



# RF Over Fiber Systems Ultra-wideband fibre optic link

- Superior linear performance
- Very low noise
- Ultra-wide dynamic range
- 2kHz - 4.2GHz bandwidth
- Transmits all video, data and audio modulation formats
- Transmission distances of >50km
- Interfaces with M&C systems for remote monitoring
- Multiple carrier transmission



## ULTRA-WIDE DYNAMIC RANGE

The ViaLiteHD broadband, wide dynamic range fibre optic links provides a transparent cross-site connection between RF communications equipment. It is ideal for distribution of signals such as low frequency radio, cellular and satellite C band.

- Negligible degradation of signals due to noise or inter-modulation
- High link reliability
- Comprehensive alarm/status monitoring
- Highly flexible product suitable for a large number of different installations.
- Suitable for almost any analogue or digital signal modulation including FM and QPSK

The ViaLiteHD wide dynamic range broadband fibre optic links have 0dB 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. Optical connector options include FC/APC, E2000/APC, SC/APC and LC/APC.



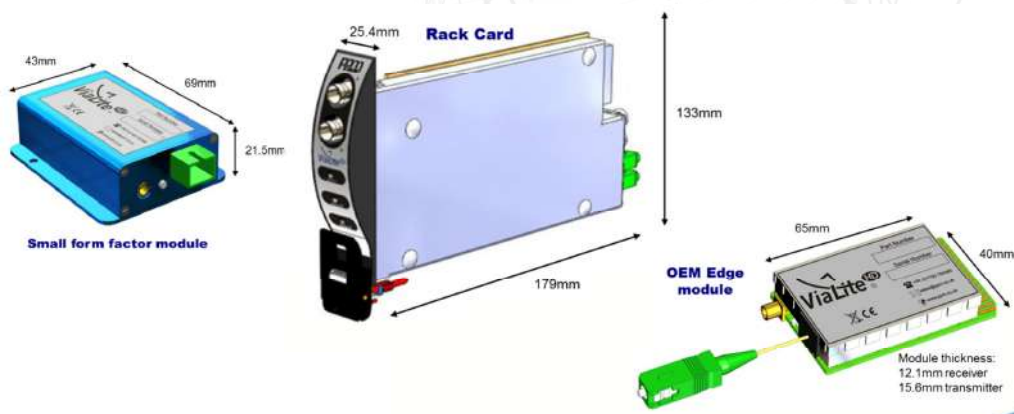
ViaLiteHD fibre optic links are available as rack mounted cards, small form factor modules and Edge OEM modules.

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 rack equipment and enclosures are also available.

## MECHANICAL DIMENSIONS





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## RF PERFORMANCE CHARACTERISTICS

Frequency range	2kHz - 4200MHz	
Flatness	2kHz - 10MHz	±2.5dB (max)
	10MHz - 3GHz	±1.0dB (max)
	3.0GHz - 4.2GHz	±1.5dB (max)
VSWR (50 Ohm)	1:1.5	
Maximum input power	+15dBm (without damage)	
Gain stability	±0.25 dB over 24 hrs	
RF link gain (nominal)	0dB <sup>a</sup>	
InputIP3	14dBm <sup>t a</sup>	
InputP1dB	+2dBm <sup>t a</sup>	
Noise figure	23dB <sup>t a b</sup>	
SFDR	110 dB Hz <sup>2/3 a b t</sup>	

<sup>a</sup> @ 0dB optical loss

<sup>b</sup> Calculated at 1200MHz

<sup>t</sup> typical

## OPTICAL PERFORMANCE CHARACTERISTICS

Laser Type	DFB
Optical Wavelength	1310nm ± 20nm (1550nm/CWDM options)
Optical Power Output	4.5dBm (typ)

## TEMPERATURE CHARACTERISTICS

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

## PART NUMBERS AND OPTIONS

### H R T - U 1 - 6 R - 05 - S 1310

#### Module type

- R : receiver
- V : dual receiver
- T : transmitter
- U : dual transmitter
- X : transceiver

#### Electrical connector

- U1: 50Ω SMA
  - U5: 50Ω MCX\*
- \*modules only*

#### Optical connector

- 6: FC/APC
  - 7: E2000/APC\*\*
  - 8: SC/APC
  - 9: LC/APC
- \*\* not available on small form factor modules and dual cards*

#### Module package

- R : rack module
  - D : rack module blind mate\*\*\*
  - M : small form factor module
  - N : Edge OEM module
- \*\*\*50Ω SMA or 75 Ω BNC and optical SC/APC only*

#### Nominal gain

- Transmitters
- 05 : -15dB gain
- Receivers
- 05 : +15dB gain

#### Laser type

- Transmitters only - receivers leave this blank
- S : DFB Laser
- C : CWDM

#### Laser Wavelength

Transmitters only - receivers leave this blank

DFB laser options:  
 1310 : 1310±20nm  
 1550 : 1550±20nm

CWDM laser 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 wavelengths are available up to a maximum of 18 channels*

