power Adaptor cable with 2-pin barrel to POWER outlet.

4. Plug in Power Adaptor into electrical outlet.

5. Push ON/OFF button. Check LED power up sequence.

6. Press the WPS button of the Access Point Gateway until and then press the WPS button on the proposed Extender. The MESH Blue LED of the Gateway and the Extender will start blinking.

7. Allow 2-3 minutes for the Extender to pair and auto synchronize with the Gateway unit. When the EasyMesh function is complete the Extender AP Green LED will turn off and MESH Blue LED will turn on.

8. The Extender can now be disconnected from the Gateway, powered off and placed in another location within your home. When powered on in a different location, the Extender will remember its settings and now operate as a Mesh Extender.

9. If the Mesh signal between Gateway and Extender is strong, the Extender MESH Blue LED will remain constant

10. If the Mesh signal is weak (the distance between Gateway and Extender is too far or wireless signal is blocked), the Extender MESH Blue LED may begin to flash. Please allow the Extender to re-optimize over time, or it may be necessary to move the Extender to another location closer to the Gateway. See the Troubleshootng section for tips and suggestions.

6 Web Graphical User Interface

You can access the AP through a web browser using the following steps:

- Connect an Ethernet cable from your computer to any of the LAN1 - 3 (5) ports.

- Launch a web browser and connect to address 192.168.2.1

- After response, enter the following:

    1. Username: user

    2. Password: user

After initial login, it is recommended that password be changed.

7 Placement within the Home or Office

The AP1064B Access Point is designed for self-installation and provisioning using EashMesh with either wired Ethernet connection, or over a wireless Mesh connection using WPS activation. The LEDs on the front panel can be used to diagnose issues. For advanced troubleshoot it may require accessing the Web Graphical User Interface (Web GUI) for additional information.

Some common issues when operating as either an Home Gateway or Extender.

The Alarm Red LED remains on for more than 2 minutes after Access Point is powered ON.

- If the Access Point is configured as Gateway (default mode), check whether the Ethernet cable is connected to an active LAN port on your Modem or Router, and that cable is properly connected to WAN port of Access Point.

Central location for
Wireless Extensions

Installation near Ethernet
Modem or Home Gateway
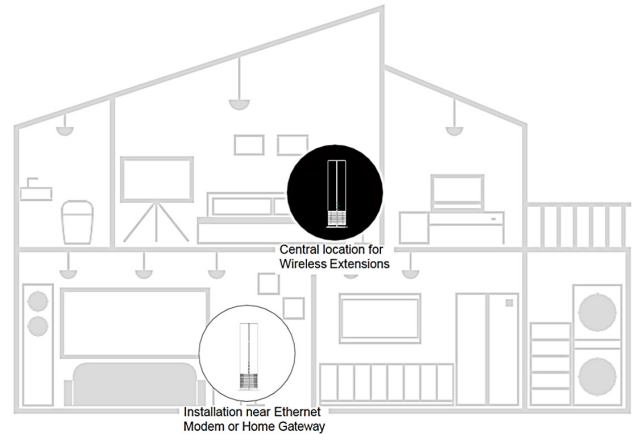
- If the Access Point has been configured as Extender, check that the Mesh network activation was successful and that Gateway Access Point can access the Internet.

- If trouble persists it may be necessary to pair your Extender a second time. Please restore AP1064B to factory default (using RESET button) and follow the steps for Wired Activation or Wireless Activation.

The MESH Blue LED remains off for an extended period after Access Point is powered ON.

- If the Access Point is configured as Gateway (default mode), the MESH Blue LED will remain off. This is standard operating behavior, no action is required.

- If the Access Point is to be configured as Extender, check that the Mesh network activation was successful.

- If Mesh activation fails, please restore AP1064B to factory default (using RESET button) and follow the steps for Wired Activation or Wireless Activation.

The MESH Blue LED is flashing after initial start-up, or after moving to another location within the home or business.

- If the Access Point WPS button was pushed it will trigger the pairing operation and cause MESH Blue LED to flash. Either continue with the pairing of the Extender with the Gateway or wait for EasyMesh WPS pairing mode to expire in 3 minutes.

- Verify whether the Mesh signal strength between the Access Point Extender and Gateway is less than -70dBm. This can be done by entering the Web GUI and viewing the Mesh backhaul signal level.

- To improve Mesh signal strength to be greater than -70dBm, relocate the Extender to another location within the home or business. It may be necessary to locate unit closer to the Gateway or another Extender, or it may require moving the Extender away from an obstacle (metal, in-floor heaters or Low-Emissivity windows can attenuate wireless signals) or source of interference (micro waves, baby monitors or Bluetooth devices such as wireless speakers can generate interfering signals).

8   Caution

Please follow the instructions below to avoid physical injury:

– This unit is for indoor use only.

– All Ethernet and power wiring are limited to the inside of the building.

– You should not install AP during lighting storms to avoid electrical shock.

– DO NOT plug in, turn on or attempt to operate an obviously damaged unit.

– DO NOT use near water.

– DO NOT operate AP in a location where maximum ambient temp. exceeds 40°C.

– DO NOT place near high temperature source.

– Set up the unit away from direct sunlight or other electrical equipment.

– Avoid impact stresses when handling connectors.

– Check the available voltage supply.

– Only connect approved accessories.

– This equipment is not suitable for use in locations where children are to be present.

– DO NOT disassemble the unit.

9   Limited Warranty

The product warranty does not cover damage resulting from hardware being installed in areas subject to rain, high humidity, water ingress and dust or debris. Disassembling product or removing enclosure cover from the assembly is a safety hazard and will void warranty. AP1064B may only be repaired by authorized service personnel.

FCC Radiation Exposure 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 or more 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 FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 25 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the no-collo-cation statement.

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.

Caution

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

Canada Statement

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1) L'appareil ne doit pas produire de brouillage;
2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.
Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 et la conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 25 centimeters between the radiator and your body.

Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 25 centimètres entre le radiateur et votre corps.

The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

Les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

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