

## BROADCAST DVB/UHF FIBRE-OPTIC-LINK

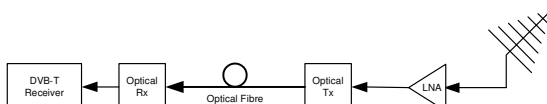
PPM's **ViaLite** broadband, wide dynamic range 470-860MHz Fibre-Optic-Link provides a high performance, high reliability, transparent cross-site connection between RF communications equipment. It is specifically designed for UHF analogue or COFDM digital TV signal transportation.



The ultra-wide dynamic range results in negligible degradation of signals due to noise or inter-modulation effects.

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 wide dynamic range and flat frequency and phase response makes the link ideal for transporting multiple COFDM (Code Orthogonal Frequency Division Multiplexing) carrier sets.

High reliability, comprehensive alarm & status monitoring & wide dynamic range result in a highly flexible product suitable for a wide range of installations.



The use of optical fibre has a number of inherent advantages over conventional coaxial alternatives:

- Low loss - enabling very long path lengths with minimal degradation of carrier-to-noise.
- Lightweight, highly flexible, small diameter cable.
- Frequency response is independent of path length.
- Immunity to electrical interference - the signal is not corrupted by radiated interference.
- Non-conductive - provides electrical isolation.
- Lower cost compared to coaxial cable over long distances

PPM's **ViaLite** product offers particular advantages:

- Ultra-wide dynamic range
- Wideband operation 200MHz to 900MHz
- Operation from 0m to 15km
- Suitable for all modulation formats
- Compact plug-in module
- Front panel status LEDs and rear panel alarm outputs: laser status, received light level

### Complementary PPM ViaLite Products

- OEM module versions
- Bi-directional RS422 optical data modules
- 19" Rack Case
- Dual redundant power supplies
- 1:1 RF Redundancy Switch
- Application specific RF modules e.g. GPS
- Ethernet Link
- Cross-site fibre optic cabling solutions

## ViaLite BROADCAST DVB/UHF - SPECIFICATIONS

### Bandwidth

Bandwidth	<200MHz to >900MHz
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### Gain

RF Link Gain at 0dB optical loss	0dB $\pm$ 3dB Subtract [2 x Optical Loss]dB for >0dB optical loss Optical Losses: Fibre = 0.4dB/km typ., Connectors = 0.5dB per connector typ.
Gain Flatness	+/-1dB
Gain Slope	<0.7dB/36MHz
Gain Stability over Temperature Tx Rx	< +/-3dB over operating range <0.08dB/°C below 40°C typ., <0.1dB/°C above 40°C typ. <0.05dB/°C typ.

### Dynamic Range

Input Third Order Intercept	>+10dBm
Input Power for -40dBc IMD	-10dBm
Input P1dB @ 500MHz	>0dBm
Noise Figure @ 500MHz	<28dB, 0dB optical loss

### User Interface

Input/Output Impedance, VSWR	75 $\Omega$ , $\leq$ 2:1
Power LED	Indicates DC power is applied to the module
Transmitter Status LED	Green: Transmitter laser functioning Red: Transmitter laser degraded
Receiver Status LED	Green: Received light level above threshold (threshold factory set to nominal 20dB optical / 40dB electrical loss) Red: Received light level below threshold
Transmitter Alarm Outputs & Monitors	Current sink "Laser Degraded" Alarm
Receiver Alarm Outputs & Monitors	Current sink "Light Low" Alarm Analogue Received Light Level (RLL) monitor. RLL monitor voltage = 7.75V for a gain of 0dB and reduces by 0.125V per dB of RF link loss due to losses in the optical path.
RF Connector	75 $\Omega$ BNC female
External LNA Supply Voltage	Internal LNA bias connection to RF input of transmitter module. Option of user applied voltage (350mA max.) or internally generated +12V @ 80mA.
Optical Connector options	FC/APC: Suhner FCPC-Z/M-A601 narrow keywidth connector >60dB return loss E2000/APC: Suhner FLSH-2000-A608 >60dB return loss
Monitor & Alarm Interface Rack plug-in module Converter Sleeve	15pin female D-type on 19" rack case backplane 15pin female D-type
Current Consumption	Transmitter <4.5W, Receiver <4W

### Operating Conditions

Absolute Maximum RF Input (RF in)	>+15dBm, 5Vdc
Optical	>60dB return loss. See above for approved connectors. Use with other types may compromise system performance.
Operating Temperature Rack plug-in module	0°C to +40°C
Storage Temperature	-40°C to +70°C

### Optical Characteristics

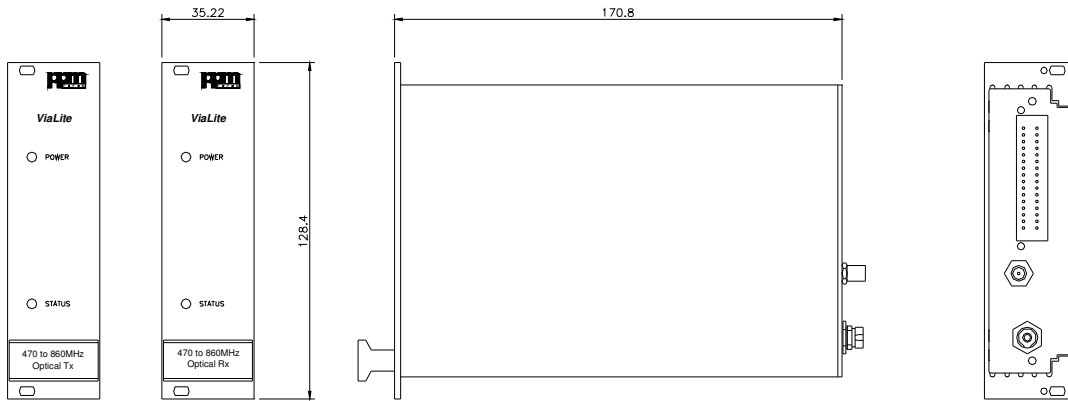
Wavelength	1310+/-20nm
Fibre	Singlemode 9/125, Corning SMF28 or equivalent
Output Power	+4.5dBm/3mW nominal

All parameters specified after 15 minutes warm-up.

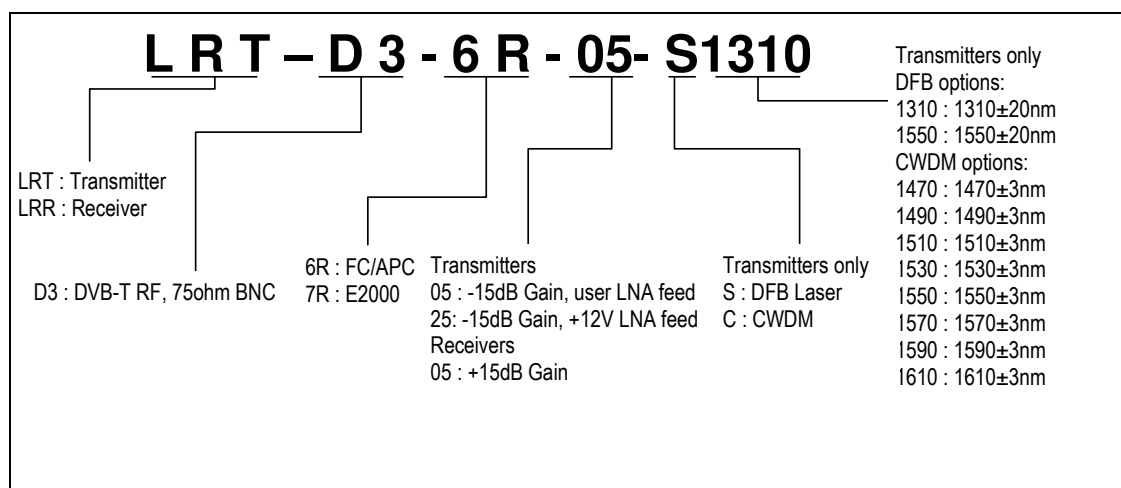
**Physical Format**

Housing Options	Rack Plug-in Module - suitable for Rack Case or Plug-in Converter Sleeve
Supply Voltage Rack Plug-in Module Plug-in Converter Sleeve	+12Vdc from LRK power supply +12Vdc +/-10% from external supply via 2.1mm or D-type connector
Weight Rack plug-in module Plug-in Converter Sleeve	600g 600g + module
Rack Mount Case Suitability	LRK1S, LRK2S

All parameters specified after 15 minutes warm-up.



## Ordering Information



Standard parts available on short lead times:

- LRT-D3-6R-05-S1310
- LRT-D3-6R-25-S1310
- LRR-D3-6R-05

### 19" Rack Case Solutions

Part Number	Description
LRK1S	19" Rack Case 3U for desktop or 19" rack installation. Accommodates up to 8 plug-in modules and 2 mains power supplies.
LRK2S	19" Rack Case 3U for 19" rack installation. Accommodates up to 8 plug-in modules and 2 mains power supplies.
LPS-M	Main Power Supply plug-in for LRK1S or LRK2S.
LPS-R	Reserve Power Supply plug-in for LRK1S or LRK2S.
75004	19" Rack Case, 1U for desktop or 19" rack installation, integral power supply, accommodates 3 plug-in modules.

### Stand alone Solutions

Part Number	Description
75003	Converter sleeve. Converts a single plug-in module for standalone operation.
73502	Power Supply, 12Vdc, with 2.1mm connector for Plug-in Converter Sleeve
LPS-CS	Power Supply, flange mounting, 12Vdc, with 15 pin D connector for Plug-in Converter Sleeve

### Accessories

Part Number	Description
51214	Kit, Masthead Amplifier, Cables and Connectors
51215	Aerial, High Gain for DVB-T
LRS-10	1:1 Redundancy Switch Module
LAC-1	Alarm Concentrator Transceiver Fibre Optic Link module
F6R1/x	FC/APC Patchlead, 2.8mm jacket. Length defined in metres by "x" (1m, 2m, 10m)

## CONTACT US

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