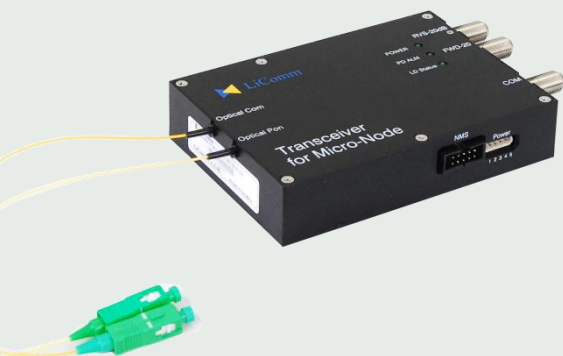


## Fiber Optical RF Unit (for U) Transceiver micro-Node

Transceiver Micro-node, **ORS-10xx-M1** is designed for upstream path transmission of burst mode optical signal. CMTS analog signals are fed into the input of the **ORS-10xx-M1** and converted into 1550nm optical signal and transmitted to HFC/ CATV networks.

Additionally, the Micro-node's ability to operate over a wide optical input range of -6 to +0dBm allows for a variety of system designs without degrading performance. The wide bandwidth supports the delivery of up to 77 CATV analog signals or a combination of analog and digital channels, including HDTV broadcast. The **ORS-10xx-M1** exhibits excellent distortion performance with values above standards over the entire bandwidth and temperature specifications.

The **ORS-10xx-M1** is flexibility to grow your network to meet customer demand now and coming future.



### Features

- PON compatible
- Extended spectrum RF video
- Transparent return path capability
- Optical loss AGC with 0 ~ -6dBm
- Support most in-home applications without amplifiers
- Multiple set-top box support
- In-home power over 75ohm coaxial cabling
- Burst-mode Laser Operation
- LED display Laser Diode and Photo Diode operating status
- NMS Interface
- RoHS Compliant 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)

# Transceiver

# micro-Node

## Mechanical Dimension

(The dimensions are in millimeters)

ORS-10xx-L1 (124.8 X 88.8 X 26mm)

## Electrical / Optical characteristics

Parameter	Value	Unit
Supply Voltage	+12	V <sub>DC</sub>
Operating Temperature Range	-40 ~ +65	°C
Supply Current	+12V <sub>DC</sub> 350~450	mA
<b>Down Stream</b>		
Input Optical Power	-10 ~ -4	dBm
Optical Loss AGC	-10 ~ -4	dBm
Input Wavelength	1290 ~ 1610	nm
Responsivity (@1550nm)	> 0.9	A/W
Optical Input Return loss*	< -40	dB
<b>Up Stream</b>		
Output Optical Power	2~ +6	dBm
Output Wavelength	1310 / 1610	nm

\* Optical connector type : SC/APC connector

## RF Characteristics

Parameter	Value	Unit
<b>Down Stream</b>		
Bandwidth	54 ~ 1000 / 88~1000	MHz
Up Tilt*	2~5	dBp-p
Output RF signal level ** @547MHz	16~20	dBmV/CH
Output Impedance	75	ohm
Output Return Loss	≤ -14	dB
Carrier to Noise Ratio (CNR) *** @-8dBm	≥ 44	dB
Composite Second-Order (CSO) **	≥ 60	dBc
Composite Triple Beat (CTB) **	≥ 60	dBc
RF Test Point	-21 ~ -19	dB
<b>Up Stream</b>		
Bandwidth	5 ~ 42	MHz
Frequency Response *	≤ 2	dBp-p
Input RF Signal Level	15~ 35	dBmV
IMD3****	≥ 60	dBc
Input Return Loss	≤ -14	dB

\* Peak to valley

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

\*\*\* 77NTSC Channel loading, OMI=3.5%, -6dBm Input

\*\*\*\* 2-Tone 30dBmV RF Input

## Ordering Information

<b>ORS</b>	-	<b>XXXX</b>	-	<b>L1</b>	-	<b>XX</b>
<b>RF Bandwidth</b>		<b>LD Wavelength</b>		<b>RF Port</b>		<b>Optical Connector</b>
10:54~1000MHz		31:1310nm		M1:1Port		SA: SC/APC
11:88~1000MHz		61:1610nm				FA: FC/APC

## LiComm Co., Ltd.

### Korea Head Office

908-1, Seo-Ri, Idong-Myeon, Yongin-Si, Gyeonggi-Do,  
449-834, S.Korea

Tel: +82-31-323-1926, 1936

Fax: +82-31-323-2447

E-mail: sale@licomm.com

Website : www.licomm.com

### Korea Factory

708, Seo-Ri, Idong-Myeon, Yongin-Si, Gyeonggi-Do,  
449-834, S.Korea

### U.S.A. Branch Office

206 Woodcliff Blvd, Morganville, USA,  
Tel: +1-732-526-7019

