RF Over Fiber Systems
C-Band RF over Fiber Link

EUROSATCOM
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50 Ω C-Band HRx-C Card

- C-Band 3.4 – 7.1 GHz (500 MHz – 7.5 GHz)
- Excellent Wideband performance
- Up to 112 dB/Hz SFDR
- No IF down conversion required
- Lower overall CapEx
- Rack chassis card or purple OEM module
- 5-year warranty

ViaLiteHD C-Band (HRx-C) RF over fiber links have been designed for customers who need even greater dynamic range. The rack chassis card and OEM module negate the need to down convert from IF; allowing a direct LNB connection over long distances with no impact to cross-site link budget.

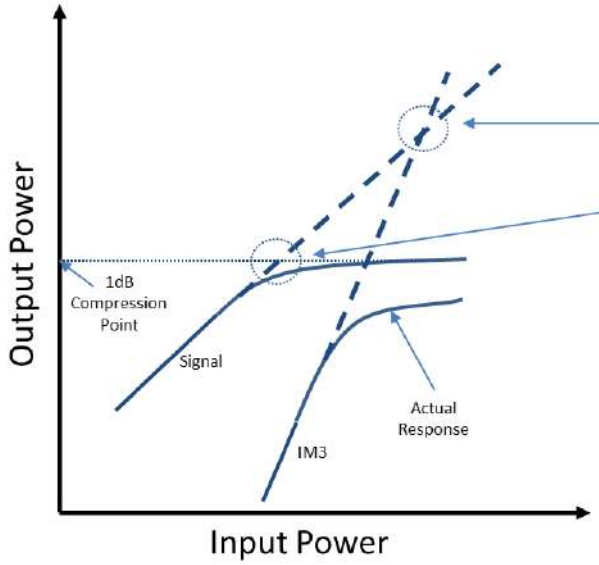
The HRx-C products use DFB Lasers with longer wavelengths making them ideal for use with multiplexers. Options for DWDM 1550nm and CWDM 1310nm/1550nm 10mW photodiodes provide deployment flexibility in a broad range of applications within Broadcast, Satcom and Military verticals, amongst others.

OPTIONS

RF Connection	50ff electrical connectors, SMA
Optical connectors	FC/APC, SC/APC, E2000/APC
BiasT	Built-in LNB power through RF 1
LNB control circuit	3/18 VDC & 22 kHz tone
Rack chassis	1U, 3U

APPLICATIONS

- Full Satcom transponder applications
- Government Signal Intelligence (SIGINT)
- Fixed Satcom earth stations and teleports
- Telemetry
- Government installations
- Remote monitoring stations



IP3= 3.2 dB @ 5 GHz

P1= -4.0 dB @ 5 GHz

Noise= 21 dB @ 5 GHz

SFDR= 105 dB @ 5

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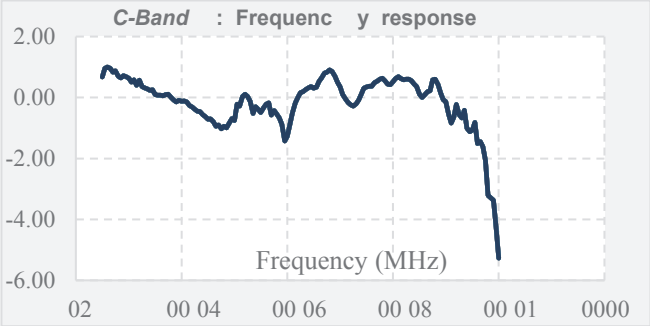
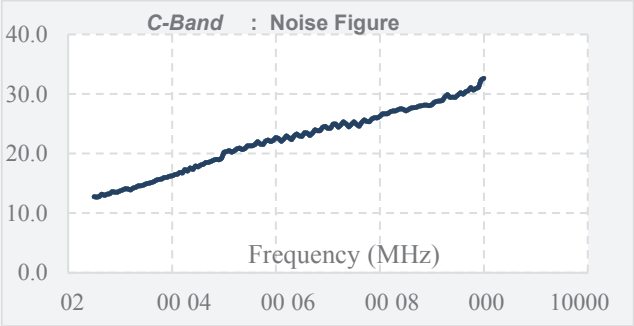
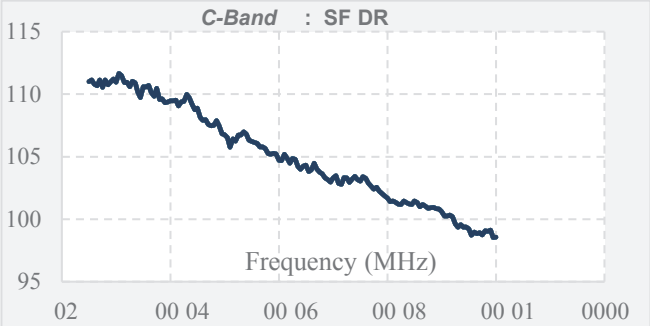
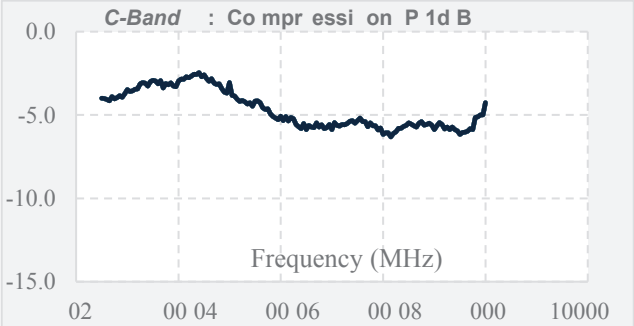
PRODUCT PERFORMANCE

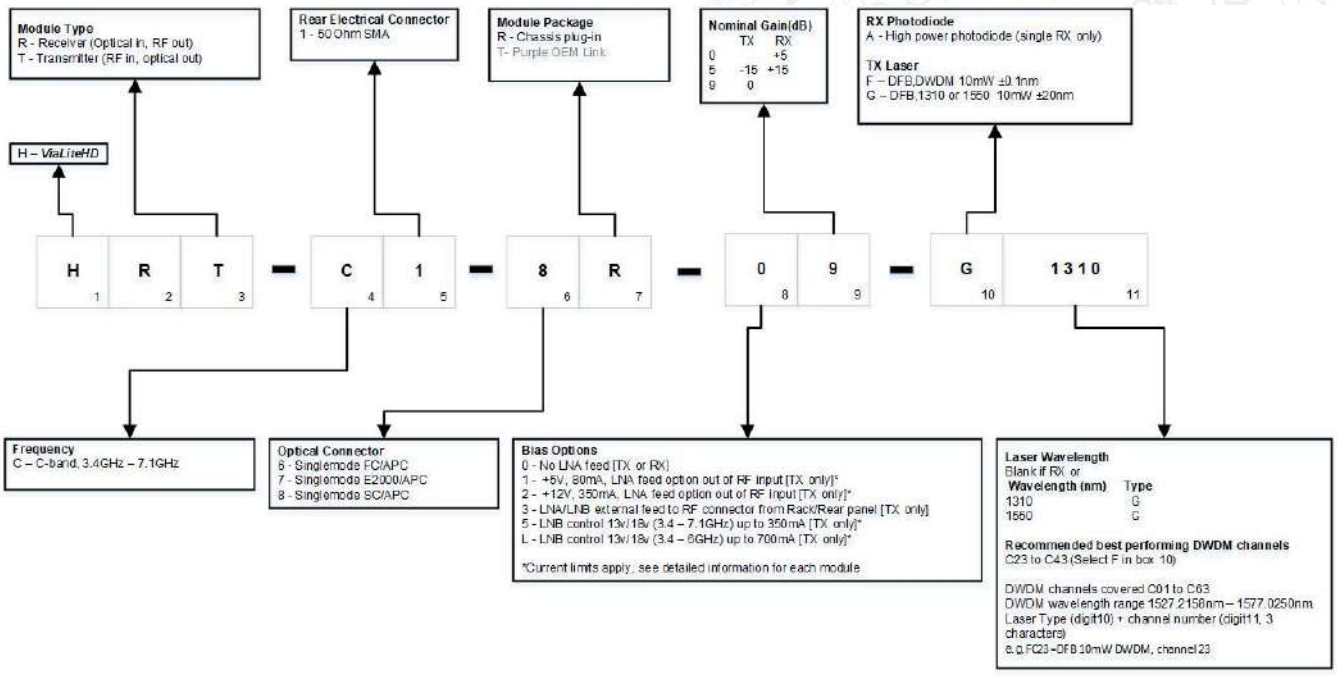








PRODUCT CONFIGURATOR



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TECHNICAL SPECIFICATION

Transmitter	HRT-C1-8R-09-G1310 (example)
Receiver	HRR-C1-8R-05-A (example)
Frequency range	500 – 7500 MHz
Impedance, RF connector	50Ω SMA
VSWR	1:1.5 (typ)
Link gain (Tx gain / Rx gain), default	0/15 dB (nom)
Tx gain adjustment range	15.5 dB (typ)
Tx gain adjustment from default gain	-12 to 3.5 dB (typ)
Rx gain adjustment range	15.5 dB (typ)
Rx gain adjustment from default gain	-9.5 to +25 dB (typ)
Gain adjustment step size Rx and Tx	0.5 dB (typ)
Gain stability over temperature range	±1 dB (max)
Nominal input signal / output signal	-15/0 dBm
P1dB input	-9 dBm (typ)
P1dB input, at maximum Tx gain	-4 dBm (typ)
IP3 input, at default gain	+3.2 dBm (typ)
Noise figure, at default gain	21 @ 5 GHz dB (typ)
SFDR	105 @ 5 GHz dB/Hz$^{2/3}$ (typ)
Maximum input power without damage	15 dBm
LNB power	Internal 13/18 V (3.4 – 6 GHz) up to 700 mA (3.4 – 7.1 GHz) up to 350 mA
Optical connector	SC/APC
Laser type	DFB (Distributed feedback), thermo-electric cooled laser
Optical power output	10 mW (typ)
Summary alarm output	Open drain alarm: OPEN: Alarm, CURRENT SINK: okay
Operating temperature range	-10 °C to +50 °C
Storage temperature range	-40 °C to +70 °C
Humidity	95% non-condensing humidity

MADE BY ViaLite

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ACCESSORIES

SNMP/Web Browser Card

- Easy to use graphical user interface (GUI)
- Real time monitoring of card performance
- Alarm monitoring and event logging
- Control of gain adjustment
- Compatible with all ViaLiteHD rack chassis and cards
- Easy integration with network management systems (NMS) using management information base (MIB) tables
- Actively manage redundancy switching
- New RF cards can be automatically reprogrammed with the previous card parameters
- Remote SNMP to local SNMP connection via optical fiber
- Provides remote LAN 10/100 Ethernet link

Rack Chassis

- 3U accepts up to 13 RF or Support cards, plus an SNMP card and dual power supplies
- A 1U chassis accepts up to 3 RF or Support cards or 2 cards and an SNMP card (with dual power supplies)
- Up to 26 channels per 3U chassis (using dual RF cards) – reducing the amount of rack space required
- Blind mate option
- All modules hot-swappable and auto-reconfigure with SNMP option
- On-card LNB and BUC power options
- Power fed through rear chassis connector to card Bias Tees
- System can be monitored and controlled remotely via SNMP using a web browser

DWDM Systems

- DWDM multiplexers
- EDFAs
- Delay lines
- Optical switches
- Dispersion Compensation
- System design and configuration
- Remote link monitoring

Outdoor Enclosures

- CE approved and EMC compatible
- IP rated and NEMA approved
- Plug and play format
- Suitable for harsh environments
- All modules hot swappable
- Dual redundant power options
- Interface for monitor and control (M&C) systems