5. Forward Optical Receiver Module WOS-WR-1002-4K

1. Product Overview

The forward one-way optical receiver module provides an optical input port and a RF output port. It is mainly used for optical fiber transmission of downstream analog TV signals, digital television signals and CMTS data signals in HFC networks.

The optical receiving part adopts a high-response PIN tube or optoelectronic integrated module with up to 1 GHz band.
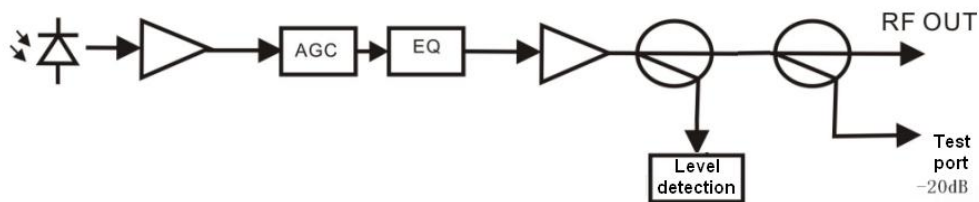
The AGC or MGC can be switched and low noise amplifying components are selected to offer high CNR and low distortion.

2. Performance Characteristics

➢ Support hot swap.
➢ 870M/1002M band is optional.
➢ The AGC and MGC gain control modes are optional.
➢ PIN tube and photoelectric integrated module are optional.

3. Block Diagram

4. Technique Parameters

Item	Unit	Technique parameter
Optical Part		
Optical return loss	dB	>45
Optical receiving wavelength	nm	1100 ~ 1600
Optical connector type		SC/APC
Fiber type		Single mode
RF Part		
Optical AGC range	dBm	-8～+2
Optical AGC control point	dBm	-8/-7/-6/-5/-4/-3/-2 adjustable
Frequency range	MHz	45 ~862/1003
Flatness in band	dB	±0.75
Max output level	dBµV	≥ 104
Output return loss	dB	≥16

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Electronic control EQ range	dB	0〜15	
Electronic control ATT range	dB	0〜15 : PIN diode 0〜10: Integrated module	
C/N	dB	≥ 51	Optical receiving power: -1dBm 84 analog signals with an output level of 98 dBμV
C/CTB	dB	≥ 67	
C/CSO	dB	≥ 62	
Others			
Operating temperature	℃	-5 〜 + 55	
Storage temperature	℃	-30 〜 + 70	
Maximum power consumption	W	≤18	
Weight	Kg	1	

5. Operation Instructions of the Display Menu

Once the module is installed, the corresponding slot in the display menu will highlight the module which is online. After entering the submenu, the following parameters can be seen:

RecvPower XX.XdBm	Optical receiving power
OutRFLevel XX.XdBuV	Output level
Set AGC XXdBm	Set the AGC control range
ATT XXdB	Attenuation, type I: 0~15dB, type II:0~10dB
EQ XXdB	Equilibrium, range 0~15dB
ChanNum XX	Channel numbers, range 0~100
DevTemp XX.X℃	Module temperature
SN	Serial number
Version	Version number
WorkTime	Equipment total operating hours

6. Structure Description

Front panel   Rear panel
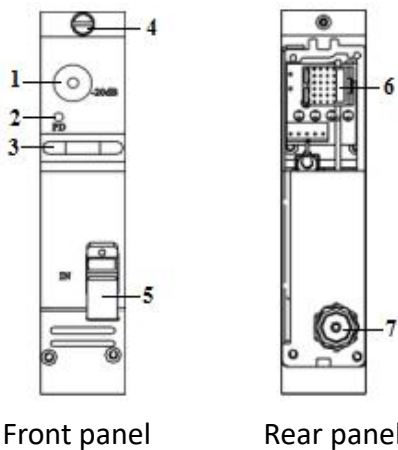
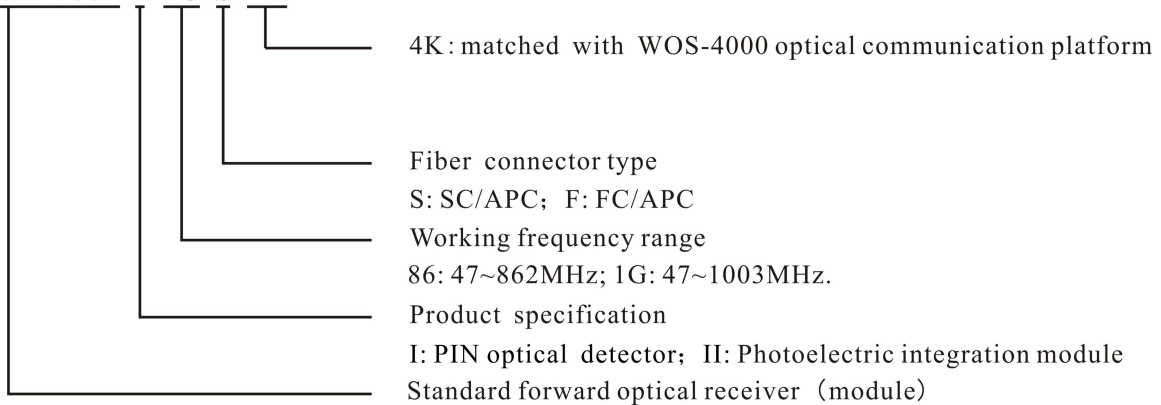| 1	RF output test port	-20dB
2	Optical power indicator	Green: -10dBm ≤ optical receiving power ≤ +3dBm Red: <-10dBm or >+3dBm
3	Module handle	
4	Module fixing screw	Used to fix the module
5	Optical signal input	
6	Module socket	Used to connect module and rack
7	RF signal output	Correspond to A channel F-type RF connector on the rear panel of the rack.

7. Installation

➢ This module can be installed in slots 1-16 and can be fully configured.

➢ Check whether the pins on the rear of the module are bent.

➢ Install the module in place along the guide and tighten the screws.

➢ Avoid direct observation and contact with the fiber tip. You must confirm the equipment is off when cleaning the port.

8. Naming Specification

WOS-WR-1002-I-1G-S-4K

4K : matched with WOS-4000 optical communication platform

Fiber connector type
S: SC/APC；F: FC/APC

Working frequency range
86: 47~862MHz; 1G: 47~1003MHz.

Product specification
I: PIN optical detector；II: Photoelectric integration module

Standard forward optical receiver（module）

Note 1: This model is single optical signal input and single RF signal output.

Note 2: If the customer has special requirements for key components such as RF amplification module, please indicate in the order.