



Description

Precision's PEM100 series managed media converter transmits 10/100Mbps Ethernet data over multi-mode or single-mode fibre-optic cable over distances of up to 25km or more. The PEM100 allows management via its web interface, SNMP, Telnet and console with a variety of flexible features. The PEM100 chassis is also equipped with a management card which can be used as master or slave with up to 3 slave systems per master.

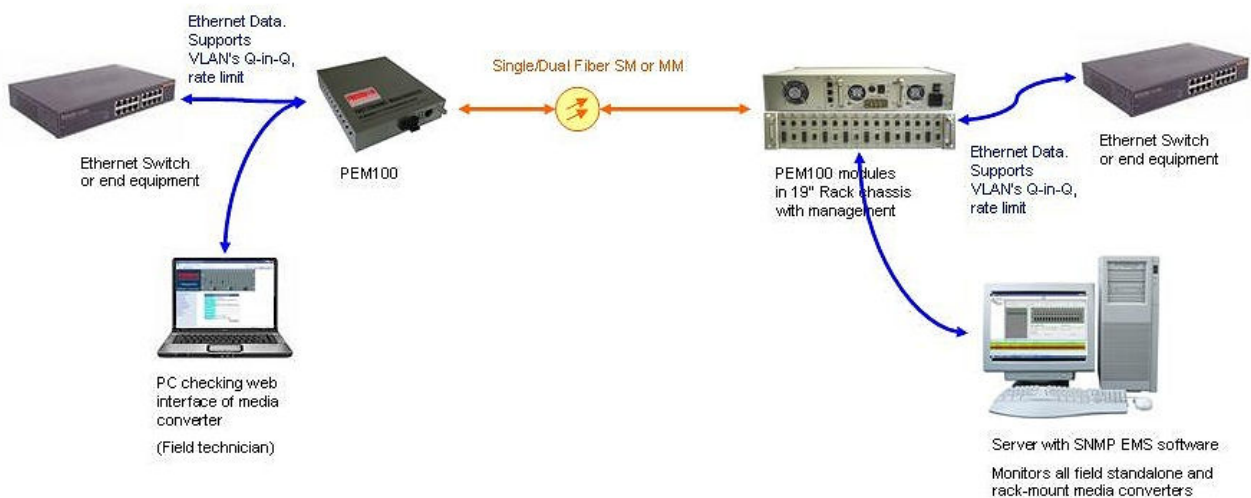
The PEM100 series is field-hardened with a telco-grade MTBF (longer than 50000 hours) for operation in harsh field conditions. The PEM100 series is available as standalone metal cased units with internal power supplies, which can also be unplugged and rack-mounted for high density applications. The PEM100 range is also available as 10/100/1000 (PEM1000).

Key Features

- Field hardened media converter with high MTBF > 50000 hours
- Management via Web, SNMP, Telnet and console
- Powerful adjustable data rate limiting in 64K steps
- Supports Q-in-Q, double VLAN tags, IEEE 802.1Q VLAN's and IEEE802.3x flow control
- Reports flow statistics, pre-alarms, real-time port status, alarm logs
- Different user level logins
- Ethernet port speed auto detection
- Duplex or Simplex SC Fibre connector options
- Low delay < 0.9us pass through, <9.6us store & forward
- Low BER < 1E-9
- Hot-swap 19" rack-mount card or standalone units
- Standalone units supplied with internal switch-mode power supply for either:
 - Mains 110-220V AC operation, or
 - Universal low power DC/AC operation from 12V to 48V DC or AC

Typical applications

Typical application: Managed 100Mbps fiber network



- FTTx managed networks
- Railway / Freeway monitoring networks
- IP camera networks
- Security networks (access control)

Optic

Optic wavelength	Duplex model (-D/-A) Simplex model: (-S)	1310nm on 2 fibres 1310nm & 1550nm	
Optic transmit power	Multi-mode: Single-mode:	-16 dBm typ. +/- 4dB -11 dBm typ. +/- 4dB	[Note: long range models up to 120km available]
Optic receive sensitivity	Multi-mode: Single-mode:	-30 dBm -28 dBm	
Optic budget	Multi-mode: Single-mode:	12 dB min. 16 dB min.	
Optic Connector	SC Duplex (-D/-A) SC Simplex (-S)		

Ethernet

Ethernet Connector	RJ45	
Speed	10/100Mbps autoneg	
Standards	IEEE 802.3 IEEE 802.3u IEEE 802.3x IEEE 802.1q IEEE 802.1p IEEE 802.1d	10Base-T 100Base-TX/FX Flow control VLAN Priority QoS Spanning Tree
Conversion method	Media conversion	Store & Forward / pass
Time delay	Store & forward Pass through	9.6 us 0.9 us
Filtering rate	At 100Mbps	148800 pps
MAC table	Store & Forward only	1K entries
Max frame size	1600 bytes	
Buffer capacity	256K bits	

System

BER	1E-9 max
MTBF	> 50000 Hr

Dimensions

Standalone unit	157mm x 128mm x 32mm
Rack-mount card	2U, 1 slot (of 16)

Power

Standalone unit	Internal Mains supply	110-220V AC 50-60Hz	5 Watt max
	Internal 24V AC supply	24V AC 50-60Hz	5 Watt max (210mA)
	Internal 12V DC supply	12V DC	5 Watt max (420mA)
Rack-mount card	Rack power		

Environmental

Storage temperature	-40°C to +70°C
Operating temperature	0°C to +60°C
Humidity	0 to 95% (non cond)




Quality standards

ISO9001
CE Mark
FCC class A

Management

Methods	Web, SNMP, Telnet, Console
User access	Graded levels

Ordering information

Model	Function	Fibre	Description
PEM100 Ethernet Media Converters, Duplex Fibre			
PEM100A-2MM-SA220		2xMM	10/100Base Managed Ethernet Media converter, MM, 2KM, SC, 2-Fiber, Standalone, Internal Power Supply 110-220V AC 50-60Hz Type-M 15A plug. Removable card is rack-mountable in 16-slot chassis.
PEM100D-2SM-SA220		2xSM	10/100Base Managed Ethernet Media converter, SM, 25KM, SC, 2-Fiber, Standalone, Internal Power Supply 110-220V AC 50-60Hz Type-M 15A plug. Removable card is rack-mountable in 16-slot chassis.
PEM100 Ethernet Media Converters, Simplex Fibre			
PEM100S1-SM-SA220 PEM100S2-SM-SA220 (PAIR)		1xSM	Pair 10/100Base Managed Ethernet Media converter, SM, 25KM, SC, Single-Fiber, Standalone, Internal Power Supply 110-220V AC 50-60Hz Euro plug. Removable card is rack-mountable in 16-slot chassis.
Ethernet Media Converter Rack			
PEMR216-DS220	Rack		19" Rack with 16 slots for Ethernet cards, 2U, Management card (NMS) with dual power supply for 110-220V AC 50-60HZ. Type-M 15A Plug

Note: PEM100S Simplex version must be used as pairs.

Other models available on request (power supply, optic power)

Data Sheet Version

1.1

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