www.vialite.com
sales@vialite.com
+44 (0)1793 784389
+1 (855) 4-VIALITE

ViaLiteHD® – C-Band RF over Fiber Link

50 Ω C-Band HRx-C Card

- **C-Band 3.4 – 7.1 GHz**
- **Full frequency range 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 all downlink frequencies; allowing a direct LNB connection over long distances with no impact to cross-site link budget.

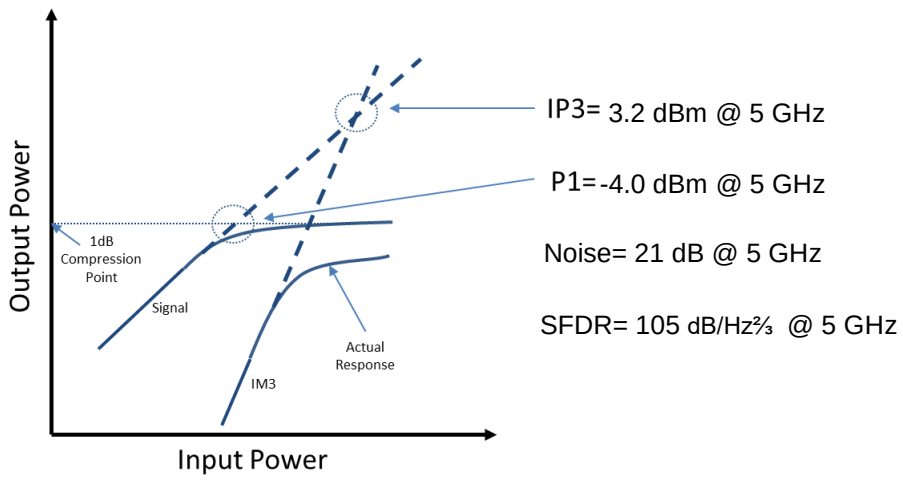
The HRx-C products use DFB Lasers with longer wavelengths making them ideal for use with multiplexers. Options for DWDM 1550 nm and CWDM 1310 nm/1550 nm 10 mW photodiodes provide deployment flexibility in a broad range of applications within Broadcast, Satcom and Military verticals, amongst others.

Options

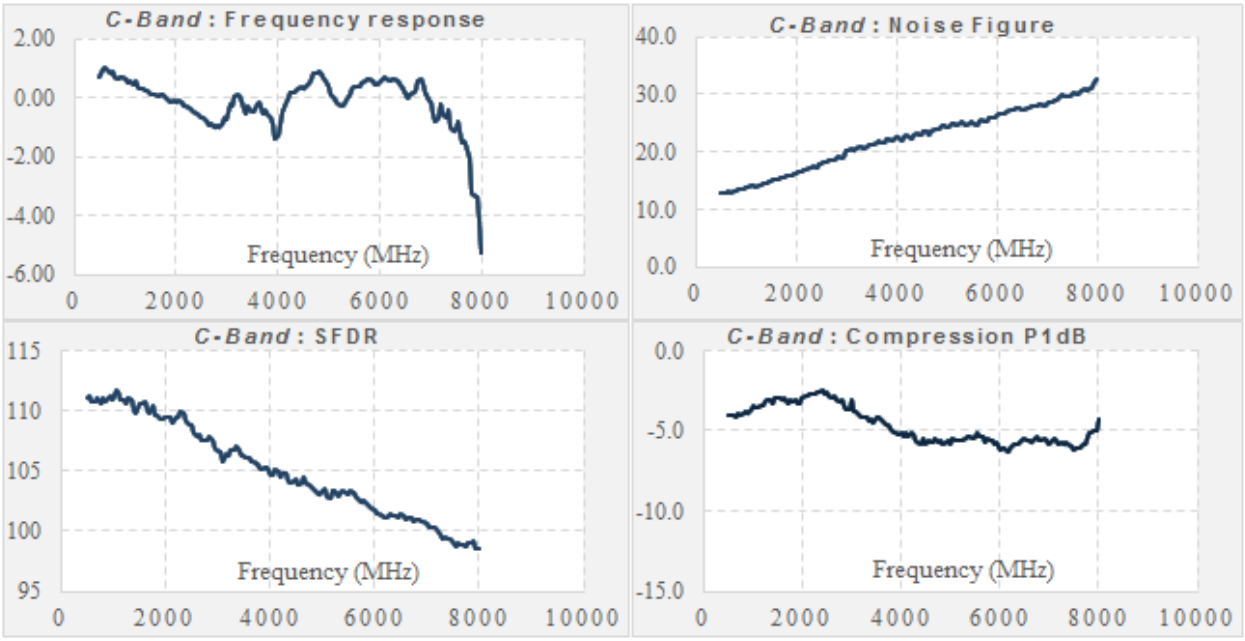
RF connection:	50 Ω electrical connectors, SMA
Optical connectors:	FC/APC, SC/APC, E2000/APC
BiasT:	Built-in LNB power through RF
LNB supply & control:	13/18 VDC & 22 kHz tone
Rack chassis:	1U, 3U

Applications

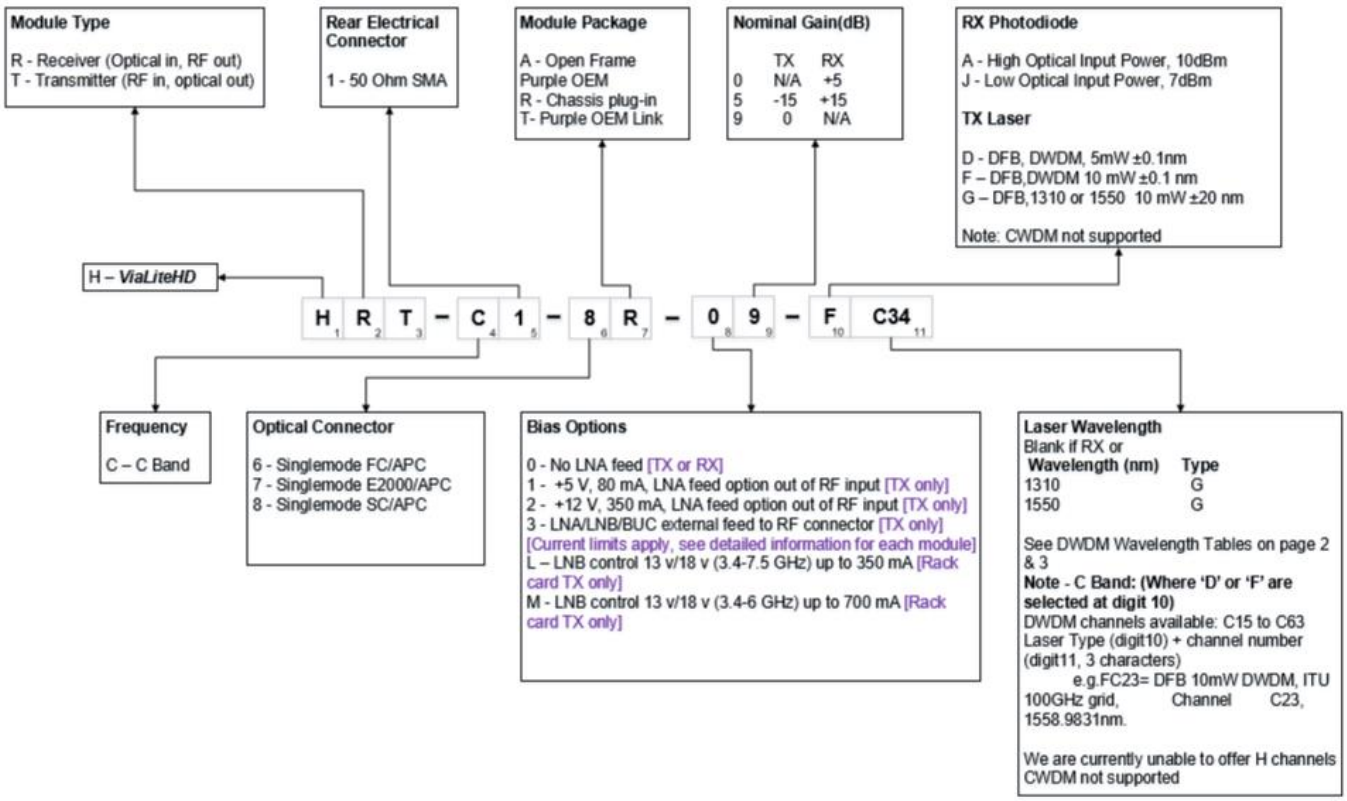
- Full Satcom transponder applications
- Government Signal Intelligence (SIGINT)
- Fixed Satcom earth stations and teleports
- Telemetry
- Government installations
- Remote monitoring stations



Product performance



Product configurator



Popular Products

HRT-C1-8R-35-G1310
ViaLiteHD RF Link, Transmitter (E/O), C Band, 50 Ohm SMA, Singlemode SC/APC, Rack plug-in module, LNA/LNB or BUC DC voltage feed to RF input or output conn' supplied from rear chassis SCSI conn' or OEM header conn', -15dB RF Gain, DFB, 10mW, Wavelength 1310 +/- 20nm.

HRR-C1-8R-05-A
ViaLiteHD RF Link, Receiver (O/E), C Band, 50 Ohm SMA, Singlemode SC/APC, Rack plug-in module, No LNA Feed, 15dB RF Gain, High Optical Input Power, 10dBm.

HRT-C1-8R-39-FC34
ViaLiteHD RF Link, Transmitter (E/O), C Band, 50 Ohm SMA, Singlemode SC/APC, Rack plug-in module, LNA/LNB or BUC DC voltage feed to RF input or output conn' supplied from rear chassis SCSI conn' or OEM header conn', 0dB RF Gain, DFB 10mW DWDM, ITU 100GHz grid, Channel C34, 1550.1161nm.

HRR-C1-8R-00-A
ViaLiteHD RF Link, Receiver (O/E), C Band, 50 Ohm SMA, Singlemode SC/APC, Rack plug-in module, No LNA Feed, 5dB RF Gain, High Optical Input Power, 10dBm.

Technical specification

	50 Ohm C-Band
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	-4 dBm (typ)
P1dB input, at maximum Tx gain	-9 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/Hz⅔ (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	-20 °C to +60 °C
Storage temperature range	-40 °C to +70 °C
Humidity	95% non-condensing humidity

Accessories

Type	Key Features
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 modules • 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-reconfiguration 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