Mini Optical Transceiver

The QAMnet mTRVR-1 is a mini optical transceiver designed for Node Splitting implementation in HFC networks.

Product Description

The QAMnet mTRVR-1 is a mini optical transceiver designed for Node Splitting implementation in HFC networks. Using proven Wavelength Division Multiplexing (WDM) technology, a 1550 nm forward receiver and a 1310 nm return transmitter are combined into a common optical input/output port. The mTRVR-1 is a versatile, compact, and a low cost module that has the performance of a optical node. With standard HFC configuration of a forward receiver and a reverse transmitter, the mTRVR-1 can provide the HD video and QAM data bandwidth capacity of a traditional HFC optical node, but at a fraction of the cost. The mTRVR-1 is an ideal deep fiber solution for delivering Switch Digital Broadcasting (SDB), as well as high-speed QAM data services over existing HFC fiber infrastructure. The QAMnet mTRVR-1 features an always-on (CW) configuration in return path, such that the optical transmission is maintained constant output, regardless of the RF input level.

Features

- 1550 nm forward path receiver
- 1310 nm return path transmitter
- Single optical fiber input/output
- Compatible with existing HFC installation
- Designed for RFoG and Cable PON networks
- Low power consumption
- High output RF level of 20 dBmV

Applications

✓ HFC ✓ FTTH ✓ RFoG ✓ PON ✓ Deep Fiber Applications

PRODUCT SPECIFICATIONS

Optical Specifications

Forward Path - Receiver	
Receiver Wavelength Range	1527 nm - 1600 nm
Input Optical Power Level	+3 dBm to -6 dBm
RF Output Power Level	17 dBmV typ.
Carrier to Noise Ration (CNR)	50 dB typ. @ 0 dBm Input Level
Composite Second Order (CSO) Distortion	-60 dBc max.
Composite Triple Beat (CTB) Distortion	-60 dBc max.
Frequency Range	54 MHz to 870 MHz
Return Path - Transmitter	
Transmitter Wavelength	1310 nm ± 20 nm
Output Optical Power Level	+3 dBm to -3 dBm
RF Input Power Level	20 dBmV typ. to 65 dBmV
Carrier to Noise Ration (CNR)	45 dB typ. @ 0dBm
Composite Second Order (CSO) Distortion	-53 dBc max.
Composite Triple Beat (CTB) Distortion	-65 dBc max.
Frequency Range	5 MHz to 42 MHz
General Specifications	
Flatness in Frequency Range	±1 dB
Optical Return Loss	45 dB min.
RF Impedance	75 Ω
RF Return Loss	16 dB min.

Mechanical Specifications

Optical Connectors	1, SC/APC
Temperature Range	-20 to +65 ºC
Power Supply	6 V, 0.5 A DC
Power Consumption	5 W max.
Housing Dimensions	3.8"(W) x 4"(L) x 0.6"(H)
Control / Monitoring	Jumper of Selection
Display	2 LEDs: Optical Input and VDC Power High output

Ordering Information

mTRVR-1

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