

## CWDM for 4G/5G fronthaul System

In 4G/5G fronthaul system, if use optical fiber direct to connect RRU and DDU, it is simple, but it takes up a lot of optical fiber resources, and many times, the optical fiber resources are scarce. In this case, if use CWDM system, can save your fiber resources.

FIBERWDM are mainly producing WDM products, our 6ch /12ch CWDM are used in 5G fronthaul system.

### Product

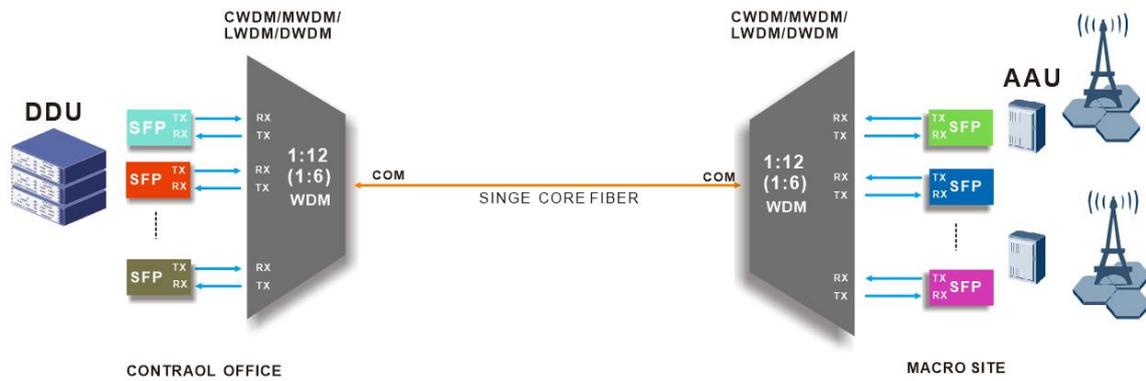


1:6 CWDM ABS Box



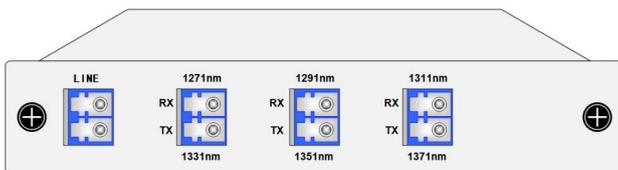
1:12 CWDM ABS Box

### Application solution as below:

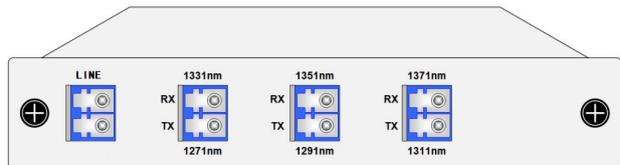


## 6waves passive CWDM Mux&DeMux

### Product illustration:



1:6 Indoor



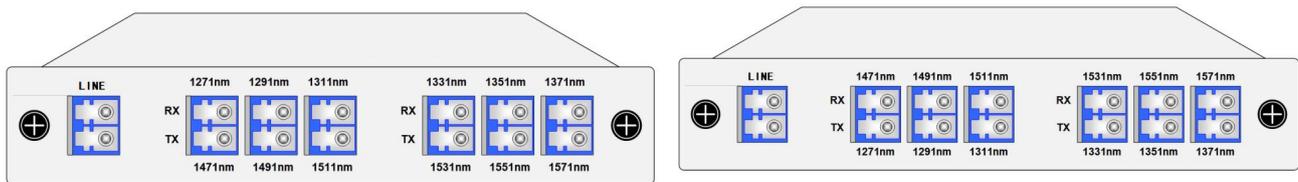
1:6 Outdoor

**Optical performance indicators**

parameter	unit	index
Number of channels		6
Center wavelength	nm	1271、 1291、 1311、 1331、 1351、 1371
Center wavelength deviation	nm	±1.5
-1dB channel bandwidth	nm	>14
Banding flatness	dB	<0.5
Mux&DeMux Channel insertion loss	dB	<1.2
Mux&DeMux Channel insertion loss uniformity	dB	<1.0
Adjacent channel isolation	dB	>30
Non-adjacent channel isolation	dB	>45
Wavelength Heat stability	nm/°C	<0.002
Insertion loss heat stability	dB/°C	<0.007
Polarization-related losses	dB	<0.2
Return loss	dB	≥45
Working temperature	°C	-40~+85
Storage temperature	°C	-40~+85
Working humidity		5%~95% RH, no condensation
Dimensions	mm	130*100*25mm

**12waves remote passive WDM Mux&DeMux**

**Product illustration :**



**1:12 Indoor**

**1:12 Outdoor**

**Optical performance indicators**

parameter	unit	index
Number of channels		12
Center wavelength	nm	1271、 1291、 1311、 1331、 1351、 1371、1471、 1491、 1511、 1531、 1551、 1571
Center wavelength deviation	nm	±1.5
-1dB channel bandwidth	nm	>14
Banding flatness	dB	<0.5

parameter	unit	index
Mux&DeMux Channel insertion loss	dB	<1.8
Mux&DeMux Channel insertion loss uniformity	dB	<1.0
Adjacent channel isolation	dB	>30
Non-adjacent channel isolation	dB	>45
Wavelength Heat stability	nm/°C	<0.002
Insertion loss heat stability	dB/°C	<0.007
Polarization-related losses	dB	<0.2
Return loss	dB	≥45
Working temperature	°C	-40~+85
Storage temperature	°C	-40~+85
Working humidity		5%~95% RH, no condensation
Dimensions	mm	130*100*25mm

## 2.1. colourful module

### 2.3.1. colourful module 25G/10km CWDM colourful module

Based on the wireless fronthaul passive wavelength division multiplexing system, the 25Gb/s SFP28 CWDM colourful module conforms to the MSA protocol, has the characteristics of low power consumption, small size, multi-rate, etc., is compatible with eCPRI (25G), CPRI 10, 25GE and other network applications, with a maximum transmission distance of up to 10 kilometers, RoHS compliant, and supports digital diagnostic functions.

#### Optical performance indicators

Product model	Tx wavelength (nm)	Rx wavelength (nm)	Distance (km)	Tx optical power range (dBm)	Overload Optical Power (dBm)	Ext (dB)	Receiver Sensitivity (dBm)
RSPD-25GC10--27	1271	1260~1620	10km	0~+6	>+2	>3.5	<-13.8
RSPD-25GC10--29	1291						
RSPD-25GC10--31	1311						
RSPD-25GC10--33	1331						
RSPD-25GC10--35	1351						
RSPD-25GC10--37	1371						

### 10G/10km CWDM colourful module

The 10Gb/s SFP+ CWDM colourful module based on the wireless fronthaul passive wavelength division multiplexing system conforms to the MSA protocol, has the characteristics of low power consumption, small size, multi-rate, etc., is compatible with CPRI 7/8, 10GE, STM-64 and other network applications, with a maximum transmission distance of up to 10 kilometers, RoHS compliant, and supports digital diagnostic functions.

**Optical performance indicators**

Product model	Tx wavelength (nm)	Rx wavelength (nm)	Distance (km)	Tx optical power range (dBm)	Overload Optical Power (dBm)	Ext (dB)	Receiver Sensitivity (dBm)
RSPD-10GC10-27	1271	1260~1620	10km	0~+3	>+1	>4	<-14.4
RSPD-10GC10-29	1291						
RSPD-10GC10-31	1311						
RSPD-10GC10-33	1331						
RSPD-10GC10-35	1351						
RSPD-10GC10-37	1371						
RSPD-10GC10-47	1471						
RSPD-10GC10-49	1491						
RSPD-10GC10-51	1511						
RSPD-10GC10-53	1531						
RSPD-10GC10-55	1551						
RSPD-10GC10-57	1571						

## Remote passive WDM

### Remote 1U rack

The remote 1U rack is a 3-slot, 1U-high passive rack, which is suitable for inserting 3 remote combiner splitters, which can realize the compact installation of the remote combiner and splitter and save space in the equipment room. The 1U rack can be installed in a 19-inch cabinet.

**Size: 1U, 44 mm (H) × 438 mm (W), × 132 mm (D)**

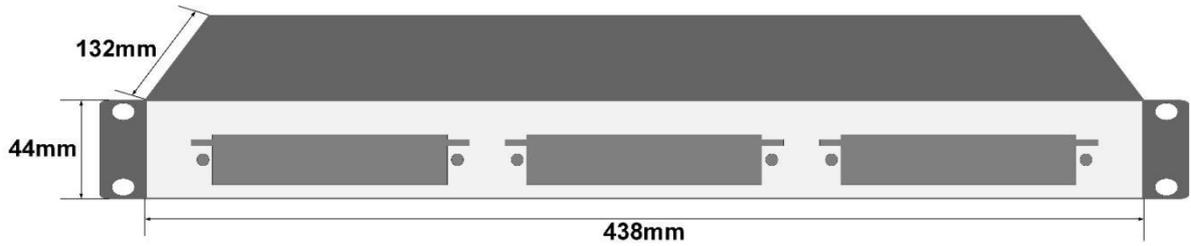


Figure 2.2.1 View of a remote 1U rack

### Remote 3U rack

The 3U rack is a 16-slot, 3U-high passive rack, which is suitable for vertically inserting 16 remote combiners and splitters, which can realize the compact installation of remote combiners and save space in the computer room. The 3U rack can fit in a 19-inch cabinet. .

- Size: 3U, 120 mm (H), 430 mm (W×), × 133 mm (D)

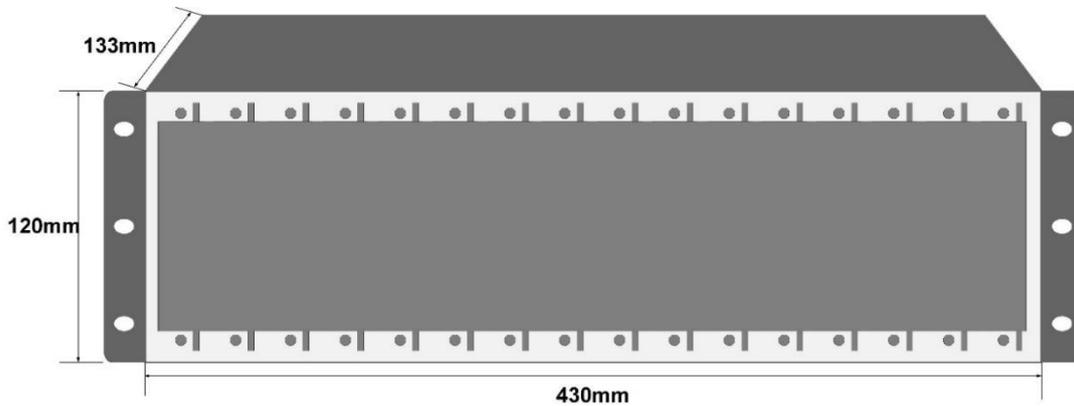


Figure 2.2.2 Rack view of the remote OPC1000-16

### Remote outdoor boxes

The outdoor dust-proof box is a special box for outdoor wall-mounted or pole-mounted remote WDM system, which supports 1 or 2 built-in remote combination splitters, meets the requirements of IP67 standards, has a lightweight structure and is easy to install.

**Size:365 mm (length)×290mm (width)×100 mm (height)**

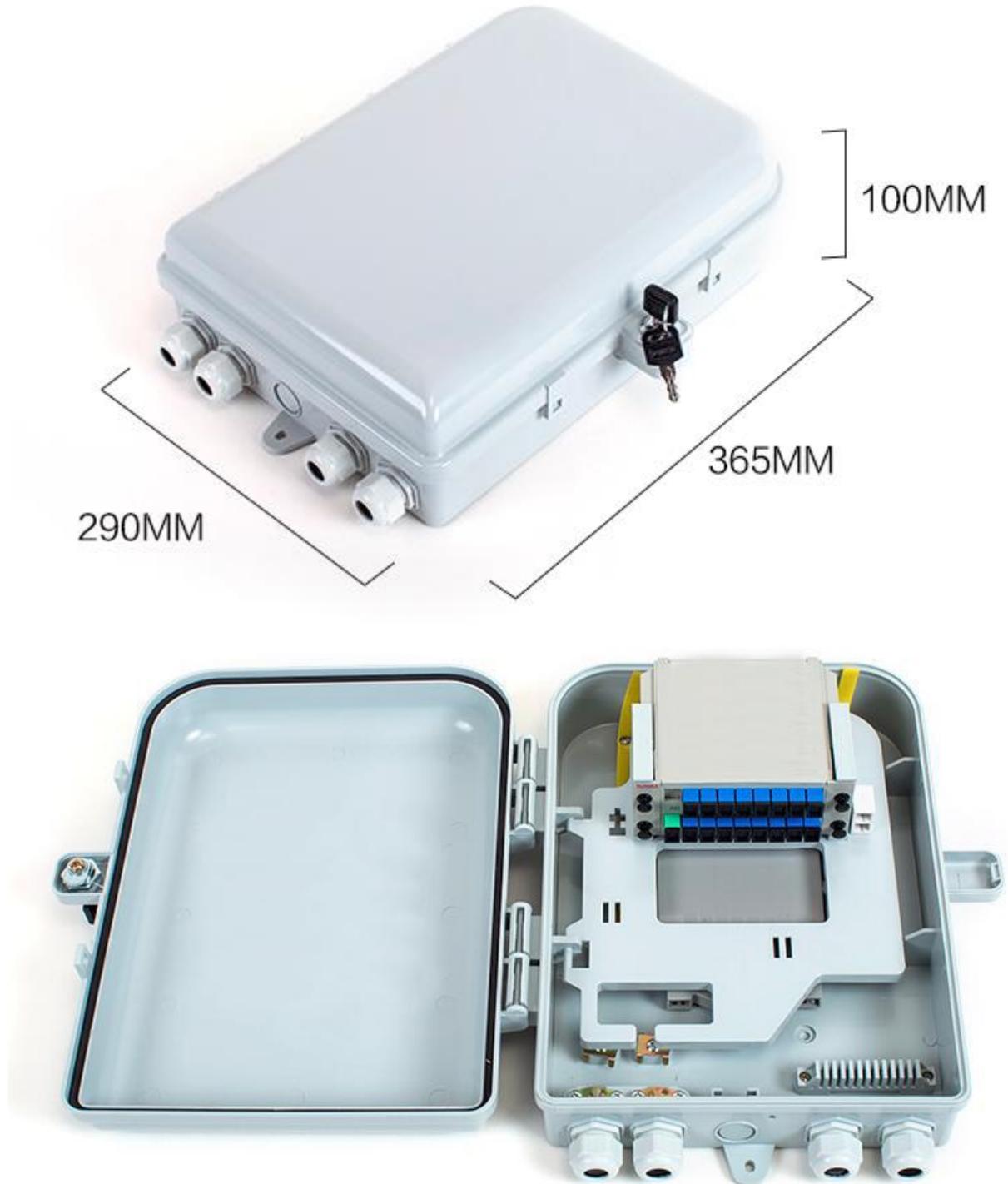


Figure 2.2.3 View of the remote outdoor dust box