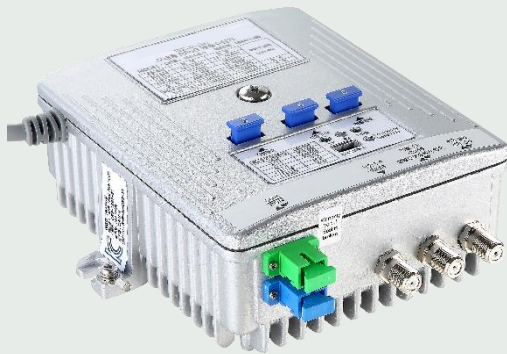


Fiber Optical RF Unit (for U) **Transceiver** **In-Building node**



The ORS-1561-S1 converts optical signals in the CATV downstream 1550nm band into middle output RF signals and transmits Burst-mode optical signals for Uplink RF signals. So, it can provide low-cost solution for Mini-node distribution network operators to increase system efficiency.

It also supports 77 channel CATV Analog signal and Analog/Digital mixed signal (including HDTV broadcast signal), automatic gain control over a wide optical input range of -6 to 0 dBm ensures system design flexibility without performance degradation, and has excellent signal distortion.

The downstream optical signal conversion band converts a wide band signal from 54/108 MHz to 1002 MHz into a middle output RF signal from 36 to 38 dBmV/1 GHz, which is providing electrical/optical conversion to the CMTS without signal loss by a high-speed Burst-mode LD control circuit.

In addition, the switching function provides the following frequency band conversion.

Band With S/W A : 5~42MHz / 54~1002MHz

Band With S/W B : 5~85MHz / 108~1002MHz

Features

- Support for frequency band conversion function via S/W (DOCSIS 3.0 support)
- U/L Burst mode support
- Wide bandwidth and middle output of D/L RF signal 54/108MHz ~ 1002MHz , 1port 36~38dBmV/1002MHz
- D/L RF Automatic Gain Adjustment (AGC) function
- D/L Slop: 8 dB (PAD Type_Variable)
- D/L RF output port and D/L output T.P. support (-20 dB)
- Wide optical input power: -6 dBm to 0 dBm
- Excellent distortion properties with high linearity
- U/L RF input port and U/L output T.P. support (-20 dB)
- Display ONU status information (LED display)
- RoHS-enabled products

Applications

- Receiver module for CATV network in HFC and RFoG nodes
- Video overlay in passive optical networks (PON)

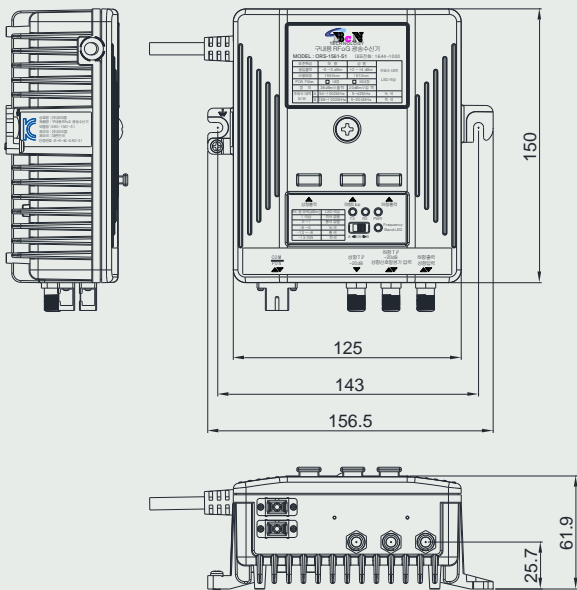
Fiber Optical RF Unit (for U)

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Mechanical Dimension

(The dimensions are in millimeters)



Electrical / Optical characteristics

Parameter	ORS-1561-S1	Unit
Down Stream		
Input Optical Power	-6 ~ 0	dBm
Optical Loss AGC	-6 ~ 0	dBm
Input Wavelength	1290 ~ 1610	nm
Responsivity (@1550nm)	> 0.9	A/W
Optical Input Return loss**	< -40	dB
Up Stream		
Output Optical Power	+2 ~ +4	dBm
Output Wavelength*	1270 ~ 1610	nm
Operating Temperature Range	-20 ~ +50	°C
Supply Voltage	85~265V	V
Power Consumption	8 (Max)	W

** Optical connector type : SC/APC connector

RF Characteristics

Parameter	ORS-1561-S1	Unit
Down Stream		
Bandwidth	54 ~ 1002 or 108~1002	MHz
Tilt (Slop) *	8 (± 1) or 7 (± 1)	dB
Output RF signal level ** @1002MHz	36~38	dBmV/CH
Output Impedance	75	ohm
Output Return Loss	≤ -16	dB
Frequency Response *	≤ 2.5	dBp-p
Carrier to Noise Ratio (CNR) *** @-6dBm	≥ 47	dB
Composite Second-Order (CSO) **	≥ 60	dBc
Composite Triple Beat (CTB) **	≥ 60	dBc
Up Stream		
Bandwidth	5 ~ 42 or 5 ~ 85	MHz
Frequency Response *	≤ 2 or ≤ 3	dBp-p
Input RF Signal Level	20	dBmV
Carrier to Noise Ratio (CNR) **** @-16dBm	≥ 45	dB
RF Test Point	-21.5 ~ -18.5	dB
Input Return Loss	≤ -16	dB

* Peak to valley

** 77NTSC Channel loading, 0dBm Optical input with OMI=3.5%

*** 77NTSC Channel loading, OMI=4.5%, -6dBm Input

**** 6-Tone 20dBmV RF Input

Ordering Information

ORS	- XX XX	- XX X	- XX	- XX	- XX
Bandwidth	Wavelength	Size	고객사	RF Output Level	PON Support
10:54~1002MHz	31:1310nm	S1	B : BcN	36:36dBmV/ch	P:with PON
11:88~1002MHz	:				O:w/o PONI
12:108~1002MHz	61:1610nm				
15:108~1002MHz (Switchable)					
					Optical Connector
					SA : SC/APC
					SP : SC/PC

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