

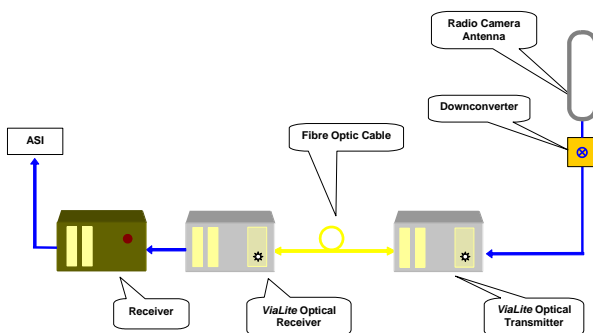
DVB-T Fiber Optic Link

- **Superior Linear Performance and High Spurious Free Dynamic Range**
- **Protocol Transparent – transmits all video, data and audio modulation formats**
- **Transmission distances of >50km**
- **Interfaces with M&C systems for remote monitoring**
- **Multiple carrier transmission**
- **LNA Voltage Feed via the Fiber Optic Transmitter RF input**
- **SNMP Network Control Module Compatible**

DVB-T Broadcast Technology

The **ViaLite** DVB-T Fiber Optic Link enables indoor and outdoor broadcast operators to transport multiple RF DVB-T feeds over optical fiber. The ultra-wide dynamic range results in negligible degradation of signals due to noise or inter-modulation effects. The link bandwidth covers 470MHz to 860MHz and is transparent to modulation type, making it suitable for conventional analogue signals.

High reliability, comprehensive alarm & status monitoring & wide dynamic range result in a highly flexible product suitable for a wide range of installations. The link's operation is independent of data format, and together with its inherently low phase noise performance, it is suitable for almost any type of analogue or digital signal modulation including FM and QPSK.



The DVB Fiber Optic Link system is simply inserted between antenna or down-converter and the electrical receiver. The fiber is lightweight with a small diameter and a cross site cable can be offered with or without an electrical insert to provide power to the remote end. The fiber optic transmitter can be used to power the antenna / down-converter via a voltage feed from the RF input. In situations where dual or quad diversity is being used, all RF channels can be transported over a single fiber using the **ViaLite** high isolation WDM or CWDM technology, where each "channel" is transmitted through the fiber at a separate optical wavelength allowing up to 8 channels to be carried on one fiber. The DVB-T Fiber Optic Link has options for either 0dB or +9dB link gain and optical connector options that 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 installation are also available in the **ViaLite** range.

The most recent addition to the **ViaLite** range 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.



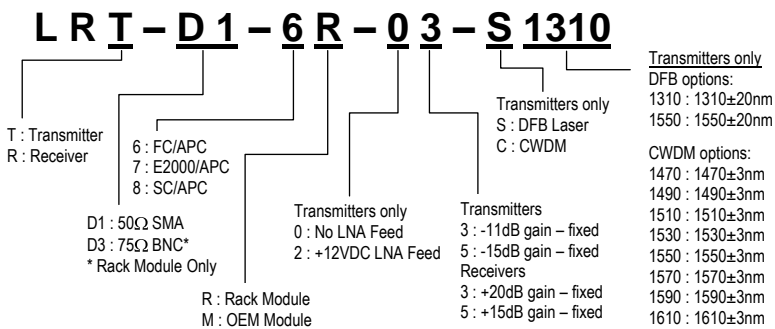
RF Performance Characteristics

	Rack Module 0dB Gain Link Internally generated LNA feed	Rack Module 0dB Gain Link Externally provided LNA feed	OEM Module 0dB Gain Link 1310nm	OEM Module 0dB Gain Link 1550nm
Frequency Range	470-860 MHz	470-860 MHz	470-860 MHz	470-860 MHz
Impedance	75Ω (BNC connector)	75Ω (BNC connector)	50Ω (SMA connector)	50Ω (SMA connector)
Flatness	± 0.30 dB (typical) ^a ± 0.75 dB (max) ^a ± 0.2 dB (typical in 36MHz) ^a	± 0.30 dB (typical) ^a ± 0.75 dB (max) ^a ± 0.2 dB (typical in 36MHz) ^a	± 0.25 dB (typical) ^a ± 0.50 dB (max) ^a ± 0.2 dB (typical in 36MHz) ^a	± 0.25 dB (typical) ^a ± 0.50 dB (max) ^a ± 0.2 dB (typical in 36MHz) ^a
VSWR	≤1.5:1 [†]	≤1.5:1 [†]	≤1.5:1 [†]	≤1.5:1 [†]
Maximum Input Power	+15 dBm (without damage)	+15 dBm (without damage)	+15 dBm (without damage)	+15 dBm (without damage)
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
RF Link Gain (nominal)	0 dB ^a	0 dB ^a	0 dB ^a	0 dB ^a
Output IP3	14 dBm ^{† a}	14 dBm ^{† a}	15 dBm ^{† a}	16 dBm ^{† a}
Input P1dB	2 dBm ^{† a}	2 dBm ^{† a}	3 dBm ^{† a}	4 dBm ^{† a}
Noise Figure	24 dB ^{† a}	23 dB ^{† a}	23 dB ^{† a}	23 dB ^{† a}
SFDR	109 dB Hz 2/3 ^{ab†}	110 dB Hz 2/3 ^{ab†}	111 dB Hz 2/3 ^{ab†}	112 dB Hz 2/3 ^{ab†}
LNA Supply Voltage Output (on RF input of Tx module)	+12VDC @ 80mA internally generated LNA feed	+12VDC @ 350mA external LNA feed can be routed through module	+12VDC @ 330mA external LNA feed can be routed through module	+12VDC @ 330mA external LNA feed can be routed through module
^a @ 0 dB optical loss ^b Calculated at 650MHz [†] typical				

Optical Performance Characteristics

	Rack Module 0dB Gain Link Internally generated LNA feed	Rack Module 0dB Gain Link Externally provided LNA feed	OEM Module 0dB Gain Link 1310nm	OEM Module 0dB Gain Link 1550nm
Laser Type	DFB	DFB	DFB	DFB
Optical Wavelength	1310 nm ± 20 nm (1550nm/CWDM options)	1310 nm ± 20 nm (1550nm/CWDM options)	1310 nm ± 20 nm (1550nm/CWDM options)	1550 nm ± 20 nm (1310nm/CWDM options)
Optical Power Output	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)
All measurements at 25°C unless otherwise stated				

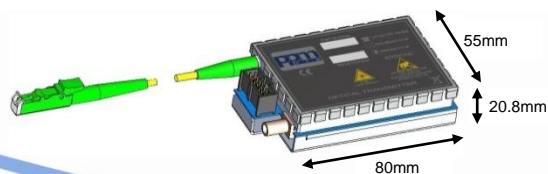
Part Numbers and Options



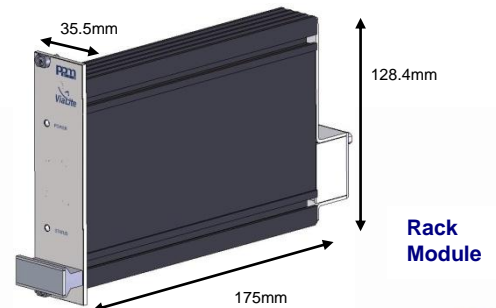
Accessories

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



OEM Module



Rack Module