

## ALARM CONCENTRATOR FIBRE-OPTIC-LINK

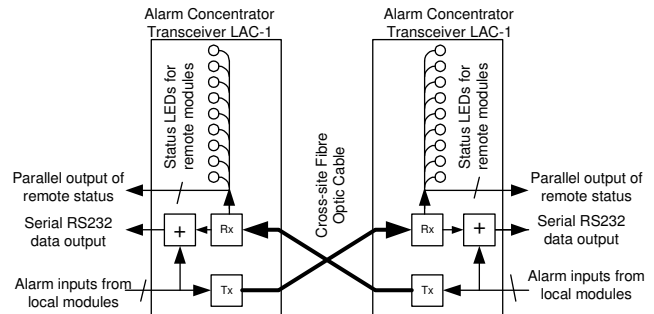
PPM's **ViaLite** Alarm Concentrator Transceiver module allows users to monitor the status of remotely located fibre optic link modules. The status may be monitored visually via front panel LEDs, over a serial data output and also over a parallel data output. This enables PPM **ViaLite** equipment to be fully integrated into an Operations, Maintenance and Control environment or a redundantly switched network.

The module complements the alarm concentrator output connector provided on the LRK1 and LRK2 19" rack case that makes the alarm outputs of the local **ViaLite** modules available to the user.

The Alarm Concentrator Transceiver module occupies position 8 in a **ViaLite** 19" rack shelf. It concentrates all alarms from neighbouring modules within the same rack, and converts them into a serial data stream for transmission over optical fibre to an identical Alarm Concentrator Transceiver module. Here, the data stream is demultiplexed to provide a visual indication of the status of remote modules via front panel LEDs. The remote data stream is forwarded, together with local alarm information, in an RS232 electrical format to external equipment e.g. a PC or other system controller, in response to a poll command on the serial data input.

The remote module status is also made available in parallel at the rear of the 19" rack shelf via a D-sub connector. This allows the system to be integrated into a redundantly switched network when used in conjunction with PPM's Redundancy Switch module.

The Alarm Concentrator modules are bi-directional, so that the status of remote modules can be determined at either end of a cross-site connection. This greatly aids the commissioning and fault location during installation.

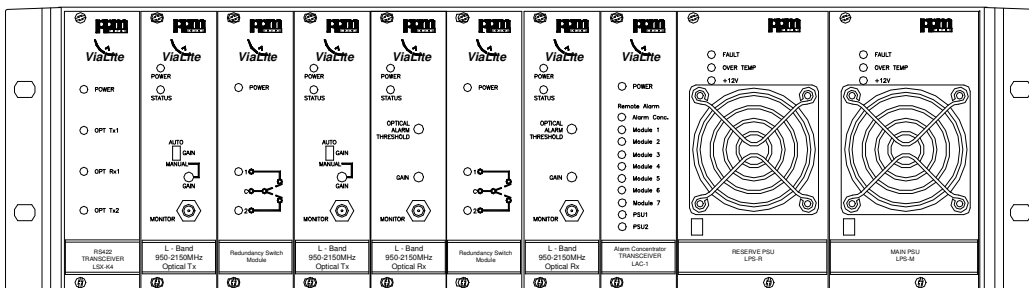


PPM's **ViaLite** Alarm Concentrator offers the following key advantages:

- Visual indication of remote module status e.g. laser fail, low optical carrier etc.
- Parallel output of remote module status, for integration into redundantly switched network
- Serial output of remote module status for interface to PC etc. via RS232
- Operation from 0m to >20km
- Compact plug-in module

### Complementary PPM **ViaLite** Products

- RF Signal modules for RF GPS, L Band, 70/140MHz, Broadband 2kHz-1500MHz and 10MHz-3GHz etc.
- ViaLite 1:1 Redundancy Switch
- 19" Rack Case
- Dual redundant power supplies for maximum availability



## ViaLite ALARM CONCENTRATOR FIBRE-OPTIC-LINK SPECIFICATIONS

Parameter	Value
Serial Data Input/Output	9600 Baud RS232, 8N1 via 15-way D-type Female on 19" Rack Case or Converter Sleeve
Parallel data input from local modules	Compatible with open-collector alarm outputs from up to 7 local signal modules and 2 local PSUs via 19" Rack Case backplane PCB
Parallel data status outputs	Seven open collector/drain outputs representing remote ViaLite module alarms. One open collector/drain output representing remote ViaLite PSU (PSU1 OR PSU2) alarm. One open collector/drain output representing Alarm Concentrator error. This alarm occurs if data from the remote module is not being received, or if there is a fault resulting in incorrect operation of the alarm concentrator. Outputs are accessible via 15-way D-type Female on 19" Rack Case or Converter Sleeve Current sink capability: 50mA/15V
Front Panel Indicator LEDs	"Power" – Alarm Concentrator local supply voltage "Alarm Concentrator" – Confirms that data is being received from remote Alarm Concentrator "Module 1" – Alarm status of remote module 1 "Module 2" – Alarm status of remote module 2 "Module 3" – Alarm status of remote module 3 "Module 4" – Alarm status of remote module 4 "Module 5" – Alarm status of remote module 5 "Module 6" – Alarm status of remote module 6 "Module 7" – Alarm status of remote module 7 "PSU1" – Alarm status of remote Power Supply Module 1 "PSU2" – Alarm status of remote Power Supply Module 2
Current Consumption	<4W

### Operating Conditions

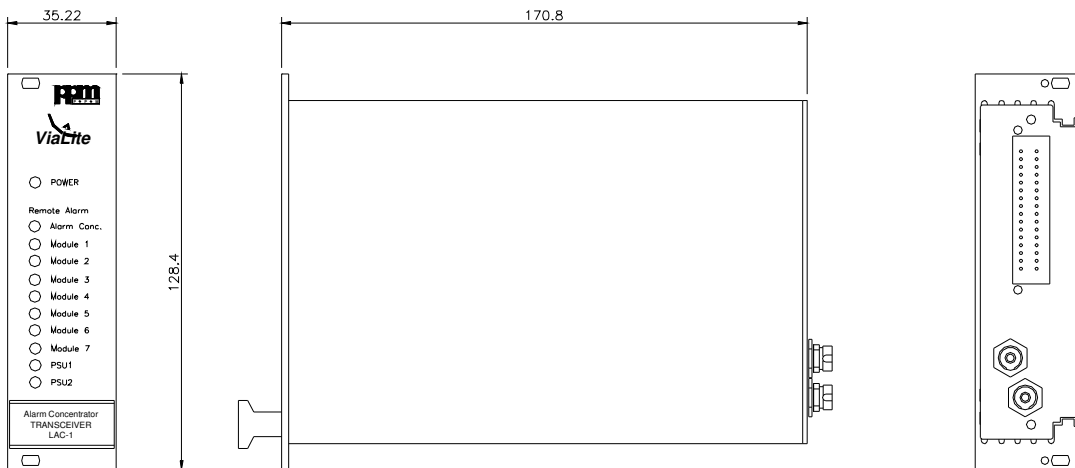
Operating Temperature	0°C to +40°C
Storage Temperature	-40°C to +70°C
Optical	>60dB return loss. Suhner FCPC-Z/M-A601 narrow keywidth connector. Use with other types may compromise system performance.

### Optical Characteristics

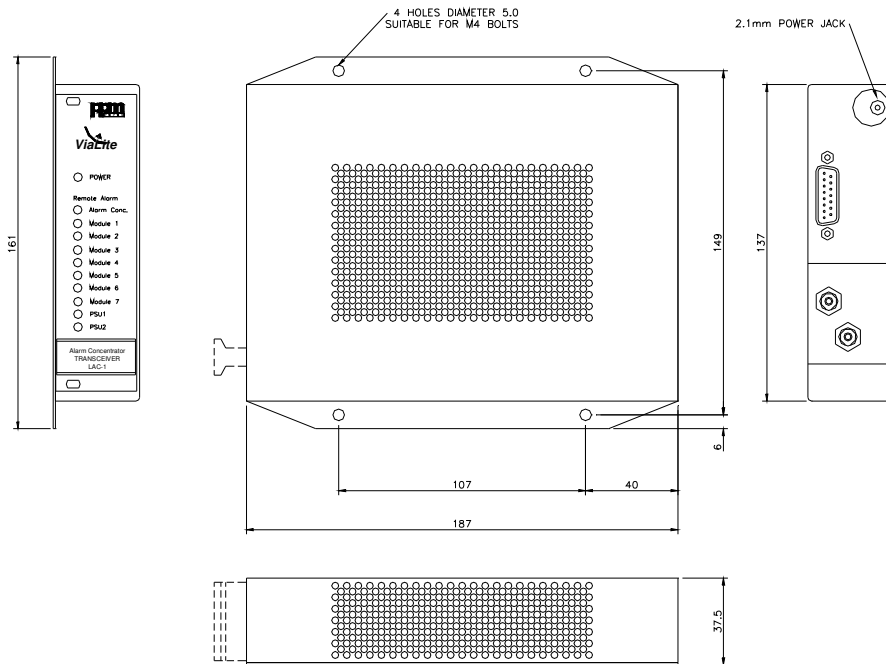
Output Power	-20dBm nominal
Wavelength	1310+/-20nm
Fibre	Singlemode 9/125, Corning SMF28 or equivalent
Optical Connector	FC/APC Narrow key, >60dB return loss, Suhner FCPC-Z/M-A601
Optical Path Length	0m to 20km for 1300nm, single-mode fibre
Optical Power Budget	10dB (Typical fibre losses: Fibre: 0.4dB/km; Connectors: 0.5dB max.)

### 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 connector
Weight Rack plug-in module Plug-in Converter Sleeve	600g 600g + module
19" Rack Case Suitability	LRK1, LRK2



**Figure 1: Plug-in Module**



**Figure 2: Plug-in Module in Converter Sleeve for standalone operation**

## Part Numbering

Part Number	Plug-in Module
LAC-1	•

## 19" Rack Case Solutions

Part Number	Description
LRK1	19" Rack Case 3U for desktop or 19" rack installation. Accommodates up to 8 plug-in modules and 2 mains power supplies.
LRK2	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 LRK1 or LRK2.
LPS-R	Reserve Power Supply plug-in for LRK1 or LRK2.
75004	19" Rack Case, 1U for desktop or 19" rack installation, integral power supply, accommodates 3 plug-in modules.

## Accessories

Part Number	Description
73635	Alarm Concentrator to PC interface cable
LRS-xx	1:1 Redundancy Switch Module. (Substitute 10, 30 or 40 for xx to select connector type. -10 for 50Ω SMA; -30 for 75Ω BNC or -40 for 50Ω BNC)
LRD-x	Broadband Low-loss RF Splitter, 10-2500MHz. (Substitute 1, 3 or 4 for x to select connector type. -1 for 50Ω SMA; -3 for 75Ω BNC or -4 for 50Ω BNC)
F6R1/x	FC/APC Patchlead, 2.8mm jacket. Length defined in metres by "x" (1m, 2m, 5m, 10m)

## CONTACT US

For further details of this or any other product from PPM, please contact us at:

PPM Ltd, 65 Shrivensham Hundred Business Park, Watchfield, Swindon, Wiltshire, SN6 8TY, UK.

Email: [sales@ppm.co.uk](mailto:sales@ppm.co.uk), Tel.: +44 (0)1793 784389 Fax: +44 (0)1793 784391

Web: [www.vialite.co.uk](http://www.vialite.co.uk) or [www.ppm.co.uk](http://www.ppm.co.uk)