FD-HG8421C - XPON ONU

Specifications

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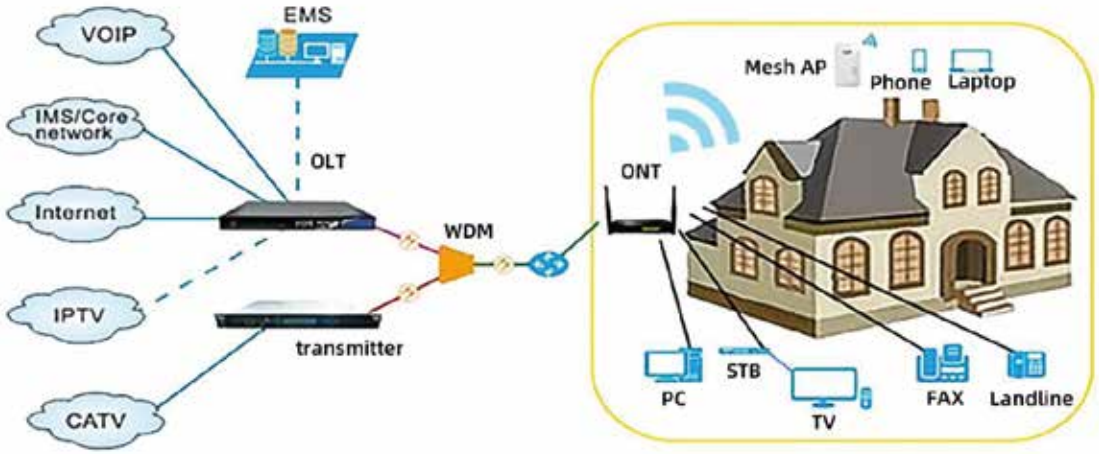
1.OVERVIEW

1.1 Product Introduction

RL841GWVC-DG is designed for fulfilling FTTH and triple play service demand of fixed network operators or cable operators. The ont is based on the mature Gigabit GPON technology, which have high ratio of performance to price, and the technology of 802.11 ac/n Wi-Fi , Layer 2/3, and high quality VoIP as well. They are 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 and technical requirement of GPON Equipment.

1.2 Network Mode

RL841GWVC-DG is the FTTH mode terminal equipment which designed for indoor applications. Specific application refers to Picture 1-1



Picture 1-1 RL841GWVC-DG products Network diagram

2.HARDWARE FEATURES

2.1 Interface of device

RL841GWVC-DG product figure as Picture 2-1

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Picture 2-1 RL841GWVC-DG product figure

Table 2-1 Description RL841GWVC-DG equipment Interface

Port Type	Function
FXS port	Connect the telephone with FXS port by telephone wire
CATV port	Connect PON port with internet by SC/APC, Built-in WDM, it can transmit optical signals of 1550nm, 1310nm and 1490nm wavelengths.
RF port	Connect the set-top box via coaxial cable.
LAN 1~4 port	RJ45 Port connects to local internet,4 GE port
Reset button (RST)	Press down reset button and keep 5 seconds to make the device restart and recover from the factory default Settings.
WPS button (WPS)	WPS: Press for 3 seconds and press the WPS button of other Wi-Fi devices within 2 minutes to start standard WPS negotiation.
PWR port (DC12 V)	Connect with power adapter
Power turn on/off	Power turn on/off

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2.2 Indicators of device

Indicators	status	Description
POWER	Light on	ONU power supply normally
	Light off	ONU no power supply
	Blink	Enable WPS function
PON	Light on	ONU link active
	Blink	ONU manage to link
	Light off	ONU receiving power rate lower than optical receiver sensitivity
LOS	Blink(Red)	Device does not receive optical signals.
	Light off	Device has received optical signal.
INTERNET	Light on	Internet is effective.
	Light off	internet is ineffective.
LAN1~4	Light on	network port linked, but no data transmitting
	Blink	network port data pass
	Light off	The ONU is not powered on or the network cable is disconnected
WIFI	Light on	Wi-Fi turn on
	Light off	Device is power off or Wi-Fi turn off
	Blink	Wi-Fi turn on and with ongoing data transmission
FXS	Light off	VOIP account is not used
	Every 1s blink	SIP server is not registered
	Light on	Registered to the SIP server and can be used
	Every 0.25s blink	Send and receive voice data
CATV	Light on	Normal work
	Blink	CATV function is turned off
	Light off	Device is power off

3.TECHNICAL SPECIFICATIONS

3.1 Physical structure, Environment and Electrical parameter

Table 3-1 RL841GWVC-DG specification and working environment

Parameter	Nominal
Dimension	176mm×112mm×31mm（L×W×H）
Net weight	0.35kg
Typical power consumption	<15W

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Noise	None
Cooling style	Naturally cooling
Power supply	12VDC/1.5A（By external AC/DC adapter）
Installation style	Support PC, wall mount or put inside of information box.
Environment	-5~50℃
Atmospheric pressure	70~106Kpa
MTBF	50,000hours@25℃
MTTR	30minutes

3.2 GPON Interface Specifications

Table 3-2 RL841GWVC-DG 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
Opticalreceiver sensitivity	Precede -28dBm
The length of the optical link	Max 20km

3.3 CATV optical receiver specifications

Table 3-3 CATV Optical receiver parameter

Item			Unit	Parameter
Optical parameter	Receivingoptical 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	dB	≥22

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	channel		
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	℃	0 ～ +45
	Storage temperature	℃	-40～ +75
	Relative humidity	%	Maximum 95% non-condensing

3.4 Wi-Fi Specifications

Table 3-3 RL841GWVC-DG Wi-Fi Specifications

Standard		IEEE 802.11 ac/b/g/n
WiFi parameter	Frequency	2.4~2.4835GHz 5GHz： Low frequency 5.15GHz～5.25GHz、 Middle frequency 5.25GHz～5.35GHz、 High frequency 5.725GHz～5.825GHz

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	Technique	
	Data Modulation	DBPSK、DQPSK、CCK and OFDM(BPSK/QPSK/16-QAM/64-QAM)
	Sensitivity@PER (Package error rate)	270M：-68dBm@10% PER；130M： -68dBm@10% PER； 108M：-68dBm@10% PER；54M：-68dBm@10% PER 11M：-85dBm@8% PER；6M：-88dBm@10% PER 1M：-90dBm@8% PER；
	Transmission distance	Indoor Maximum 120 meters；Outdoor Maximum 360 meters(The distance depends on the environment)
	RF power	20dBm EIRP
	Antenna	5dBi Antennas

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 MU-MIMO
- Support Easy-Mesh(optional)
- Support Multiple VLAN
- 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

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