

RH841GWVC-AX3B

XPON ONU Datasheet

Contents

1.Overview	3
1.1 Product Positioning	3
1.2 Network Mode	3
2.Hardware Features	4
2.1 Interface of device	4
2.2 Indicators of device	5
3.Technical specifications	6
3.1 Physical structure, Environment and Electrical parameter	6
3.2 GPON Interface Specifications	6
3.3 WIFI Specifications	7
3.4 CATV optical receiver specifications	8
3.5 POTS Specifications	9
3.6 Special function	9

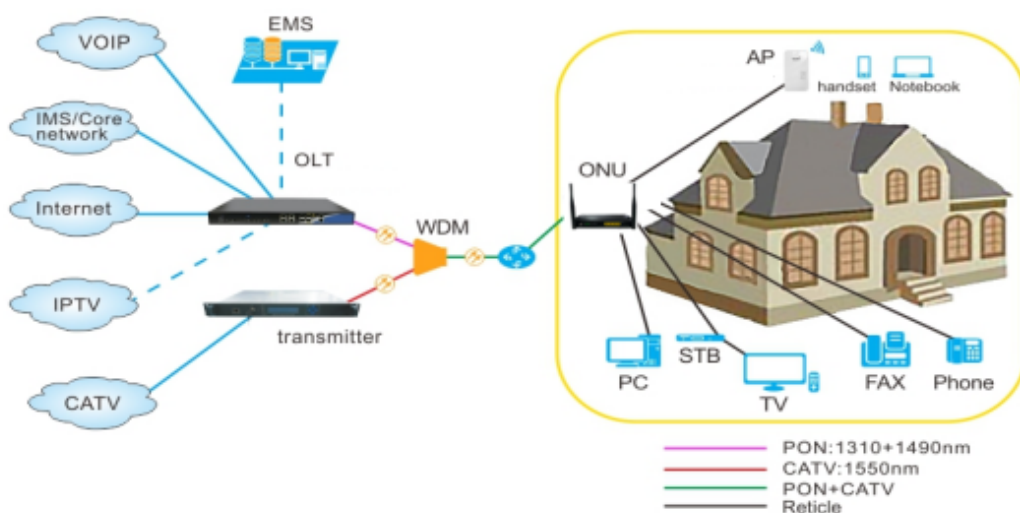
1.OVERVIEW

1.1 Product Positioning

RH841GWVC-AX3B terminal devices are designed for fulfilling FTTH and triple play service demand of fixed network operators or cable operators. The box is based on the mature Gigabit GPON technology, which have high ratio of performance to price. The device 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 device adopts the latest 802.11ax WiFi 6 technology standard and is compatible with 802.11ac/b/g/n , support 3000Mbps connecting rate. Support high quality VoIP as well. They are Large transmission capacity and fast speed, highly reliable and easy to maintain, with guaranteed QoS for different service. And It is fully compliant with technical regulations such as ITU-T G.984.x .

1.2 Network Mode

RH841GWVC-AX3B is the FTTH mode terminal equipment which designed for indoor applications. Specific application refers to Picture 1-1



Picture 1-1 RH841GWVC-AX3B Products Network diagram

2.HARDWARE FEATURES

2.1 Interface of device

RH841GWVC-AX3B product figure as Picture 2-1



Table 2-1 Description RH841GWVC-AX3B equipment Interface

Port Type	Function
FIBER	Connect PON port with internet by SC type, single mode optical fiber cable With WDM(1550nm for CATV,1310nm/1490n for data)
USB	USB2.0 default (USB3.0 optional)
LAN 4/ 3/2/1	RJ45 Port connects to local internet, 4* GE port
RESET button	Press down reset button and keep 5 seconds to make the device restart and recover from the factory default Settings.
WPS button	Wireless transmission data encryption and open button
FXS	Connect the telephone with FXS port by telephone wire
RF port	Connect the set-top box via coaxial cable.
POWER	Connect with power adapter, DC 12V
ON/OFF button	Power turn on/off

2.2 Indicators of device

Table 2-2 RH841GWVC-AX3B LED statement

Indicators	status	Description
POWER	Light on	ONU power supply normally
	Light off	ONU no power supply
PON	Light on	ONU gateway registered
	Blink	ONU manage to link
	Light off	ONU not registered
LOS	Blink	Received optical power is lower than the sensitivity of the optical receiver.
	Light off	Received optical power is normal
NET	Light on	Internet is effective
	Light off	Internet WAN port is not configured or is not valid
WIFI	Light on	WiFi turn on
	Light off	Device is power off or WiFi turn off
	Blink	WiFi turn on and with ongoing data transmission
LAN 1-4	Light on	network port linked, but no data transmitting
	Blink	network port data pass
	Light off	ONU no power supply or internet cable unlink
WPS	Light off	WPS function is not enabled
	Blink	When the ONT enables the WPS function, the WPS led flashes within 2 minutes
FXS	Light on	Registered to the SIP server and can be used
	Light off	It is not registered to the SIP server
USB	Light on	Connected USB
	Light off	Not connect to USB
CATV	Light on	normal work
	Blink	Blue Blink: The CATV optical signal is not in the receiving range. You need to contact the operator. Green Blink:RF function is turned off

3. TECHNICAL SPECIFICATIONS

3.1 Physical structure, Environment and Electrical parameter

Table 3-1 RH841GWVC-AX3B specification and working environment

Parameter	Nominal
ETH Interface	4*GE
Dimension	207mm×130mm×48mm (L×W×H)
Net weight	0.5kg
Typical power consumption	<24W
Noise	None
Cooling style	Naturally cooling
Power supply	12V DC (By external AC/DC adapter)
Installation style	Support PC, wall mount or put inside of information box.
Environment	-5~45°C

3.2 GPON Interface Specifications

Table 3-2 RH841GWVC-AX3B GPON Interface

Parameter	Nominal
Connector style	SC/APC
PON quantity	1
Fiber style	Single mode
Wavelength	TX: 1310 +/-20nm RX: 1490 +/-10nm
PON interface standard	ITU-T G.984.2/ITU-T G.984.3/ITU-TG.988 Class B+
PON interface receiving rate	2.488Gpbs
PON interface transmitting rate	1.244Gpbs
Output optical power	Min: 0.5dBm Max: +5dBm
Optical receiver sensitivity	Precede -28dBm
The length of the optical link	Max 20km

3.3 WIFI Specifications

Table 3-3 RH841GWVC-AX3B WIFI Specifications

Standard	IEEE 802.11 ax/ac/b/g/n
Max Transmission speed	2976Mbps
2.4Ghz Transmission speed	574Mbps
5Ghz Transmission speed	2402Mbps(Support 160MHz bandwidth)
Channel	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
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-OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM Rate Set: MCS0-MCS11
Antenna	External 2pcs 5dBi,built-in1pcs 3dBi 2.4G 2x2 MU-MIMO,5G 3x3 MU-MIMO

3.4 CATV optical receiver specifications

Table 3-3 CATV Optical receiver parameter

Item			Unit	Parameter
Optical parameter	Receiving optical wavelength		nm	1200~1650
	Receiving optical power		dBm	-18~+0
	Reflection loss		dB	≥50
	Connector		-	SC/APC
	Fiber type		-	Single mode
	Isolation (WDM)	Forward channel	dB	≥40
		Reflection channel	dB	≥22
RF parameter	Frequency		MHz	47 ~ 1000
	In-band flatness		dB	±1
	Output reflection loss		dB	≥14
	Nominal output level		dBuV	=75±1 (AGC range: -15~ -2dBm)
	Attenuation range		dB	-18~0
	C/N		dB	≥ 46
	C/CTB		dB	≥ 65
	C/CSO		dB	≥ 65
	Output impedance		Ω	75
Others	Power supply (DC)		V	5
	Power consumption		W	≤1.5
	Working temperature Storage temperature		°C	0 ~ +45
			°C	-40~ +75
	Relative humidity		%	Maximum 95% non-condensing

3.5 POTS Specifications

- support SIP voice protocol
- support H.248 voice protocol
- SIP protocol: ISP provide the port number of the main SIP proxy server and terminal VOIP
- Value range is 1-65535, system default value is 5060
- H.248 protocol: ISP provide port number of the spare MGC server and VOIP terminal
- Value range is 1~65535, system default value is 2944
- Port ringing current voltage: 50±10VAC, 30±10H
- Port type POTS(VOIP)
- Support G.711 A-Law/u-Law,G729A/B,G.723.1-5.3/6.3,G.726.etc.voice coding/compressed technology

3.6 Special function

- Support TR069,NAT,DMZ,DNS features
- Support Multiple ssid
- Support Multiple VLAN
- Support 802.11ax(WIFI6)
- Support MU-MIMO
- Support Easy Mesh
- Support IPV6 ,PPPoE, DHCP and Static IP configuration for WAN Interface
- Support IP, MAC filtering, Firewall Functionality in routed mode
- Support for XPON, adaptive EPON or GPON OLT on the network