

## 6. Dual Forward Optical Receiver Module WOS-WR-1002-JDS-4K

### 1. Product Overview

The dual forward optical receiver module has two optical input ports and a RF output port. The two optical inputs are redundant backups for each other, which can be automatically switched by settings or manually switched. The product is mainly used for optical fiber transmission of downstream analog TV signals, digital television signals and CMTS data signals.

It can be used to build a highly reliable transmission network with the two way backup feature. The optical receiving part adopts a high-response PIN tube or optoelectronic integrated module with up to 1 GHz band.

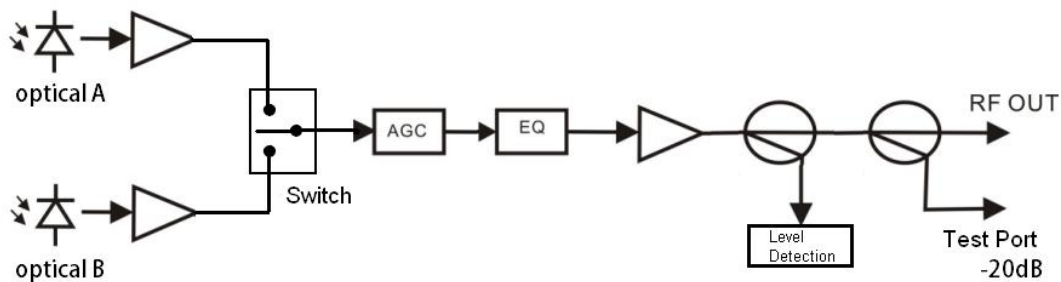
The AGC or MGC can be switched and low noise amplifying components are selected to offer high CNR and low distortion.



### 2. Performance Characteristics

- Support hot swap.
- Two redundant backups, which can be switched automatically or manually.
- 870M/1002M band is optional.
- The AGC and MGC gain control modes are optional.
- PIN tube and photoelectric integrated module are optional.
- Optical receiving isolation of the two channels is > 60dB.

### 3. Block Diagram



### 4. Technique Parameters

Item	Unit	Technique parameter
<b>Optical Part</b>		
Optical return loss	dB	>45
Optical receiving wavelength	nm	1100 ~ 1600
Optical connector type		SC/APC
Fiber type		Single mode
<b>RF Part</b>		
Optical AGC range	dBm	-8 ~ +2
Optical AGC control range	dBm	-8/-7/-6/-5/-4/-3/-2 adjustable

<b>Frequency range</b>	MHz	45 ~862/1003
<b>Flatness in band</b>	dB	±0.75
<b>Max output level</b>	dBμV	≥ 104
<b>Output return loss</b>	dB	≥16
<b>AB channel isolation</b>	dB	>60
<b>Electronic control EQ range</b>	dB	0~15
<b>Electronic control ATT range</b>	dB	0~15 : PIN diode 0~10: Integrated module
<b>C/N</b>	dB	≥ 51
<b>C/CTB</b>	dB	≥ 67
<b>C/CSO</b>	dB	≥ 62
<b>Others</b>		
<b>Operating temperature</b>	℃	-5 ~ + 55
<b>Storage temperature</b>	℃	-30 ~ + 70
<b>Maximum power consumption</b>	W	≤18
<b>Weight</b>	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:

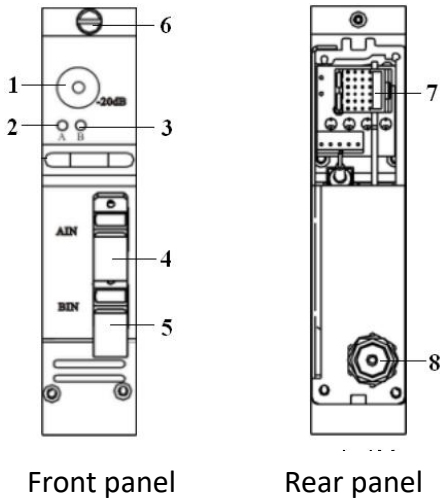
<b>ARecvPower</b>	<b>-xx.xdBm</b>	Optical receiving power of A channel
<b>BRecvPower</b>	<b>-xx.xdBm</b>	Optical receiving power of B channel
<b>OutRFLevel</b>	<b>xx.xdBuV</b>	Output level
<b>WorkChan</b>	<b>A</b>	The working channel
<b>SWCtrlMode</b>	<b>A</b>	Channel switching mode: A—forced to A channel manually; B—forced to B channel manually;
<b>SwitchThreshold</b>	<b>x.xdBm</b>	Automatic switching threshold of A/B channel, SWCtrlMode is valid when AF or BF is selected
<b>SetAGC-A</b>	<b>-xdBm</b>	Set the AGC control point of A channel
<b>SetAGC-B</b>	<b>-xdBm</b>	Set the AGC control point of B channel
<b>XATT</b>	<b>xdB</b>	Attenuation, type I: 0~15dB, type II:0~10dB
<b>EQ</b>	<b>xdB</b>	Equilibrium, range 0~15dB
<b>ChanNum</b>	<b>xx</b>	Channel numbers, range 0~100
<b>DevTemp</b>	<b>xx.x℃</b>	Module temperature
<b>SN</b>	<b>xxxxxx</b>	Serial number
<b>Version</b>	<b>x.xx</b>	Software version number
<b>WorkTime</b>	<b>x.xHour</b>	Total operating hours of the equipment

Note 1: For example, SWCtrlMode selects AF and SwitchThreshold is set to -6dBm.

When the A channel receives optical power > -6dBm, A channel is valid.

When the A channel receives optical power <-6dBm, it automatically switches to the B channel.

## 6. Structure Description



1	RF output test port	-20dB
2	Optical power indicator of A channel	Green: $-10\text{dBm} \leq \text{optical receiving power} \leq +3\text{dBm}$ Red: $< -10\text{dBm}$ or $> +3\text{dBm}$
3	Optical power indicator of B channel	Green: $-10\text{dBm} \leq \text{optical receiving power} \leq +3\text{dBm}$ Red: $< -10\text{dBm}$ or $> +3\text{dBm}$
4	A channel optical signal input	
5	B channel optical signal input	
6	Module fixing screw	Used to fix the module
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

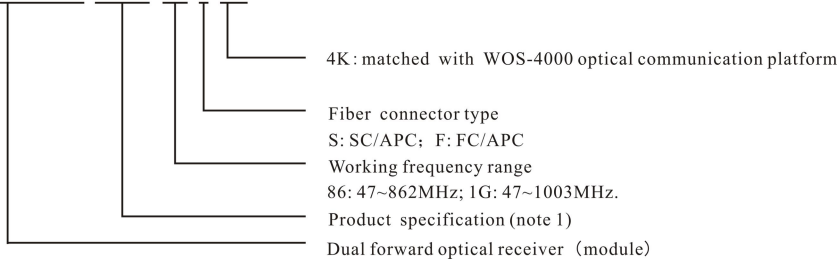
## 7. Installation

- 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-JDS-I-1G-S-4K



**Note 1:** This model is with two optical signal inputs and one RF signal output

JDS-I: PIN optical detector + photoelectric integrated module.

JDS-II: Dual optoelectronic integrated module.

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