

L Band Fibre Optic Interfacility Links

- **Superior Linear Performance**
- **Ultra Low Noise**
- **High Spurious Free Dynamic Range**
- **Protocol Transparent – transmits all video, data and audio modulation formats**
- **Transmission distances of >50km**
- **50Ω or 75Ω impedance options**
- **Interfaces with M&C systems for remote monitoring**
- **Multiple carrier up or down link transmission**
- **SNMP Network Control Module Compatible**

Advanced Satcom Technology

The **ViaLite** range of fibre optic links connect antennas with control rooms, network operation centres or broadcast headends.

ViaLite links offer more than an alternative to coaxial cabling in teleport earth stations. They have been designed to provide very low carrier-to-noise ratio and extremely linear performance. This means a cost effective technically superior installation for the satcom user. **ViaLite** systems have been engineered to give industry leading performance when compared with any other fibre optic link. Only **ViaLite** links have ultra wide dynamic range so that auto gain control is not required to cope with changing signal intensity caused by meteorological conditions.



A range of options to suit a variety of installations is offered, such as 75Ω or 50Ω impedance with either BNC or SMA connectors. The standard link utilises a high performance DFB laser, but for less demanding short haul applications the lower cost FP laser option is available. 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 8 channels to be carried on one fibre. Optical connector options include FC, E2000 and SC.



The **ViaLite** system comprises rack mounted modules that plug into 19" 3U chassis/power supply. Alternatively up to 3 modules can be fitted into a 1U high 19" chassis, or standalone modules are available. A wide range of additional modules and accessories that might be required in any typical satcom installation are also available in the **ViaLite** range.

The most recent addition to the is the small form factor OEM module that allows System Integrators and Original Equipment Manufacturers an easy route to build RF/optical interfaces into their own design.



RF Performance Characteristics

	Rack Module Fixed Gain Link	Rack Module Variable Gain Link	Rack Module Fixed Gain Short Haul Link	Rack Module High Gain Link	OEM Module Variable Gain Link
Frequency Range	950 - 2150 MHz	950 - 2150 MHz	950 - 2150 MHz	950 - 2150 MHz	950 - 2150 MHz
Flatness	± 1.00 dB (max) ^a ± 0.40 dB (typical) ^a ± 0.20 dB in any 36 MHz ^{a†}	± 1.25 dB (max) ^{a,d} ± 0.40 dB (typical) ^{a,d} ± 0.20 dB in any 36 MHz ^{a†}	± 1.25 dB (max) ^a ± 0.40 dB (typical) ^a ± 0.20 dB in any 36 MHz ^{a†}	± 1.50 dB (max) ± 0.60 dB (typical) ± 0.25 dB in any 36 MHz ^{a†}	± 1.25 dB (max) ^{a,d} ± 0.70 dB (typical) ^{a,d} ± 0.25 dB in any 36 MHz ^{a†}
VSWR (50 Ohm)	1:1.5 [†]	1:1.5 [†]	1:1.5 [†]	1:1.5 [†]	1:1.5 [†]
IMD	-60 dBc ^{†c}	-60 dBc ^{†c}	-62 dBc ^{†c}	-66 dBc ^{†c}	-62 dBc ^{†c}
CNR	58 dB ^{†b}	58 dB ^{†b}	48 dB ^{†b}	62 dB ^{†b}	56 dB ^{†b}
Test Input Signal	-20 dBm	-20 dBm	-20 dBm	-20 dBm	-20 dBm
Test Output Signal	-20 dBm	-20 dBm	-20 dBm	-20 dBm	-20 dBm
Maximum Input Power (without damage)	+15 dBm	+15 dBm	+15 dBm	+15 dBm	+15 dBm
Gain Stability	0.25 dB over 24 hrs	0.25 dB over 24 hrs	0.25 dB over 24 hrs	0.25 dB over 24 hrs	0.25 dB over 24 hrs
RF Link Gain (nominal)	9 dB ^a	9 dB ± 3 dB ^a	9 dB ^a	20 dB ^a	9 dB ± 3 dB ^a
Output IP3	10 dBm ^{†c}	10 dBm ^{†c}	11 dBm ^{†c}	14 dBm ^{†c}	11 dBm ^{†c}
Input IP3	11 dBm ^{†c}	11 dBm ^{†c}	12 dBm ^{†c}	4 dBm ^{†c}	12 dBm ^{†c}
Input P1dB	-1 dBm	-1 dBm	-1 dBm	-8 dBm	0 dBm
Noise Figure	19 dB ^{†a}	19 dB ^{†a}	31 dB ^{†b}	15 dB ^{†a}	20 dB ^{†a}
SFDR	110 dB Hz 2/3 ^{†b}	110 dB Hz 2/3 ^{†b}	103 dB Hz 2/3 ^{†b}	109 dB Hz 2/3 ^{†b}	110 dB Hz 2/3 ^{†b}

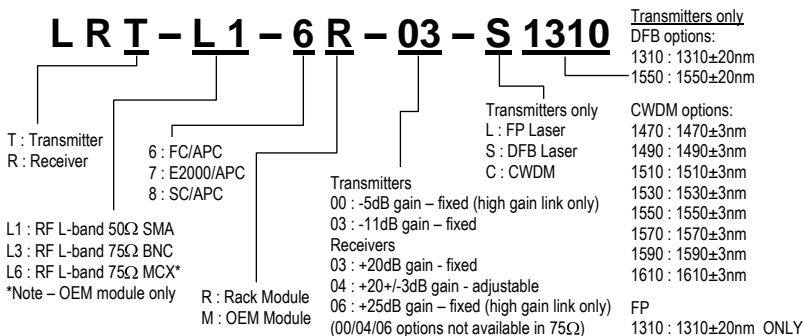
^a using test input signal @ 0 dB optical loss ^b using test input signal @ 1 dB optical loss ^c using test input signal @ 5 dB optical loss ^d 0dB variable gain offset [†] typical

Optical Performance Characteristics

	Rack Module Fixed Gain Link	Rack Module Variable Gain Link	Rack Module Fixed Gain Short Haul Link	Rack Module High Gain Link	OEM Module Fixed Gain Link
Laser Type	DFB	DFB	FP (Fabry Perot)	DFB	DFB (FP option)
Optical Wavelength	1310 nm ± 20 nm (1550nm/CWDM options)	1310 nm ± 20 nm (1550nm/CWDM options)	1310 nm ± 20 nm	1310 nm ± 20 nm (1550nm/CWDM options)	1310 nm ± 20 nm (1550nm/CWDM options)
Optical Power Output	4.5 dBm (nominal)	4.5 dBm (nominal)	4.5 dBm (nominal)	4.5 dBm (nominal)	4.5 dBm (nominal)
Optical Connector	FC/APC (E2000/APC and SC/APC options)	FC/APC (E2000/APC and SC/APC options)	FC/APC (E2000/APC and SC/APC options)	FC/APC (E2000/APC and SC/APC options)	FC/APC (E2000/APC and SC/APC options)

All measurements at 25°C unless otherwise indicated

Part Numbers and Options



Accessories

LRK2S	3U 8 Module Chassis + 2 PSU's
LPS-M	Main Power Supply Module
LPS-R	Reserve Power Supply Module
75003	Single Module Sleeve
75004	1U 3 Slot Chassis
LRD-x	RF Splitter Module
LRS-xx	1:1 Redundancy Switch
LSX-xx-xx	Ethernet or Serial Digital Module
LRC-1	SNMP Network Control Module
75010-xxx	Outdoor Enclosure

Mechanical Dimensions

