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
RF PERFORMANCE CHARACTERISTICS

- **Frequency range**
  - 2kHz - 4200MHz
  - 2kHz - 10MHz: ±2.5dB (max)
  - 10MHz - 3GHz: ±1.0dB (max)
  - 3.0GHz - 4.2GHz: ±1.5dB (max)

- **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

- **Input IP3**: 14dBm

- **Input P1dB**: +2dBm

- **Noise figure**: 23dB

- **SFDR**: 110 dB Hz 2/3

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OPTICAL PERFORMANCE CHARACTERISTICS

- **Laser Type**: DFB

- **Optical Wavelength**: 1310nm ± 20nm (1550nm/CWDM options)

- **Optical Power Output**: 4.5dBm (typ)

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TEMPERATURE CHARACTERISTICS

- **Operating Temperature**: -20°C to +50°C

- **Storage Temperature**: -40°C to +70°C

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PART NUMBERS AND OPTIONS

**HRT-U1-6R-05-S1310**

- **Module type**
  - R: receiver
  - V: dual receiver
  - T: transmitter
  - U: dual transmitters
  - X: transmitter

- **Optical connector**
  - 6: FC/APC
  - 7: E2000/APC
  - 8: SC/APC
  - 9: LC/APC

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

- **Laser type**
  - Transmitters only - Receivers leave this blank
  - S: DFB Laser
  - C: CWDM

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**Electrical connector**

- U1: 500 SMA
- US: 500 MCX

- **modules only**

**Module package**

- R: rack module
- D: rack module blank module
- M: small form factor module
- N: Edge OEM module
- **SM: 384 or 768 BOC and optical SC/APC only**

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