

- **Superior linearity and low noise**
- **Ultra-wide dynamic range**
- **Serial digital channel to 20kb/s on same optical path.**
- **Transmission distances of >50km**
- **LNB/BUC power and on-module LNB switching options**
- **SNMP interface for remote monitoring, programming and control**
- **Suitable for multiple carrier up or down links**

Advanced satcom technology

The **ViaLiteHD** range of fibre optic links are designed to connect antennas with control rooms, network operation centres or broadcast head ends.

ViaLiteHD links have been designed to provide a cost effective, technically superior installation:

- very low carrier-to-noise ratio
- extremely linear performance
- wide dynamic range



Options include:

- 50Ω electrical connectors: SMA, MCX, (BNC)
- 75Ω electrical connectors: BNC, MCX
- Optical connectors: SC/APC, LC/APC, FC/APC & E2000/APC
- 1310/1550nm and ITU CWDM wavelengths
- Test ports on Tx and Rx modules
- LNB powering through RF connection
- OEM and Edge OEM small format modules available
- Blind-mate connectivity (SC/APC and SMA/BNC)
- LNB control circuit with 13/18VDC & 22kHz tone
- Serial digital channel to 20kb/s on same optical path
- High power and dual isolated lasers for high end applications

Ultra wide dynamic range and a choice of manual, soft or automatic gain control settings address the challenges of varying signal intensity caused by meteorological conditions.

ViaLiteHD fibre optic links are available as rack mounted cards, small form factor modules and Edge OEM modules.

A fully populated 19" 3U **ViaLiteHD** rack supports up to 26 channels and accepts 13 RF and accessory cards plus an SNMP or summary alarm card and dual power supply modules. A 1U chassis accepts three RF cards or two RF cards plus an SNMP card.

Small form factor modules offer a compact, single link solution and Edge OEM modules allow system integrators and equipment manufacturers to build RF/optical interfaces into their own design.

A range of support modules and accessories including indoor rack equipment and weatherproof outdoor enclosures are also available.



RF Performance Characteristics

	L-band link (50Ω)	L-band link (75Ω)
Frequency range	950-2150MHz	
Impedance, RF connector	50Ω SMA, blind-mate	75Ω BNC, blind-mate
VSWR	1:1.5(typ)	
Link gain (Tx /Rx)	+9 (-11/+20)dB (nom) ^{a h}	+3 (-11/+14)dB (nom) ^{a h}
Flatness (full band)	±0.5dB (typ) ^{a h}	±0.6dB (typ) ^{a h}
Gain stability	0.25 @ 24hrs dB (typ)	
P1dB input	-1dBm (typ) ^{a k}	0dBm (typ) ^{a k}
IP3 input	11dBm (typ) ^{a k}	12dBm (typ) ^{a k}
Noise figure	20dB (typ) ^{a k}	21dB (typ) ^{a k}
SFDR	110dB/Hz ^{2/3} (typ) ^a	110dB/Hz ^{2/3} (typ) ^a
Maximum input power	15dBm (min)	15dBm (min)
^a nominal input power @ 0dB optical loss ^h default gain setting ^k measured @ 1.2GHz		

Optical Performance Characteristics

	L-band link
Laser type	Distributed feedback (DFB) laser
Optical wavelength	1310nm ± 20nm (1550nm/CWDM options)
Optical power output	4.5 dBm (nominal)

Temperature Characteristics

	L-band link
Operating temperature	-20degC to +50degC
Storage temperature	-40degC to +70degC

Part Numbering

H R T - L 1 - 6 R - 3 3 - S 1310

Module type
 R - receiver
 V - dual receiver
 T - transmitter
 U - dual transmitter
 X - transceiver

Electrical connector
 L1 - 50Ω SMA
 L2 - 75Ω F-Type¹
 L3 - 75Ω BNC
 L4 - 50Ω BNC¹
 L5 - 50Ω MCX²
 L6 - 75Ω MCX²
¹ special order
² modules only

Optical connector
 6 - FC/APC
 7 - E2000/APC³
 8 - SC/APC
 9 - LC/APC
³ not available for dual cards and small form factor modules

Module package
 R - rack card
 D - rack card blind-mate⁴
 M - small form factor module
 N - Edge OEM module
⁴ 50Ω SMA or 75Ω BNC electrical and optical SC/APC only

Options
 0 - Rx standard
 3 - LNB/BUC connection (Tx standard, Rx option)
 4 - 20kb/s Serial Link
 5 - LNB control 13/18v/22kHz tone⁵
⁵ Tx rack cards only

Nominal gain
 3 - 50Ω standard 9dB (Tx: -11dB, Rx: 20dB)
 8 - 75Ω standard 3dB (Tx: -11dB, Rx: 14dB)
 Note: Further gain adjustments via MGC, SGC or AGC. For more gain options consult **ViaLite**

Laser type
 Transmitters only - receivers leave this blank
 S : DFB laser
 H : DFB dual isolated laser
 P : DFB high power dual isolated laser
 C : CWDM
 B : CWDM dual isolated
 W : WDM

Laser wavelength
 Transmitters only - receivers leave this blank
 DFB & WDM options
 1310 : 1310±20nm
 1550 : 1550±20nm
 CWDM options
 1470 : 1470±3nm
 1490 : 1490±3nm
 1510 : 1510±3nm
 1530 : 1530±3nm
 1550 : 1550±3nm
 1570 : 1570±3nm
 1590 : 1590±3nm
 1610 : 1610±3nm
 Other CWDM wavelengths are available to maximum 18 channels.

Mechanical Dimensions

