RLG804CW GPON ONU
Specifications

Contents

1 OVERVIEW

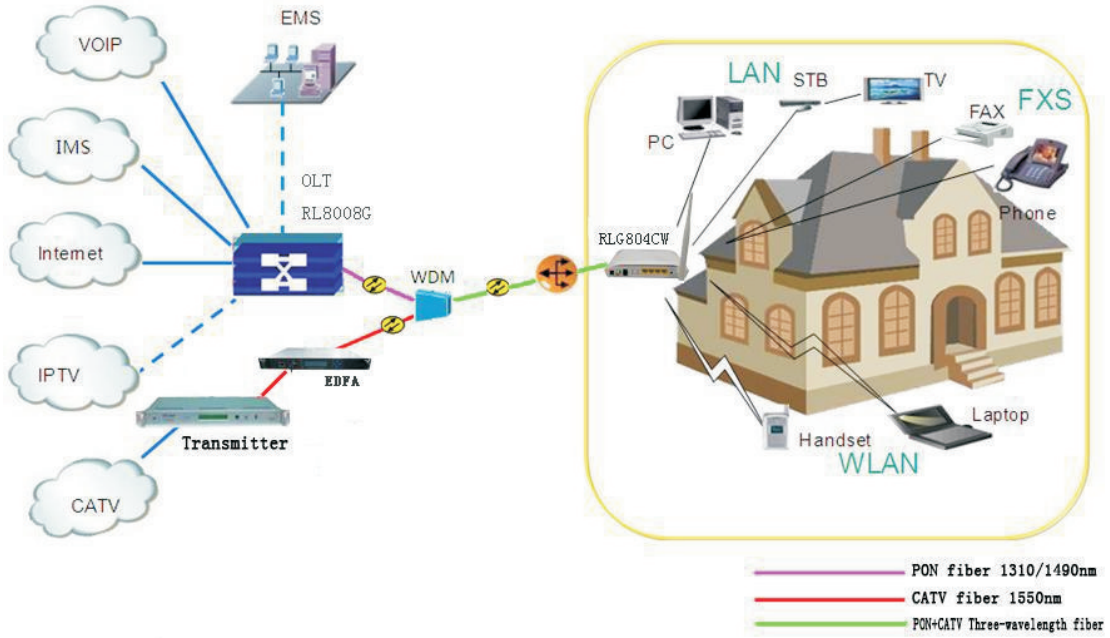
1.1 Product Positioning

Optical network terminal products RLG804CW is launched for the CATV FTTH network construction. The CATV optical receiver of RLG804CW with technical features of low optical power received. RLG804CW GPON ONU support ITU G.984 series recommendations, support international standards and industry technical standards. With high reliability, better QoS guarantee, manageable, scalable, flexible networking features, can be satisfied with high-speed broadband access needs of the customer of broadcast.

Picture 1-1 RLG804CW Appearance

1.2 Network Mode

RLG804CW is the FTTH mode terminal equipment which designed for indoor applications, specific application refers to Picture 1-2.

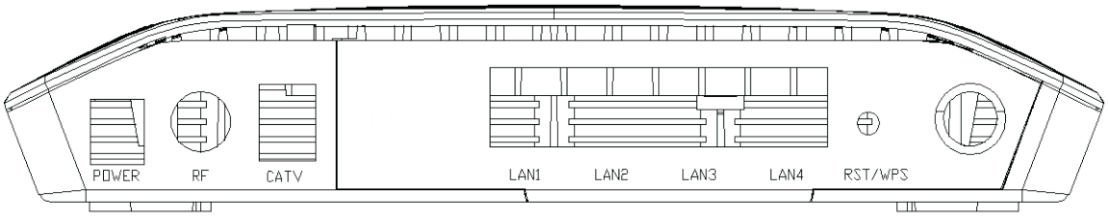


Picture 1-2 RLG804CW product network diagram

2 HARDWARE FEATURES

2.1 Interface of device

RLG804CW equipment interface as Picture 2-1,



Picture 2-1 RLG804CW back panel picture

Table 2-1 Description of RLG804CW interface

Interface	Description
POWER	DC power adapter, DC12V.
RF	CATV RF output port, connect a TV or set-top box via this interface.
CATV	CATV optical input interface, support SC / APC optical pigtail conector for connetingPON + CATV three wavelength signals.
Unidentified (knob)	RF knob, located in the port direction which is looked into

	the cabinet from the left side, the optical machine is used to adjust the RF output level. Adjustable range: -18-0dB.
LAN1~LAN4	RJ45 Port connects to local internet, speed 10/100Mbps automatically
RST/WPS Button	Reset factory button for 5 seconds to reset factory configuration. Reuse WPS function for shorter time pressing.
Antenna	5dBi omni antenna

2.2 Indicators of device

Picture 2-2 RLG804CW LED

Table 2-2 RLG804CW statement

Indicators	status	Description
POWER	Light on	ONU power supply normally
	Light off	ONU no power supply
TV	Light on	CATV optical receiver output level normal
	Flash	CATV optical receiver output level lower than normal or failure
OPT	Light on	CATV optical receiver signal normal
	Flash	CATV optical signal power rate over normal or less than normal status
PON	Light on	ONU link active
	Flash	ONU manage to link
	Light off	ONU receiving power rate lower than optical receiver sensitivity
LOS	Light on	ONU not received optical signal
	Flash	ONU receiving power rate lower than optical receiver sensitivity
	Light off	ONU receiving power rate normal
ETH1~ETH4	Light on	network port linked, but no data transmitting
	Flash	network port data pass
	Light off	ONU no power supply or internet cable unlink
WPS	Light off	no link
	Flash	Be linking
	Light on	Built-up link
WLAN	Light off	WIFI off.
	Light on	Start WIFI function
	Flash	Data transmitting

SYS	Light off	PON module no power supply
	Green	PON module power supply
	Yellow	System start normally

3 TECHNICAL SPECIFICATIONS

3.1 Physical structure, Environment and Electrical parameter

Table 3-1 RLG804CW specification and working environment

Parameter	Nominal
Measurement	191mm*133mm*34mm(W*L*H)
Net weight	0.5kg
Typical power consumption	<7W
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	0~45℃
Atmospheric pressure	70~106Kpa
MTBF	50,000hours
MTTR	30minutes
Parameter	Nominal

3.2 GPON Specifications

Table 3-2 RLG804CW GPON specification

Parameter	Nominal
Fiber style	Single mode
Wavelength	Transmitting end: 1310 +/-20nm Receiving end: 1490 +/-10nm
PON interface standard	ITU-T G.984.2/ITU-T G.984.3/ITU-TG.988 Class B+
PON interface receiving	1.244Gpbs

rate	
PON interface transmitting rate	2.488Gpbs
Output optical power	Min: 0dBm Max: +5dBm
Receiver damage threshold	7dBm
The length of the optical link	Max 20km

3.3 CATV optical receiver specifications

Table 3-3 RLG804CW CATV Optical receiver parameter

Item			Unit	Parameter
Optical parameter	Receiving optical wavelength		nm	1200～1650
	Receiving optical power		dBm	-15～+2
	Reflection loss		dB	≥50
	Connector		-	SC/APC
	Fiber type		-	Single mode
	Isolation (WDM)	Forward channel	dB	≥40
		Reflection channel	dB	≥22
RF parameter	Frequency range		MHz	45 ～ 1000
	In-band flatness		dB	± 1
	Output reflection loss		dB	≥14
	Nominal output level		dBuV	=75± 1(AGC range: -12 ～ -2dBm)
	Attenuation range		dB	-18—0
	Carrier-to-noise ratio (C/N)		dB	≥ 46
	(C/CTB)		dB	≥ 65
	(C/CSO)		dB	≥ 65
	Output impedance		Ω	75
Others	Power supply (DC)		V	12
	Power consumption		W	≤1.5
	Working temperature		℃	0～ +45
	Storage temperature		℃	-40～ +75
	Relative humidity		%	Maximum 95% non-condensing

3.4 WIFI Specifications

Table 3-4RLG804CW WIFI Specifications

Standard and Protocols		IEEE 802.11b/g/n
WiFi parameter	Frequency range	2.4~2.4835GHz
	Transmitting rate	11n：270/243/216/162/108/81/54/27Mbps 135/121.5/108/81/54/40.5/27/13.5Mbps 130/117/104/78/52/39/26/13Mbps 65/58.5/52/39/26/19.5/13/6.5Mbps
		IEEE 802.11g：54/48/36/24/18/12/9/6(adaptive)
		IEEE 802.11b ：11/5.5/2/1M(adaptive)
	Channel	13
	Spread-spectrum Technique	DSSS(Direct sequence spread spectrum)
	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(Typical data)
	Transmission distance	Indoor Maximum120 meters；Outdoor Maximum360 meters(The distance depends on the environment)
	RF power	20dBm EIRP
	Antenna	5dBi omni-directional antenna