

# point2point FIBRE-OPTIC-LINK SYSTEM



PPM's **point2point** system is a highly adaptable and modular Fibre-Optic-Link System ideal for a wide variety of data acquisition applications.

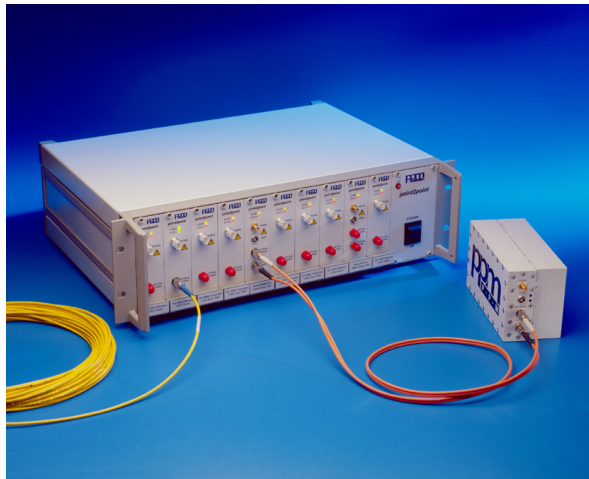
## APPLICATIONS

- Antenna Remoting.
- Secure Transmission (Tempest).
- Pulse power measurements.
- Time and frequency domain monitoring.
- Electrically noisy environments.
- Portable and Transportable applications.
- Signal Distribution.
- IF Links.
- Delay lines.
- DC Measurements.
- OEM Applications.
- High speed serial and parallel digital transmission.

## FIBRE OPTIC LINKS

**point2point** links are available in many formats covering analogue data from DC to >2GHz, and digital data from DC to >1Gb/s. Refer to the table overleaf and individual data sheets for details of the performance of these links.

Many links are available with a built in full duplex RS232 data option, which provides a compact solution for transmission of the user's command or control information in both directions.



## SYSTEM CONFIGURATION

A typical **point2point** link configuration consists of a Transmitter connected to a Receiver via a Fibre Optic Cable. The user can apply an electrical signal to the Transmitter, which converts this to an optical signal for transmission to the Receiver. At the Receiver, the signal is converted back into an electrical signal.

Transmitter and Receiver units can be supplied in Satellite, Shielded Satellite or in Rack Mount Module options.

### Shielded Satellite Module:

The compact Shielded Satellite Module shields the Transmitter or Receiver unit against very high levels of electrical interference. Power is provided from a shielded, rechargeable and removable Battery Pack or from an external DC source.

### Rack Mount Module:

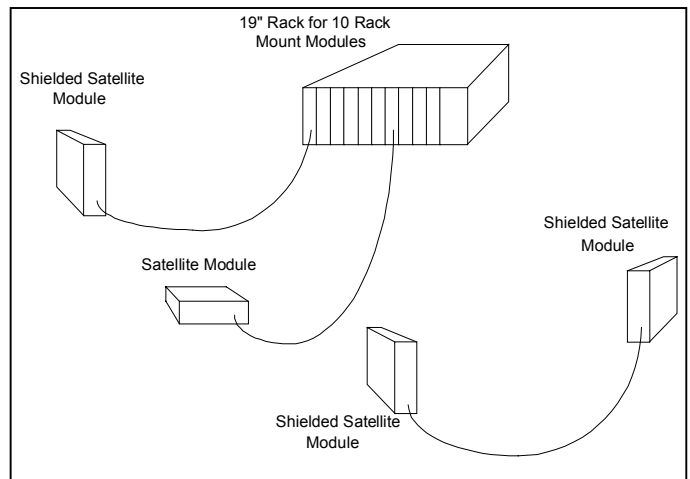
Units are available for mounting in PPM's **point2point** 19" Racks. Up to ten Rack Mount modules may be operated in the same rack. The rack is powered from the mains.

### Satellite Module:

This is a standalone unit, designed for operation at a remote location where environmental and electromagnetic field levels are less demanding. Power may be provided from an external DC source or from a PPM 15V mains power supply unit.

### Miniature Shielded Satellite Module:

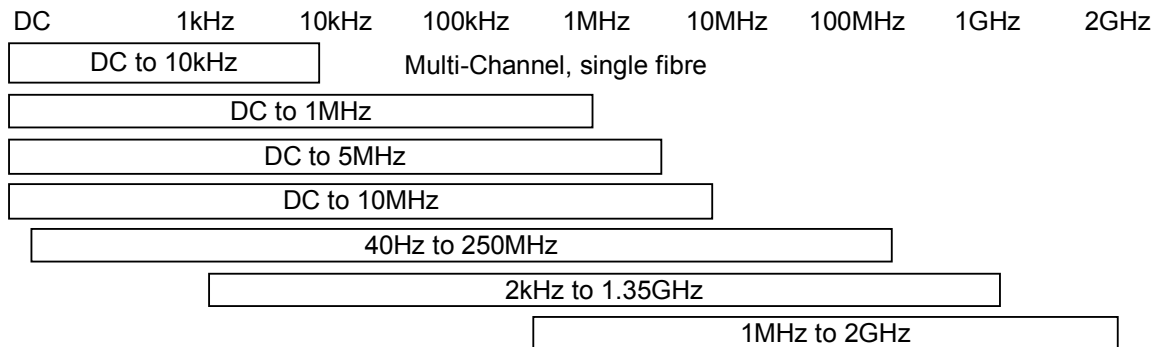
This ultra-compact unit combines the shielding capability of the SSM with space saving design for applications where space is at a premium.



## **point2point FIBRE-OPTIC-LINK SELECTION GUIDE**

### **ANALOGUE LINKS**

A wide range of frequencies are covered by PPM **point2point** analogue links:



### **DIGITAL LINKS**

- Serial Digital:
  - Serial Digital RS422/485 Data Fibre Optic Link.
  - Serial Digital RS232 Data Fibre Optic Link.
- Parallel Digital:
  - Parallel Digital Control & Acquisition Fibre Optic Link.

Please contact PPM for assistance in the selection of the most appropriate link for your application.

### **BENEFITS**

The use of optical fibre has many inherent advantages over conventional copper based alternatives:

- Immunity to electrical interference, so the signal is not corrupted by radiated interference.
- Fibre is non-conductive, thus allowing intrinsically safe monitoring of equipment at hazardous voltages.
- It uses highly flexible and small diameter cable.
- Fibre is low loss, enabling very long path lengths with negligible degradation of signal-to-noise.

In addition, PPM's **point2point** system offers the following particular benefits:

- Modular concept for maximum flexibility.
- Multiple channel 19" Rack Case for up to 10 plug-in modules.
- Standard and Heavy Duty Fibre Optic Cable options.
- Rack Mount or compact Satellite and Shielded Satellite Module format options.
- Shielded Satellite offers very high electrical shielding

### **FUTURE PRODUCT PLANS**

PPM's **point2point Controller Unit** may be plugged into the Rack to allow front panel or IEEE/GPIB/RS232 control of remotely located modules via the local Rack Mount Module.

In a development of PPM's EMC Camera Systems, **point2point Rack Mount camera receiver/controller modules** will be introduced to enable multiple cameras to be controlled from a single controller.

### **CONTACT US**

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

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PPM offers a wide range of products specifically for use in EMC Testing. These include fibre optically coupled **EMC Camera Systems**. The Camera Heads are shielded for operation in very high electro-magnetic field strengths of up to and beyond 1000V/m, and frequencies in excess of 18GHz. These allow the user to monitor Equipment Under Test (EUT) from a safe location, with none of the interference breakthrough which compromises conventional systems.



**Test & Measurement Fibre-Optic-Link Systems** allow the user to transmit information from sensors in high electro-magnetic field environments or high voltage platforms. The information is sent over optical fibre, with none of the breakthrough or signal impairment seen with coaxial cable. The systems provide full remote control of the transmitter gain, input selection, input impedance etc. This enables the user to set up the link optimally for his particular measurement conditions.



The **point2point** family of fibre optic data links provide the EMC engineer with the ability to fully decouple the EUT and measurement antennae from the instrumentation, allowing its use in a variety of instrumentation systems and electromagnetic environments. Available in rack mount, satellite or shielded satellite transmit and receive modules, the first generation are DC-1MHz, DC-5MHz and DC-10MHz units to be followed shortly by 250MHz, 1.35GHz, 2GHz, Serial Digital (RS485/422, RS232, TTL) and Multi-channel analogue systems.



A range of high reliability, solid state, high power microwave **amplifiers** permit the generation of the high RF power in EMC test chambers. Bandwidths extend from 80MHz to 8GHz and higher. Powers from 1W to 1kW are available.



**High power, non-inductive bulk ceramic resistors** make excellent RF loads and matching components for use in EMC test facilities.



Finally, a comprehensive range of **Field Sensors, Current Probes and associated accessories** is available to complement the above products.

