



RF Over Fiber Systems

Receive path L-band + reference link

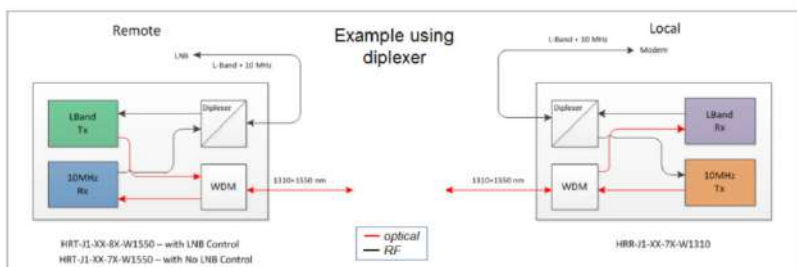
- Suitable for all modulation formats
- Ultra-wide dynamic range
- Negligible intermodulation
- SNMP and web interface for remote monitoring and control
- Multiple carrier transmission



RF + REFERENCE OVER A SINGLE FIBRE

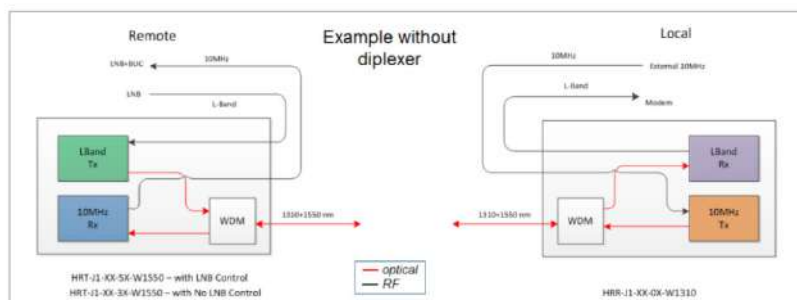
The ViaLiteHD L-band + reference link is designed for applications where remote equipment shares a common frequency reference - typically 10MHz - however the link will support reference signals in the range 5-20MHz.

- Reference and traffic signals are transported on different wavelengths to minimise intermodulation
- Requires only a single fibre
- Reference can be supplied on a single RF connection with the carrier signal or from separate input sources
- A multiplexed signal can be connected to the LNB or demultiplexed and supplied to two separate RF connections
- Transmit path link also available.



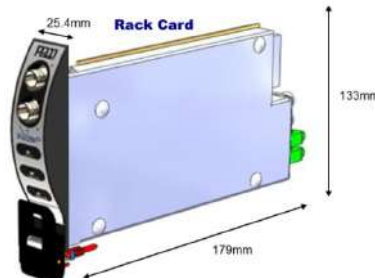
ViaLiteHD fibre optic links are available as rack mounted cards, small form factor modules and Edge OEM modules.

A fully populated 19" 3U ViaLiteHD rack supports up to 26 links and accepts 13 RF cards plus an SNMP 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 is also available.

MECHANICAL DIMENSIONS





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Receive path L-band + reference link

RF PERFORMANCE CHARACTERISTICS

	L-Band	Reference (50 ohms)	L-Band	Reference (50 ohms)
Impedance	50 ohms, duplexed		75 ohms, duplexed	
Frequency range	950 - 2150 MHz	5-20 MHz	950 - 2150 MHz	5-20 MHz
Flatness	± 1.5 dB (max) ^{a d} ± 0.5 dB (typical) ^{a d} ± 0.2 dB in any 36 MHz ^{a t}	± 0.5 dB (typical) ^{a d}	± 1.5 dB (max) ^{a d} ± 0.8 dB (typical) ^{a d} ± 0.2 dB in any 36 MHz ^{a t}	± 0.5 dB (typical) ^{a d}
VSWR (50 Ohm)	1:1.5 ^t		1:1.5 ^t	
IMD	-62 dBc ^{t c}		-50 dBc ^{t c}	
CNR	57 dB ^{t b}		55 dB ^{t b}	
Test input / output signal	-20 dBm	0 dBm	-20 dBm	0 dBm
Maximum input power	+15 dBm (without damage)		+15 dBm (without damage)	
Gain stability	0.25 dB over 24 hours		0.25 dB over 24 hours	
RF link gain (nominal)	+9 dB ^a	0 dB ^a	+3 dB ^a	0 dB ^a
Input IP3 (at default gain)	+12 dBm ^{t c}		+12 dBm ^{t c}	
P1dB (at default gain)	0 ^t dBm	+10 dBm	0 ^t dBm	+4 dBm
Noise figure (at default)	20 dB ^{t a}	34 dB ^{t a}	22 dB ^{t a}	34 dB ^{t a}
LNB power (optional)	Internal 13/18V @ 700mA, with switchable tone		Internal 13/18V @ 700mA, with switchable tone	
SFDR	110 dBHz ^{2/3t a}		109 dBHz ^{2/3t a}	
Reference sidebands	65 dBc ^t		60 dBc ^t	

OPTICAL PERFORMANCE CHARACTERISTICS

	L-Band	Reference
Laser type	DFB	DFB
Optical wavelength	1550 nm ± 20 nm	1310 nm ± 20 nm
Optical power output	4.5 dBm (nominal)	4.5 dBm (nominal)
Optical connector	SC/APC (E2000/APC and FC/APC options)	SC/APC (E2000/APC and FC/APC options)

TEMPERATURE CHARACTERISTICS

Operating Temperature	-20°C to +50°C
Storage Temperature	-40°C to +70°C

PART NUMBERING AND OPTIONS

Product type

R : Receiver , optical in/electrical out
T : Transmitter, electrical in/optical out

H R T - J 1 - 8 D - 8 3 - W 1550

Electrical connector

1 : SMA 50Ω
3 : BNC 75Ω

Optical connector

6 : single mode FC/APC
8 : single mode SC/APC

Product package

R : Rack card
D : Rack card blind mate*
*SC optical connectors only

Options

0 : No LNA feed
3 : LNA/LNB/BUC feed to RF connector from rack to rear panel
5 : LNB control 13v/18v/22kHz tone (Tx only)
7 : Dual module with RF duplexer
8 : Dual module with RF duplexer and LNB control 13v/18v/22kHz tone

Laser wavelength

1310 : 1310±20nm
1550 : 1550±20nm

Nominal L-Band gain

	Tx	Rx
3 :	-11dB	+20dB
5 :	-15dB	+15dB
8 :	-11dB	+14dB

