

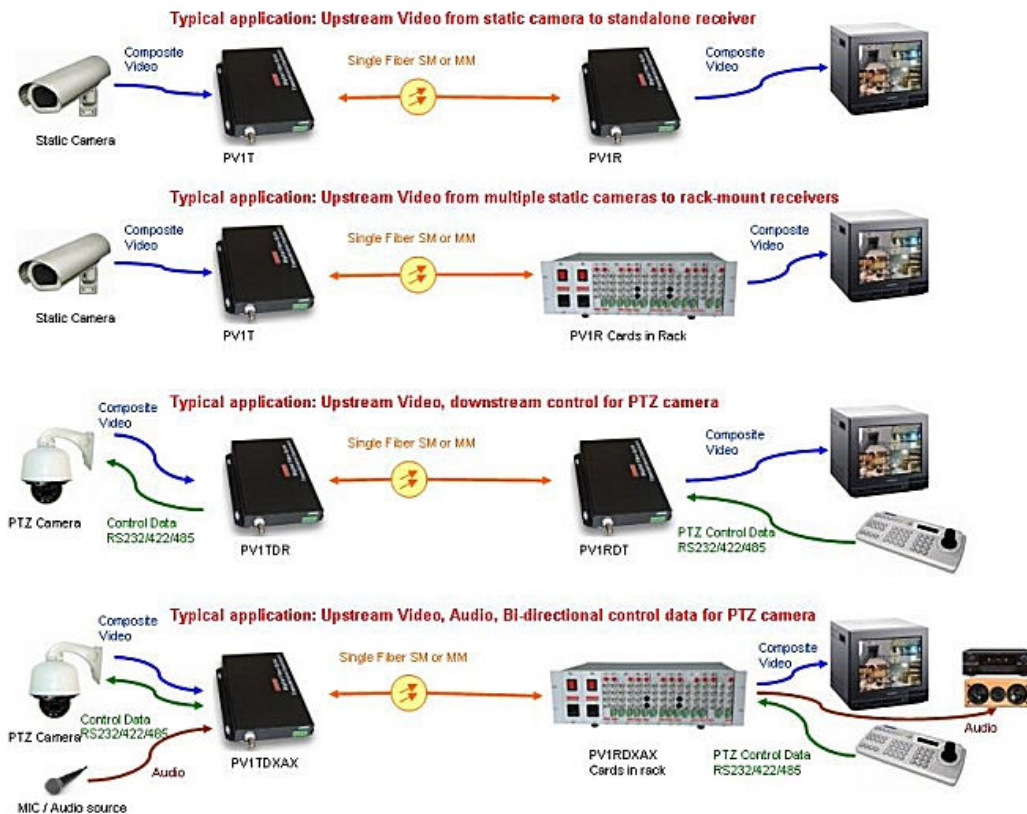
## Description

Precision's PV1 series transmits video, audio, data and contact closure signals over multi-mode and single-mode fibre-optic cable over distances of up to 20km. The PV1 series sends video using 8-bit digital uncompressed full-D1 encoding for the best possible video quality under any condition. The PV1 can also send and receive data, audio and contact closure signals on the same simplex optic fibre. The PV1 is field-hardened for operation in harsh field conditions with very wide temperature swings. The PV1 series is available as standalone units, or rack-mount cards for high density applications.

## Key Features

- 1-Channel 8 Bit uncompressed digital encoding
- Compatible with NTSC, PAL & SECAM video
- 1xBNC Video Connector
- 1x FC Optical Connector, simplex fibre
- Optional Audio, Data, and Contact Closure
- Manchester/Bi-phase, RS-232, RS-422, RS-485 (2 & 4 wire) Data (optional)
- 600 Ohm / 10k Ohm Unbalanced Audio (optional)
- High optic budget 12dB for multi-mode and 22dB for single-mode fibre
- Hot-swap 19" rack-mount card or standalone units
- Supplied with universal switch-mode power brick

## Typical applications



## Optic

Optic wavelength	Upstream:	1310nm
	Downstream:	1550nm
Optic transmit power	Single-mode:	-3dBm typ. +/- 5dB
	Multi-mode:	-13dBm typ. +/-5dBm
Optic receive sensitivity		-24dBm min
Optic budget	Single-mode:	22 dB
	Multi-mode:	12 dB
Optic Connector		FC

## Video

Video formats	PAL, NTSC, SECAM	1-channel composite
Input bandwidth	5Hz – 8MHz	
Sampling resolution	8-bit uncompressed	Full D-1 (720x576) [576p]
BNC Input	1.0V p-p 75 Ω	1 connector
Maximum input	2.0V p-p 75 Ω	
SNR	>63dB (quantified)	
Differential phase	≤ 1°	
Differential gain	≤ 1%	

## Data (Optional)

Data channels	1 (certain models only)
Data formats	RS-232 (3-wire) option RS-422 (4-wire) RS-485 (2-wire)
Data rate	180Kbps max
Termination	120Ω
Data Direction	Bi-directional or Downstream only depends on model
Connector	RJ-45

## Audio (Optional)

Audio channels	1 (certain models only)
Sampling rate	48KHz
Sampling resolution	16-bit uncompressed
Input impedance	600Ω
Input bandwidth	10Hz – 20KHz
SNR	>70dB (quantified)

## System

BER	10 E-9 max
MTBF	> 100000 Hr

## Dimensions

12V standalone	179mm x 130mm x 29mm
Rack-mount card	3U, 1 slot (of 16)

## Power

12V standalone	Universal AC adapter	110-220V AC 50-60Hz	12V DC 24Watt max
Rack-mount card	Rack power		24Watt max





































## Environmental

Storage temperature	-40°C to +85°C
Operating temperature	0°C to +70°C
Humidity	0 to 95% (non cond)



















## Quality standards

ISO 9001 certified
CE Mark
FCC certified

## Ordering information

Model	Function	Fibre	Description
<b>Video Transmitters and Receivers, Multi-mode</b>			
PV1T-MM-SA12		1xMM	1ch video TX, MM, 5KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1R-MM-SA12		1xMM	1ch video RX, MM, 5KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1R-MM-RM		1xMM	1ch video RX, MM, 5KM, FC, Single Fiber, Rack-mount, powered from rack
<b>Video Transmitters and Receivers, Single-mode</b>			
PV1T-SM-SA12		1xSM	1ch video TX, SM, 20KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1R-SM-SA12		1xSM	1ch video RX, MM, 5KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1R-SM-RM		1xSM	1ch video RX, MM, 5KM, FC, Single Fiber, Rack-mount, powered from rack
<b>Video Transmitters and Receivers with return data for PTZ control, Multi-mode</b>			
PV1TDR-MM-SA12	 	1xMM	1ch video TX + Data RX, MM, 5KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1RDT-MM-SA12	 	1xMM	1ch video RX + Data TX, MM, 5KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1RDT-MM-RM	 	1xMM	1ch video RX + Data TX, MM, 5KM, FC, Single Fiber, Rack-mount, powered from rack.
<b>Video Transmitters and Receivers with return data for PTZ control, Single-mode</b>			
PV1TDR-SM-SA12	 	1xSM	1ch video TX + Data RX, SM, 20KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1RDT-SM-SA12	 	1xSM	1ch video RX + Data TX, SM, 20KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1RDT-SM-RM	 	1xSM	1ch video RX + Data TX, SM, 20KM, FC, Single Fiber, Rack-mount, powered from rack.
<b>Video Transmitters and Receivers with return data and Bi-directional Contact closure, Multi-mode</b>			
PV1TDRCX-MM-SA12	  	1xMM	1ch video TX + Data RX + Contact T&RX, MM, 5KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1RDTCX-MM-SA12	  	1xMM	1ch video RX + Data TX + Contact T&RX, MM, 5KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1RDTCX-MM-RM	  	1xMM	1ch video RX + Data TX + Contact T&RX, MM, 5KM, FC, Single Fiber, Rack-mount, powered from rack.
<b>Video Transmitters and Receivers with return data and Bi-directional Contact closure, Single-mode</b>			
PV1TDRCX-SM-SA12	  	1xSM	1ch video TX + Data RX + Contact T&RX, SM, 20KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1RDTCX-SM-SA12	  	1xSM	1ch video RX + Data TX + Contact T&RX, SM, 20KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1RDTCX-SM-RM	  	1xSM	1ch video RX + Data TX + Contact T&RX, SM, 20KM, FC, Single Fiber, Rack-mount, powered from rack.

**Ordering information (continued)**

Model	Function	Fibre	Description
<b>Video, Audio and Data Transmitters and Receivers, Multi-mode</b>			
PV1TAXDX-MM-SA12	  	1xMM	1ch video TX + Audio T&RX + Data T&RX, MM, 5KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1RAXDX-MM-SA12	  	1xMM	1ch video RX + Audio T&RX + Data T&RX, MM, 5KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1RAXDX-MM-RM	  	1xMM	1ch video RX + Audio T&RX + Data T&RX, MM, 5KM, FC, Single Fiber, Rack-mount, powered from rack.
<b>Video, Audio and Data Transmitters and Receivers, Single-mode</b>			
PV1TAXDX-SM-SA12	  	1xSM	1ch video TX + Audio T&RX + Data T&RX, SM, 20KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1RAXDX-SM-SA12	  	1xSM	1ch video RX + Audio T&RX + Data T&RX, SM, 20KM, FC, Single Fiber, Standalone 12V DC with Mains adapter for 110-220V AC 50-60Hz Type-M 15A Plug.
PV1RAXDX-SM-RM	  	1xSM	1ch video RX + Audio T&RX + Data T&RX, SM, 20KM, FC, Single Fiber, Rack-mount, powered from rack.
<b>19 Inch Rack</b>			
PVR316-DS220	NA	NA	19" Rack with 16 slots for video, audio, data, contact cards, 3U, with dual power supply for 110-220V AC 50-60HZ. Type-M 15A Plug

**Note: Function and fiber type must be the same for transmitter and receiver to work. PV1 series is fully compatible with mini PVM1 series.**

Data Sheet Version

1.5

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