

## Fiber Optical RF Unit (for U)

# Transceiver Optic-Node



Transceiver Optic-Node, **OCS-10xx** is designed for upstream path transmission of burst mode optical signal.

CMTS analog signals are fed into the input of the **OCS-10xx** and converted into optical signal and transmitted to HFC/ CATV networks. Additionally, the micro-Node's ability to operate over a wide optical input range allows for a variety of system designs without performance degradation.

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 **OCS-10xx** exhibits excellent distortion performance with values above standards over the entire bandwidth and temperature specifications.

The **OCS-10xx** grows the network flexibility to meet customer demand now and coming future.

### Features

- PON compatible
- Extended spectrum RF video
- Universal HFC set top box and head-end support
- Transparent return path capability
- Optical loss AGC with -8 ~ 0dBm
- Support most in-home applications without amplifiers
- Multiple set-top box support
- In-home power over 75ohm coaxial cabling
- Burst-mode Laser Operation

### Applications

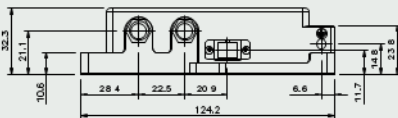
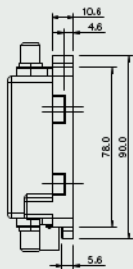
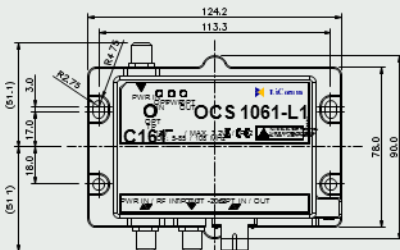
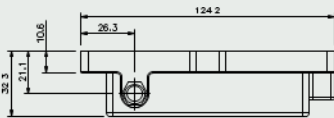
- Receiver module for CATV network in HFC and RFoG nodes
- Video overlay in passive optical networks (PON)

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

## Mechanical Dimension

(The dimensions are in millimeters)

OCS-10xx-L1 (124.2 X 90.9 X 34.3mm)



## Electrical / Optical characteristics

Parameter	Value	Unit
Supply Voltage	+12 ~ +18V	V <sub>DC</sub>
Operating Temperature Range	-40 ~ +65	°C
Supply Current	+12V <sub>DC</sub>	mA
<b>Down Stream</b>		
Input Optical Power	-8 ~ 0	dBm
Optical Loss AGC	-8 ~ 0	dBm
Input Wavelength	1540 ~ 1560	nm
Responsivity (@1550nm)	> 0.9	A/W
Optical Input Return loss*	< -40	dB
<b>Up Stream</b>		
Output Optical Power	+3±1	dBm
Output Wavelength	1610	nm

\* Optical connector type : SC/APC connector

## RF Characteristics

Parameter	Value	Unit
<b>Down Stream</b>		
Bandwidth	54 / 85 / 108 / ~ 1006	MHz
Frequency Response *	≤ ±2	dB
Output RF signal level ** @1006MHz	18 ~ 22 / 34~38	dBmV/CH
Output Impedance	75	ohm
Output Return Loss	> 18.0dB -1.5dB/Octave	dB
Carrier to Noise Ratio (CNR) *** @-6dBm	≥ 47	dB
Composite Second-Order (CSO) **	≥ 58	dBc
Composite Triple Beat (CTB) **	≥ 58	dBc
RF Test Point	-21 ~ -19	dB
<b>Up Stream</b>		
Bandwidth	5 ~ 42 / 65 / 85	MHz
Frequency Response *	≤ ± 2	dB
RF Input power range	10~ 45	dBmV
OMI	17.5	%
Input Return Loss	> 18.0dB -1.5dB/Octave	dB

\* Peak to valley

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

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

## Ordering Information

OCS	-	XXXX	-	L1	-	XX	-	XX
Frequency		LD Wavelength		RF Port		RF Output		Optical Port
•10: 54~1006MHz		27:1270nm		L1: R-ONU		20: 20dBmV		X:COM
•11: 65~1006MHz		29:1290nm		M1:MDU		38: 36dBmV		P:COM+PON
•12 :85~1006MHz		31:1310nm						
•13:108~1006MHz		:						
		61:1610nm						

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