

203469-GAEA2-PLM21&GAEA2-PLS20 HUAWEI WiFi Mesh X3 Pro&HUAWEI WiFi Mesh X3 Pro Extender Product Description-(01,en,channel)

Issue

01

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Huawei Device Co., Ltd.



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1 Overview

1.1 Introduction



HUAWEI WiFi Mesh X3 Pro redefines the benchmark for router design with its philosophy of "nature aesthetics + cutting-edge technology." Breaking away from traditional tool-like appearances, it draws inspiration from the natural wonder of "Golden Mountain Glow," featuring a transparent acrylic body with embedded three-dimensional relief mountain motifs.

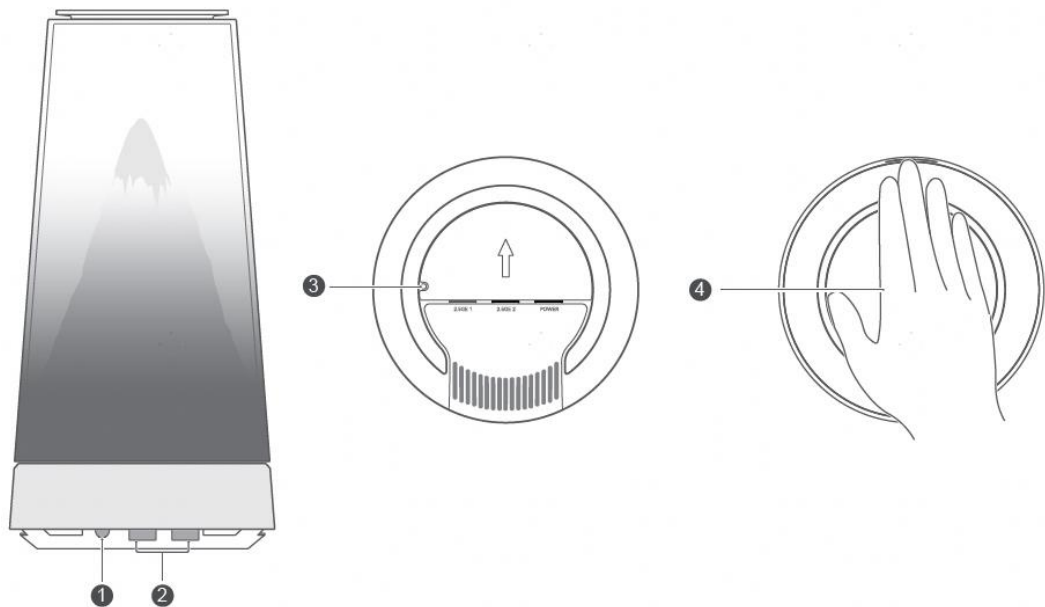
The dynamic LED lighting effects simulate the play of light during sunrise and snowfall, allowing users to switch between modes with a simple touch or automatically adapt according to the time of day. This upgrade transforms the router from a hidden tool into an artistic focal point that enhances home decor, conveying auspicious symbolism and a sense of healing.

As the industry's first router with transparent antennas, it is equipped with the flagship WiFi 7 configuration, offering a theoretical speed of 3.6 Gbps and providing full-home signal coverage, delivering a smooth and seamless internet experience for families.

Images are provided for reference only. The actual product may vary.

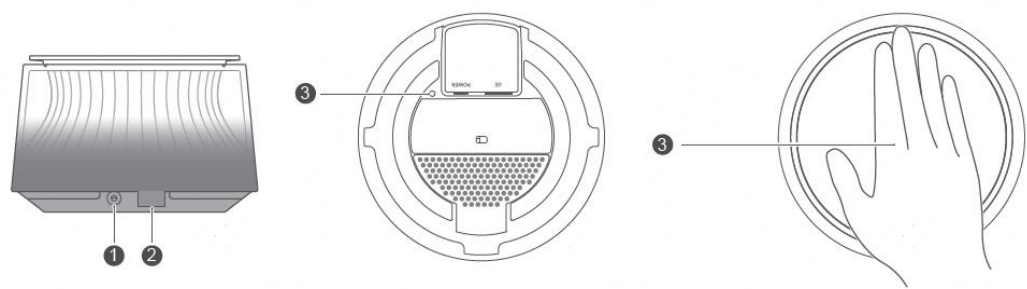
1.2 Button/Ports

X3 Pro:



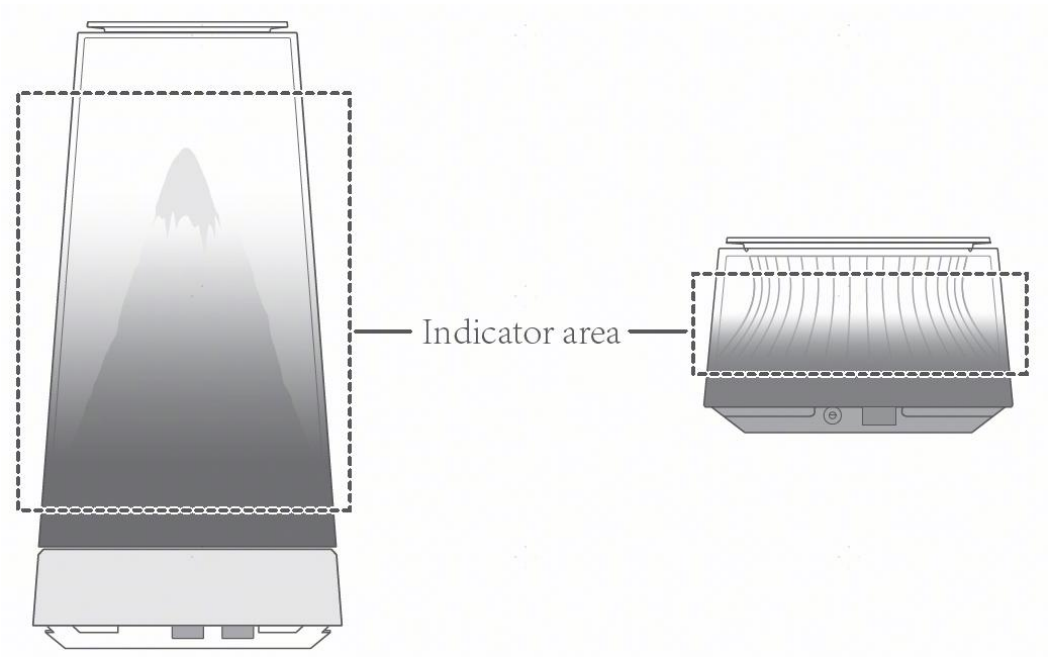
No.	Button/Port	Description
1	Power port	Connects the power adapter to this port.
2	WAN/LAN auto-adaptation port	Connects to the Internet (such as a broadband modem or an optical modem) and network devices such as a computer or TV box. Supports WAN/LAN auto-adaptation. Connect the drop network cable to any one of the ports to access the Internet. NOTE If you have a 2500 Mbit/s network port device at home, you are advised to connect it to the 2500 Mbit/s network port of the router to obtain a higher access rate.
3	RESET hole	When the router is powered on, you can use a pointed object to press and hold the RESET hole for more than two seconds until the indicator turns off. The router should now be restored to factory settings.
4	Touch control area	Tap the top of the router to adjust its brightness or turn off its light.

X3 Pro Extender:



No.	Button/Port	Description
1	Power port	Connects the power adapter to this port.
2	Auto-adaptation port	Connects to computer, or connects to base router.
3	RESET hole	When the router is powered on, you can use a pointed object to press and hold the RESET hole for more than two seconds until the indicator turns off. The router should now be restored to factory settings.
4	Touch control area	Tap the top of the router to adjust its brightness or turn off its light.

1.3 Indicator



Color temperature refers to the color of the light: the lower the number, the warmer and more yellowish-red the light; the higher the number, the cooler and more bluish-white the light. For example, 2,000 K is yellow, 2,500 K is pale yellow, 4,800 K is white with a slight yellow tint, and 7,000 K is white.

In Golden Mountain mode, the router's indicator light brightness and color temperature change depending on the weather.

In Custom mode, the brightness and color temperature of the router indicator do not change with the weather.

Golden Mountain Mode Lighting Effects	Day (Sunrise to Sunset)	Night (Sunset to Sunrise)
Sunny days	Bright with a warm color	Dim with a warm color
Cloudy/Rainy days	Bright with a cool color	Dim with a warm color

Custom Mode Lighting Effects	
Brightness	Maintains the set brightness.
Color temperature	Maintains the set color temperature.

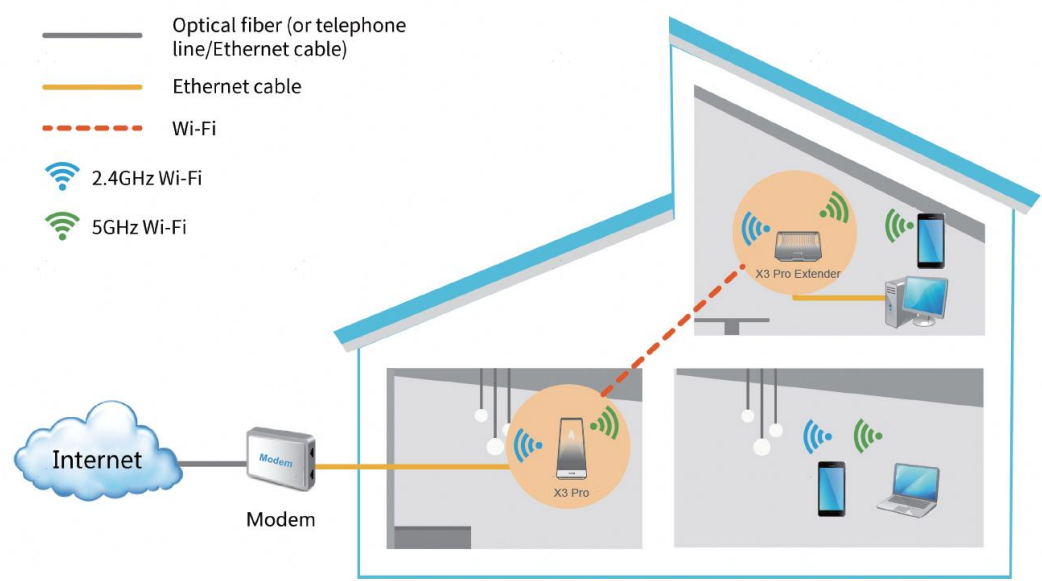
X3 Pro:

Router Status	Indicator Status	Description
Powered on but not set up	Breathing lighting effects	Not set up yet
Powered on and set up	Golden Mountain mode/Custom mode lighting effects	Initial setup completed

X3 Pro Extender:

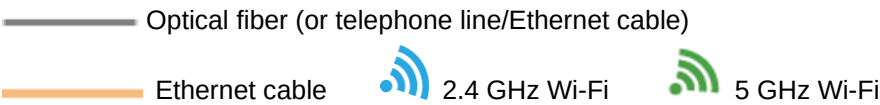
Router Status	Indicator Status	Description
Powered on but not set up	Breathing lighting effects	Not connected to the base router
Powered on and set up	Breathing lighting effects stopped	Connected to the base router

1.4 Network Architecture



Images are provided for reference only. The actual product may vary.

NOTE



2 Functions and Features

2.1 Automatically identifying Internet access mode

The router can automatically identify your Internet access mode (PPPoE/DHCP). No manual operation is required.

PPPoE, DHCP, static IP, and bridge are the most commonly used Internet access modes and are all supported by X3 Pro.

NOTE

The X3 Pro Extender does not support bridge.

2.2 Multi-router network distribution

- Supports network expansion by connecting multiple HUAWEI WiFi Mesh+ routers using Ethernet cables.
- Supports the auto-sync of your router's Wi-Fi configurations: If the Wi-Fi name, password, or router management password is changed on your primary router, the configuration will automatically sync to the others HUAWEI WiFi Mesh+ routers.
- If there are multiple routers in your home, your Wi-Fi device will be automatically switched to a better-signal router.

2.3 Connecting to your old router (through wired bridge or wireless repeater mode) to form a network

- You can use an Ethernet cable to cascade X3 Pro to an old router and form a network. In this case, X3 Pro works as the secondary router.
- X3 Pro can also connect to your old router's Wi-Fi as a wireless repeater. When it functions as a wireless repeater, it has the same Wi-Fi name and password as your old router. There will be only one Wi-Fi network in your home.

NOTE

- If you have two HUAWEI routers that support HUAWEI WiFi Mesh+, using HUAWEI WiFi Mesh+ to connect the two routers will be more convenient.

- When the X3 Pro operates in wired bridge or wireless repeater mode, the X3 Pro Extender cannot function properly.

2.4 Ensuring privacy with multiple security mechanisms

- X3 Pro controls Wi-Fi access and disconnects unwanted devices to prevent unauthorized access.
- It supports guest Wi-Fi. You can set up a dedicated Wi-Fi network for your guests. Guests have access to the guest Wi-Fi but cannot manage the router or access other devices on the home network. This allows you to protect the security and privacy of your home network.
- You can hide your Wi-Fi name to improve network security. If a Wi-Fi name is hidden, wireless devices (like PCs and mobile phones) cannot search for the Wi-Fi name. To connect a wireless device to a hidden Wi-Fi network, you must enter the correct Wi-Fi name.
- The built-in firewall can protect you from DoS/ARP attacks by scanning all data communication between the Internet and your home network.
- It supports DMZ feature that allows you to expose the DMZ host to the Internet, while other devices are protected by the firewall. For example, when setting up a server, you can set the computer connected to the external network as the DMZ host to allow it to provide Internet services while ensuring the security of other devices on your home network.

2.5 Power-saving features

- The router supports three different Signal Strength: Max, Medium, and Low to cater to your different needs at different time of the day and in different environments.
- Wi-Fi timer allows you to disable Wi-Fi during specific time periods (such as after midnight or when you're at work) in order to reduce power consumption.

2.6 Parental control

The parental control feature allows you to set Internet access time limits and restrict access to certain websites to keep your family members (especially minors) protected.

2.7 Router management

You can access your router's web-based management page from your computer, mobile phone or tablet. Alternatively, you can download and install HUAWEI AI Life on your mobile phone or tablet for faster configuration.

2.8 Other supported features

- NAT and NAPT (RFC 1631, RFC 2663, RFC 2766, and RFC 3022)
- Supports access to the Ipv6 network.
- DHCP server and clients
- DNS proxy

Proxy for DNS queries from its connected devices to speed up DNS responses.

- Universal Plug and Play (UPnP)

Computers in the LAN can request the router to automatically switch the port. This allows computers connected to the Internet to access the resources on any LAN computers when needed, allowing you to enjoy a more stable network while playing computer games or using apps to download files.

3 Technical Specifications

3.1 Product Specifications

3.1.1 RAM and Flash Memory

GAEA2-PLM21-20:

- RAM: 512Mbytes
- Flash memory: 128Mbytes

GAEA2-PLS20-20:

- RAM: 512Mbytes
- Flash memory: 128Mbytes

3.1.2 Wi-Fi

- Supports 802.11b/g/n/ax/be (2.4 GHz, wireless rates up to 688 Mbps).
- Supports 802.11a/n/ac/ax/be (5 GHz, wireless rates up to 2882 Mbps).
- Supports simultaneous dual-band (11be 2.4 GHz 688 Mbps and 11be 5 GHz 2882 Mbps Wi-Fi, wireless rates up to 3570 Mbps).

The data rates shown are theoretical in nature. Actual data rates may vary depending on operating environment, wireless device, and other factors. Data rate comparisons (if any) are for the purpose of scientific explanation, and should be used for reference only.

- Adopts Huawei's unique 2.4 GHz and 5 GHz high performance antennas for better Wi-Fi coverage.
- Supports simultaneous Wi-Fi access on the 2.4 GHz and 5 GHz bands, and supports up to 128 devices on dual bands.
- Supports AES and TKIP encryption.
- Supports WPA2-PSK, WPA/WPA2-PSK, WPA2-PSK/WPA3-SAE.
- Supports 5 GHz Wi-Fi prioritization. Your devices that support 802.11kvr will automatically connect to the faster Wi-Fi.
- Supported 2.4 GHz channels: channels 1-13.
- Supported 5 GHz channels: channels 36-64 and 100-140 in countries and areas using the CE standards.
- Channel values vary with countries.

NOTE

Relationship between 5 GHz channels and frequency bands: Channels 36-48 correspond to band 1 (5.15-5.25 GHz). Channels 52-64 correspond to band 2 (5.25-5.35 GHz) DFS. Channels 100-140 corresponds to band 3 (5.47-5.6 & 5.65-5.725 GHz) DFS.

3.2 Ports

GAEA2-PLM21-20: 10/100/1000/2500 Mbit/s WAN/LAN auto-adaptation Ethernet port: 2

GAEA2-PLS20-20: 10/100/1000 Mbit/s auto-adaptation Ethernet port: 1

3.3 Power Supply Specification

GAEA2-PLM21-20:

- Power supply: 12V DC, 2 A
- Power consumption: < 24 W
- Input voltage: 100 - 240V AC
- Input voltage frequency: 50 - 60 Hz

GAEA2-PLS20-20:

- Power supply: 12V DC, 2 A
- Power consumption: < 24 W
- Input voltage: 100 - 240V AC
- Input voltage frequency: 50 - 60 Hz

3.4 Physical Specifications

- Dimensions (Height x Width x Depth):

GAEA2-PLM21-20: 123.2 mm x 123.2 mm x 250.9 mm (Height: 250.9 mm; Diameter: 123.2 mm)

GAEA2-PLS20-20: 114.8 mm x 114.8 mm x 73.5 mm (Height: 73.5 mm; Diameter: 114.8 mm)

Package size (Height x Width x Depth):

The packaging of GAEA2-PL21-121: 328 mm x 150 mm x 326.5 mm

The packaging of GAEA2-PLM21-20: 153 mm x 153 mm x 327 mm

The packaging of GAEA2-PLS20-20: 139 mm x 139 mm x 150 mm

- Weight:

GAEA2-PLM21-20: The product without packaging: about 790g

GAEA2-PLS20-20: The product without packaging: about 420g

The product (GAEA2-PL21-121) with packaging: about 2611g

The product (GAEA2-PLM21-20) with packaging: about 1274g

The product (GAEA2-PLS20-20) with packaging: about 763g

- Operating temperature: 0 °C to 40 °C (32 °F to 104 °F)
- Storage temperature: -40 °C to +70 °C (-40 °F to +158 °F)
- Operating humidity: 5% to 95% RH (non-condensing)
- Storage humidity: 5% to 95%, non-condensing

3.5 Accessories

GAEA2-PL21-121:

- X3 Pro: 1
- X3 Pro Extender: 1
- Power adapter: 2
- Network cable: 1
- Quick Start Guide and Safety Information: 1

GAEA2-PLM21-20:

- X3 Pro: 1
- Power adapter: 1
- Network cable: 1
- Quick Start Guide and Safety Information: 1

GAEA2-PLS20-20:

- X3 Pro Extender: 1
- Power adapter: 1
- Quick Start Guide and Safety Information: 1

3.6 Name Mapping

Product Model (Internal)	GAEA2-PL21-121	GAEA2-PLM21-20	GAEA2-PLS20-20
Certified Model	/	GAEA2-PLM21	GAEA2-PLS20
Product Marketing Name	HUAWEI WiFi Mesh X3 Pro Suite	HUAWEI WiFi Mesh X3 Pro	HUAWEI WiFi Mesh X3 Pro Extender

4Abbreviations

Table 4-1 Abbreviations

Abbreviation	Formal Name
AC	Alternating current
AES	Advanced Encryption Standard
ARP	Address Resolution Protocol
CPU	Central processing unit
CHAP	Challenge Handshake Authentication Protocol
DC	Direct current
DDNS	Dynamic Domain Name Server
DDR	Double Data Rate
DHCP	Dynamic Host Configuration Protocol
DMZ	Demilitarized Zone
DNS	Domain Name System
DoS	Denial of Service
IP	Internet Protocol
LAN	Local Area Network
L2TP	Layer 2 Tunneling Protocol
MAC	Media Access Control
NAT	Network Address Translation
NAPT	Network Address and Port Translation
PAP	Password Authentication Protocol
PPPoE	Point to Point Protocol over Ethernet
PPTP	Point to Point Tunneling Protocol

Abbreviation	Formal Name
PSK	Pre-Shared key
QoS	Quality of Service
TKIP	Temporal Key Integrity Protocol
UPnP	Universal Plug and Play
VPN	Virtual Private Network
WAN	Wide Area Network
WPA	Wireless Fidelity Protected Access