

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.

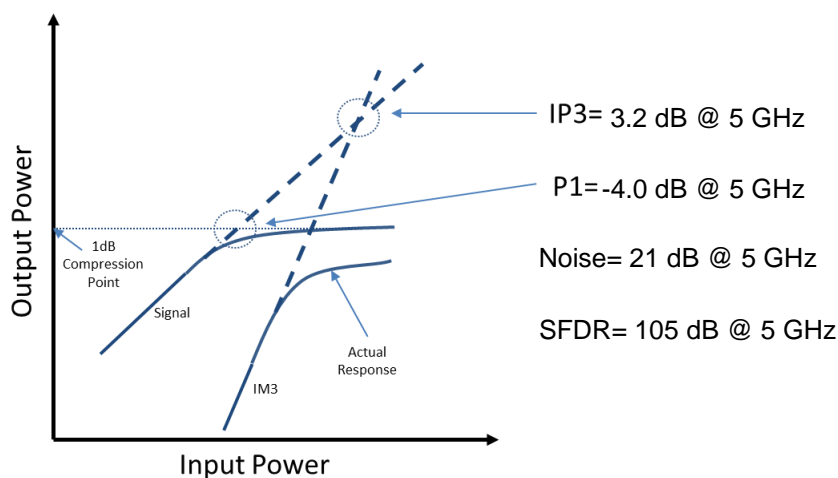
The HRx-C products use DFB Lasers with longer wavelengths making them ideal for use with multiplexers. Options for DWDM 1550nm and CWDM 1310nm/1550nm 10mW photodiodes provide deployment flexibility in a broad range of applications within Broadcast, Satcom and Military verticals, amongst others.

Options

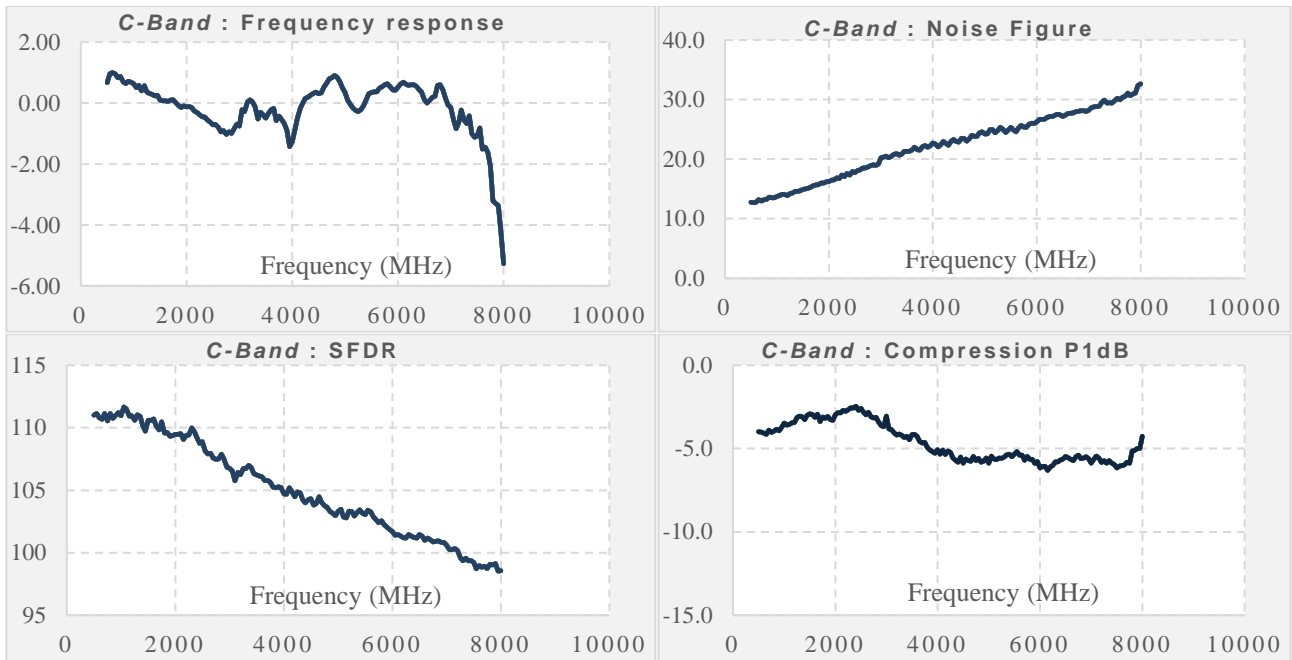
RF Connection: 50Ω electrical connectors, SMA
Optical connectors: FC/APC, SC/APC, E2000/APC
BiasT: Built-in LNB power through RF
LNB control circuit: 13/18 VDC & 22 kHz tone
Rack chassis: 1U, 3U

Applications

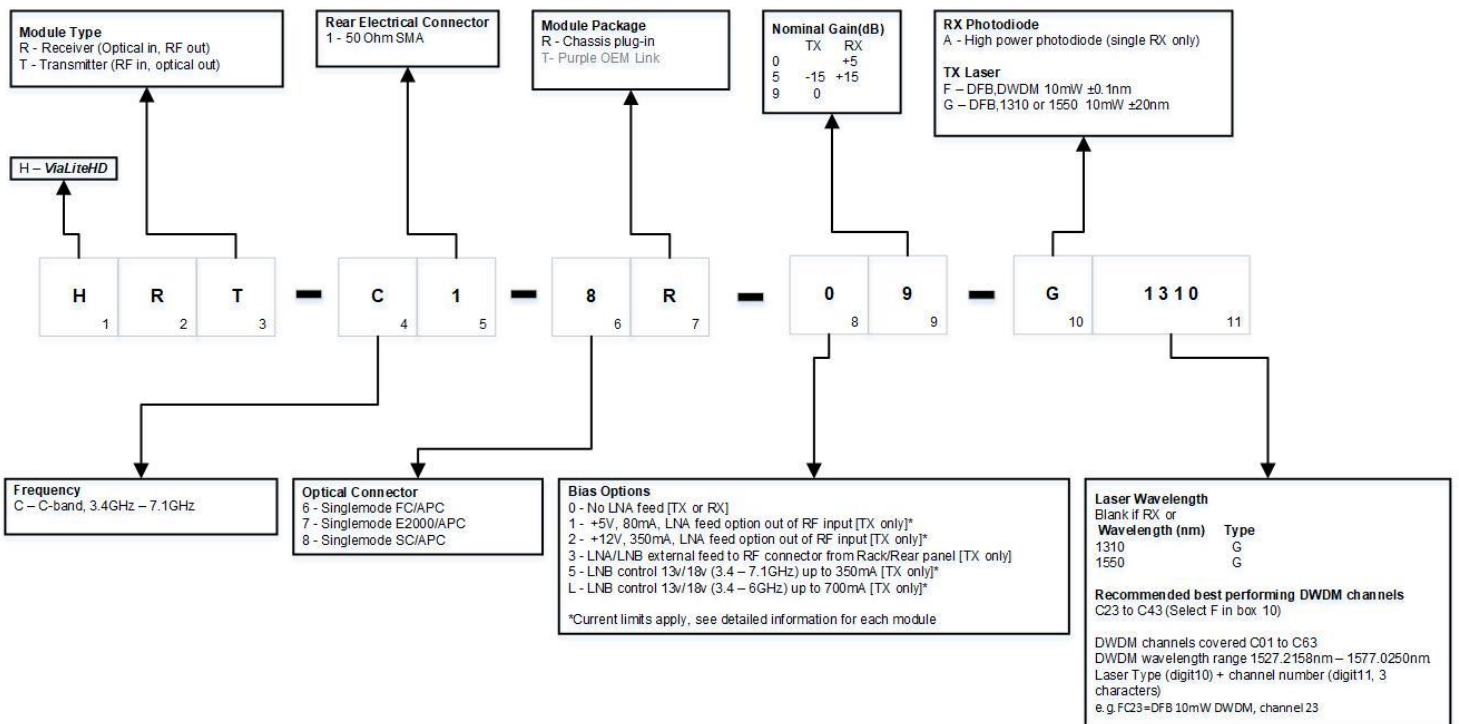
- Full Satcom transponder applications
- Government Signal Intelligence (SIGINT)
- Fixed Satcom earth stations and teleports
- Telemetry
- Government installations
- Remote monitoring stations



Product performance



Product configurator

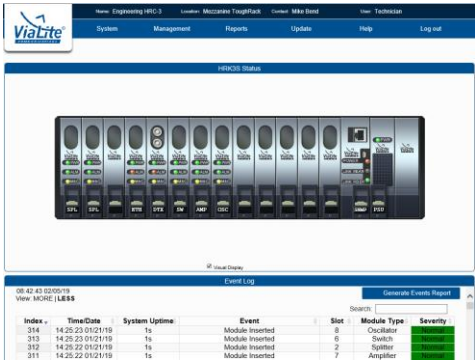





Technical specification

	50 Ohm DWDM 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	-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



Accessories

Type	Key Features																																			
<p>SNMP/Web Browser Card</p>  <p>The screenshot shows the ViaLite web interface with a navigation menu (System, Management, Reports, Updates, Help, Log out) and a main content area displaying 'HRx-C1 Status'. Below this is a 'Card Log' table with the following data:</p> <table border="1"> <thead> <tr> <th>Index</th> <th>TimeDate</th> <th>System Uptime</th> <th>Event</th> <th>Slot</th> <th>Module Type</th> <th>Severity</th> </tr> </thead> <tbody> <tr> <td>314</td> <td>14.25.22 01/21/19</td> <td>1s</td> <td>Module Inserted</td> <td>6</td> <td>Controller</td> <td>Warning</td> </tr> <tr> <td>313</td> <td>14.25.23 01/21/19</td> <td>1s</td> <td>Module Inserted</td> <td>6</td> <td>Switch</td> <td>Warning</td> </tr> <tr> <td>312</td> <td>14.25.22 01/21/19</td> <td>1s</td> <td>Module Inserted</td> <td>2</td> <td>System</td> <td>Warning</td> </tr> <tr> <td>311</td> <td>14.25.22 01/21/19</td> <td>1s</td> <td>Module Inserted</td> <td>7</td> <td>Amplifier</td> <td>Warning</td> </tr> </tbody> </table>	Index	TimeDate	System Uptime	Event	Slot	Module Type	Severity	314	14.25.22 01/21/19	1s	Module Inserted	6	Controller	Warning	313	14.25.23 01/21/19	1s	Module Inserted	6	Switch	Warning	312	14.25.22 01/21/19	1s	Module Inserted	2	System	Warning	311	14.25.22 01/21/19	1s	Module Inserted	7	Amplifier	Warning	<ul style="list-style-type: none"> • 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
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<p>Rack Chassis</p>  <p>The image shows two rack chassis units. The top one is a 3U chassis with multiple slots for modules, and the bottom one is a 1U chassis with a similar slot configuration.</p>	<ul style="list-style-type: none"> • 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 																																			
<p>DWDM Systems</p>  <p>The image shows a tall, rack-mounted DWDM system with multiple modules and a control panel.</p>	<ul style="list-style-type: none"> • DWDM multiplexers • EDFAs • Delay lines • Optical switches • Dispersion Compensation • System design and configuration • Remote link monitoring 																																			
<p>Outdoor Enclosures</p>  <p>The image shows several outdoor enclosures of different sizes, some with their doors open, revealing internal components.</p>	<ul style="list-style-type: none"> • 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 																																			