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

ViaLiteHD® – Extra Wideband Link

Extra Wideband RF over Fiber Link

- **10 MHz – 4.2 GHz Link**
- **Suitable for C-Band downlink applications**
- **Standard 0 – 10 km links**
- **SFDR of 110 dB / Hz $^{2/3}$ (Typ)**
- **Low Noise performance**
- **Interfaces with M&C systems for remote monitoring**
- **Standard 5-year warranty**

The ***ViaLiteHD*** Extra Wideband RF over fiber optic links have been designed for the satellite industry to transport RF signals between antennas and control rooms over fiber. The modules are suitable for receive only C-Band satellite systems. The dynamic range of these modules allows High Throughput Satellite (HTS) transponder bandwidths of 500 MHz, 800 MHz or even 1500 MHz to be transported, as well as multiple standard 36 MHz transponders.

The ***ViaLiteHD*** Extra Wideband RF over fiber link has options for either 0 dB or +9dB link gain. For installations where the number of cross site fibre connections is limited the complete ITU range of CWDM transmitter wavelengths is offered allowing up to 18 channels to be carried on one fibre.

ViaLiteHD fiber optic links come in various form factors, such as stand-alone modules (Blue OEM) and Rack Chassis cards for use in a ***ViaLiteHD*** 1U or 3U Rack Chassis. Rack Chassis cards can be managed and configured via a site controller which utilizes SNMP and web interface, whereas stand-alone modules are field configurable via the module electrical interface connector.

Features/Options

- Built-in BiasT for LNB powering through RF connection
- Electrical connectors: 50 Ω SMA and MCX
- Optical connectors: SC/APC, LC/APC, FC/APC
- Rack Chassis Blind mate connectivity: 50 Ω SMA and LC/APC

Applications

- Fixed satcom earth stations and teleports
- Broadcast facilities
- Mobile SNG, military and flyaways
- VSAT hubs (IP gateways)
- Marine antennas
- Telemetry, Tracking and Command (TT&C)
- Oil and gas platforms
- Television Receive-Only (TVRO)

Formats

- 3U Rack Chassis
- 1U Rack Chassis
- Blue OEM and Blue2 Link
- Yellow OEM
- Outdoor Enclosures

Extra Wideband 10 MHz – 4.2 GHz

Technical Specification

	Units	Note	Extra Wideband, 10 MHz – 4.2 GHz
Transmitter			HRT-W1-8R-05-S1310
Receiver			HRR-W1-8R-05
Frequency range	MHz		10 – 4200
Impedance, RF connector			50 Ω SMA
VSWR	(Typ)		1.5:1
Link gain (TX gain / RX gain), default	dB (Nom)	a	0 (-15 / +15)
TX gain adjustment range	dB (Typ)		15.5
TX gain adjustment from default gain	dB (Typ)		-12.5 to +3.0
RX gain adjustment range	dB (Typ)		15.5
RX gain adjustment from default gain	dB (Typ)		-12.5 to +3.0
Gain adjustment step size Rx and TX	dB (Typ)		0.5
Flatness, 10 MHz – 3 GHz	dB (Max)		±1.0
Flatness, 3.0 GHz - 4.2 GHz	dB (Max)		±1.5
Gain stability over temperature, Link	dB (Max)	a	±3
Gain stability	dB (Typ)		0.25 @ 24 hrs
Nominal input signal / output signal	dBm		-20 / -20
IMD @ nominal output power	dB (Typ)	c	-48
$P1dB_{input}$	dBm (Typ)	a k	2
$P1dB_{input}$, at minimum TX gain	dBm (Typ)	a k	4
$IP3_{input}$, at default gain	dBm (Typ)	a k	14
Noise figure, at default gain	dB (Typ)	a k	23
Noise figure, at maximum TX gain	dB (Typ)	a k	22
Noise figure, 5 dB optical loss	dB (typ)	c k	27
SFDR	dB / Hz $^{2/3}$ (Typ)	a	110
Test port gain, transmitter	dB (Typ)	l	No test port
Test port gain, receiver	dB (Typ)	l	No test port
No damage input power	dBm		15
LNA power			No LNA power
Power Tx	W (Typ)		1.9
Power Rx	W (Typ)		1.3
Optical connector			FC/APC, SC/APC, LC/APC, E2000/APC
Optical wavelength	nm		1310 nm ± 20 nm (1550 nm / CWDM options)
Laser type			DFB - Distributed feedback laser
Optical power output	dBm (Typ)		4.5
Summary alarm output			Open drain alarm: OPEN: Alarm, CURRENT SINK: OK
Operating temperature range			-20 °C to +60 °C
Storage temperature range			-40 °C to +70 °C
Humidity	RH		95 % non-condensing humidity

a nominal input power @ 0 dB optical loss
c nominal output power @ 5 dB optical loss
h default gain setting
k Measured @ 500 MHz
l Relative to rear port @ 1.2 GHz
All tests @ 25 °C after 15 minutes warm up