

FTTR Slave Gateway

RH802GW-AX3

Specification

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1. Overview

1.1 Product Introduction

RH802GW-AX3 is an optical gateway launched by RLTECH company for the needs of FTTR and POL application. The functions meet the ITU G.984 international standards, supports multi WAN connection of bridge or route, IPv4 and IPv6 protocol stack, multicast protocol, QoS and firewall function, easy Mesh function and TR069 management protocol. The gateway is distributed in the user's room, connected with the master gateway through fiber, and communicated with the master gateway through the PON interface. In the all-optical network, the slave gateway can auto mesh with the master gateway. It has good quality, high reliability, smart management, augment ability, easy mesh and other advantages, It can effectively meet the user's high-speed access needs.

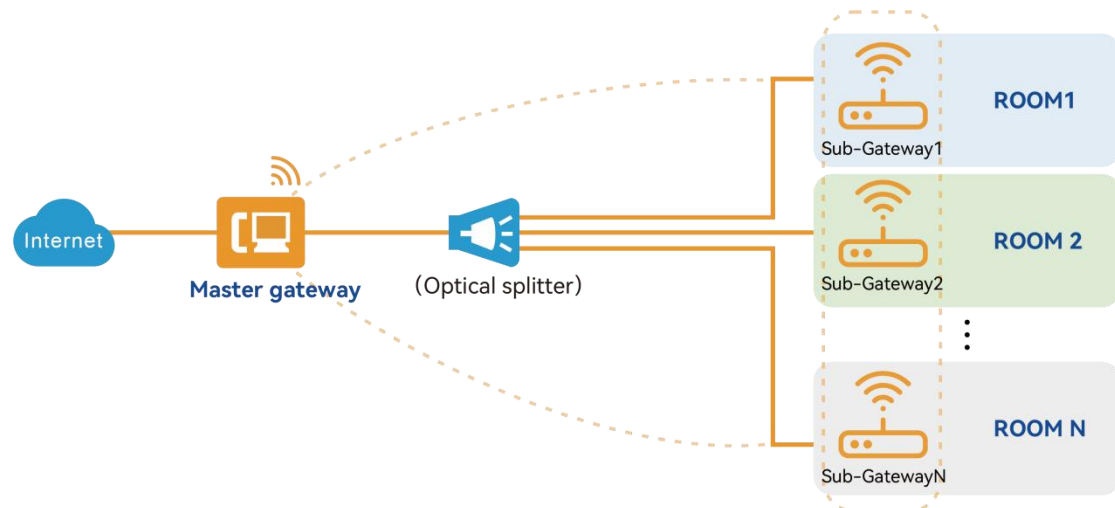
Uplink optical port is 2.5G/1.25G(asymmetric GPON interface), Downlink support 2GE LAN, one of them can used for WAN port; The gateway adopts the latest 802.11ax Wi-Fi 6 technology standard and is also compatible with 802.11a/b/g/n/ac/ax.



RH802GW-AX3 Product Image

1.2 Typical application

RH802GW-AX3 is a sub-gateway designed for indoor applications, refer to the below diagram.



RH802GW-AX3 typical application

2. Hardware specifications

2.1 Hardware Parameters

CPU	EN7529CT
BOSA Driver IC	EN7571
Wi-Fi Base-band	MT7916AN
Wi-Fi RF Chip	MT7976DN
RAM	512MB DDR3
ROM	256MB Flash

2.2 Interface

Interface	Indicator	Description
DC port	POWER	DC adaptor interface: DC12V
Reset button	RESET	Press reset key and keep 5 seconds to make the device restart and recover from the factory default Settings.
MESH button	Mesh	Easy mesh button, press $\geq 1s$, enable the easy mesh function.
LAN1/LAN2	LAN1, LAN2	RJ-45 LAN port, LAN1~2(10/100/1000Mbps)
WAN Port	WAN	Supports SC/UPC connectors, GPON(2.5G/1.25G) Optical Interface, Uplink to FTTR Master Gateway, Plug and Play
USB Port	USB	1*USB2.0 (Optional)

2.3 Indicators of device

Indicators	LED color	Status & Descriptions
WAN	Blue & Red	● Blue Off: ONU did not start the activation process ● Blue On: ONU link active ● Blue Flash: ONU is linking
		● Red Off: Normal optical signal ● Red Flash: Receiving power lower than optical receiver sensitivity ● Red On: No optical signal
WLAN	Blue & Green	● Blue Off: ONU is power off, or WLAN(2.4G & 5G) is disabled, or LED indicators are disabled. ● Blue On: WLAN(2.4G & 5G) is enabled, and is working
		● Green Flash: Mesh networking is in progress. ● Green On: Mesh networking is successful, the blue indicator will turn off after 10s. ● Green Off: Mesh function is disabled or Mesh networking is successful for more than 5 seconds. Remark: while the green led is keep on or flashing, the blue led must be off.

3. Software Specifications

Network Services	Easy mesh Networking
Home Network	Plug & Play Automatic Wi-Fi Configuration Synchronization no electromagnetic interference and low latency. Wi-Fi Channel Optimization for home network Wi-Fi Seamless Roaming (802.11k/802.11v) *
OAM	OAM/OMCI/Web UI/TR069/AVASA (optional)

Remark*: User terminal devices need to support 802.11k/802.11v.

4. Technical specifications

4.1 Physical structure, Environment and Electrical

Parameters

Parameter	Nominal Value
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Dimension	174mm×100mm×69mm (H×L×W)
Net weight	<0.43kg
Typical power consumption	<18W
Power supply	12V DC (external AC/DC adapter)
Installation style	Support Desk
Operating Temperature	0℃～45℃
Operating Humidity	10%RH～95%RH (non-condensing)

4.2 Interface Parameter

4.2.1 GPON interface parameter

Parameters	Nominal Value
Fiber Connector	SC/UPC
PON Quantity	1
Fiber Mode	Single-mode Fiber
Wavelength	TX: 1310±20nm RX: 1490±10nm
PON Interface Standard	ITU-TG G.984.x
PON interface transmitting rate	2.488Gpbs
PON interface receiving rate	1.244Gpbs
Tx Optical Power	-4～0dBm
Rx receiving sensitivity	-24～0dBm

Table4-2-1 GPON Interface parameter

4.2.2 User Interface

Quantity	Type	Remark
2	RJ45 100/1000 Base-T Ethernet Self negotiation	IEEE802.3ab Standard, Support direct network cable connection and automatic verification of connection network cable
1	USB2.0	Storage/USB Power supply (optional)

Table4-2-2 User Interface

4.3 Wi-Fi Specification

Wireless Standard		5G 802.11 ax/a/n 2*2 and 2.4G 802.11 b/g/n/ax 2*2
Parameter	Frequency	2.4G: 2.4~2.4835GHz 5G: 5.15~5.825GHz
	Transmission	2.4G: IEEE 802.11ax: 2x2, Max 574Mbps

rs	speed	5G: IEEE 802.11ax: 2x2, Max 2400Mbps
	Channels	2.4GHz: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 5GHz: 36, 40, 44, 48, 52, 56, 60, 64, 149, 153, 157, 161, 165
	Data Modulation	11b: DSSS: DBPSK(1Mbps), DQPSK(2Mbps), CCK(5.5/11Mbps) 11a/g: OFDM: BPSK(6/9Mbps), QPSK(12/18Mbps), 16QAM(24/36Mbps), 64QAM(48/ 54Mbps) 11n: MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM, : MCS0-MCS15 11ac: MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM Rate Set: MCS0-MCS9 11ax: MIMO-OFDMA: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM. Rate Set: MCS0-MCS11
	EIRP	2.4GHz:20dBm, 5GHz:23dBm
	Antenna	5*Internal omnidirectional antenna of 5dBi (2 of 2.4G, 3 of 5G)