

ViaLiteHD® – VHF/UHF Link

VHF/UHF RF over Fiber Link

- Ultra-wide dynamic range
- Transmits all video, data and audio modulation formats
- Superior linear performance
- Very low noise
- Transmission distances up to 50km
- SNMP interface for remote monitoring, system programming and control
- Multiple carrier transmission



The **ViaLiteHD** VHF/UHF RF over fiber link is a broadband, wide dynamic range product which covers a frequency range of 10 MHz to 1 GHz. The VHF/UHF Link provides a transparent connection between RF communications equipment and is ideal for VHF/UHF radio and TV signal distribution.

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

Features/Options

- Negligible degradation of signals due to noise or inter-modulation
- High link reliability
- Comprehensive alarm/status monitoring
- Suitable for almost any analog or digital signal modulation including FM and QPSK
- Highly flexible product suitable for a large number of different installations
- Electrical connectors: 50 Ω SMA and MCX, 75 Ω BNC and MCX (Format dependant)
- Optical connectors: SC/APC, LC/APC, FC/APC and E2000/APC
- Rack Chassis Blind mate connectivity: 50 Ω SMA / 75 Ω BNC and LC/APC

Applications

- Metro
- Emergency communication
 - Mining
 - Oil and Gas refineries
- Security
- Public safety communications infrastructure

Formats

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

Technical Specification

	Units	Note	VHF/UHF Link 0dB gain	VHF/UHF Link 9dB gain
Transmitter (Tx)			HRT-N1-8R-35-S1310	HRT-N1-8R-33-S1310
Receiver (Rx)			HRR-N1-8R-05	HRR-N1-8R-03
Frequency range	MHz		10-1000	
Impedance, RF connector			50 Ω SMA	
VSWR	(Typ)		1.5:1	
Link gain (Tx gain /Rx gain), default	dB (Nom)	^a	0 (-15 / +15)	+9 (-11 / +20)
Tx gain adjustment range	dB (Typ)		15.5	
Tx gain adjustment from default gain	dB (Typ)		-6.5 to +9.0	-5.5 to +10
Rx gain adjustment range	dB (Typ)		15.5	
Rx gain adjustment from default gain	dB (Typ)		-7.5 to +8.0	-8.0 to +7.5
Gain adjustment step size Rx and Tx	dB (Typ)		0.5	
Flatness, fullband	dB (Max)	^{a h}	± 1.0	
Flatness, fullband	dB (Typ)	^{a h}	± 0.3	
Gain stability over temperature, Link	dB (Max)	^a	± 3	
Gain stability	dB (Typ)		0.25 @ 24hrs	
Nominal input signal / output signal	dBm		-20 / -20	
IMD @ nominal output power	dB (Typ)	^c	-48	-60
P1dB input	dBm (Typ)	^{a k}	2	-1
P1dB input at minimum Tx gain	dBm (Typ)	^{a k}	3	0
IP3 input, at default gain	dBm (Typ)	^{a k}	14	11
Noise figure, at default gain	dB (Typ)	^{a k}	23	19
Noise figure, at maximum Tx gain	dB (Typ)	^{a k}	16	12
Noise figure, 5 dB optical loss	dB (Typ)	^{c k}	28	24
SFDR	dB / Hz ^{2/3} (Typ)	^a	110	
Test port gain, transmitter	dB (Typ)	^l	-20	
Test port gain, receiver	dB (Typ)	^l	-20	
Test port flatness	dB (Typ)	^l	± 1	
Maximum RF input power without damage	dBm		15	
LNA power			External 0-28 V @ 350 mA, from chassis power connector	
Power consumption Tx	W (Typ)		1.9	
Power consumption Rx	W (Typ)		1.3	
Optical connector			SC/APC	
Optical wavelength	Nm		1310 nm \pm 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	$^{\circ}$ C		-10 $^{\circ}$ C to +50 $^{\circ}$ C	
Storage temperature	$^{\circ}$ C		-40 $^{\circ}$ C to +70 $^{\circ}$ C	
Humidity	RH		95% non-condensing humidity	

^a nominal input power @ 0 dB optical loss^b nominal input power @ 1 dB optical loss^c nominal input power @ 5 dB optical loss^h default gain setting^k Measured @ 500MHz^l Relative to rear port @ 500MHzAll tests @25 $^{\circ}$ C after 15 minutes warm up