



Single Channel FM Video System



FEATURES:

- Surface Mount Technology (SMT) for High Reliability and Repeatability
- Compact Modules and Card Units
- Laser Based Back-Biased Photo Detection Circuitry for Stable Optical Output Over Full Temperature Range (Singlemode)
- 10MHz Video Bandwidth
- Meets EIA RS-170, RS-343A
- Frequency Modulated (PFM) Transmission
- Input Voltage Range: 12VDC-35VDC, 9VAC-24VAC (Modules)
- SpectraSmart™ Compatible
- Meets NEMA TS1/TS2 and Caltrans Specifications
- Utilizes Internal Switching Power Supplies
- Meets RS-250C Transmission Requirements
- Compatible with All NTSC, PAL, or SECAM Systems
- LED Status Indicators Provide Rapid Indication of Critical Operating Parameters
- Automatically Resettable Solid-State Current Limiters on All Power Lines: Provides Equipment Protection
- Wide Optical Dynamic Range: Optical Attenuators are Never Required

DESCRIPTION:

The Series 140 is a Frequency Modulated (PFM) state-of-the-art fiber optic video system that transmits and receives a real time video signal over one multimode or singlemode fiber. PAL, SECAM or NTSC formats, in B&W or color, are seamlessly transmitted distances of up to 6Km (multimode) and 100 Km (singlemode). All Meridian products requires no user adjustments & features superior quality and performance. The capabilities of the Model 140 are enhanced by its compatibility with Meridian's PC based SpectraSmart™ Network Management and Diagnostic software system. See the SpectraSmart™ brochure for more details.

CONFIGURATIONS:

The 140 product family is available in both stand-alone modules and rack mount cards. The cards can be installed in all of Meridian's card chassis, desk chassis and 19" racking frames. This system can be configured in either star (module to rack) or trunking (rack to rack) configurations. The Series 140 is compatible with the Series 190 triple transmitter and receiver cards for high-density applications.

APPLICATIONS:

Security and Surveillance
Military Communications
Intelligent Transportation System (ITS)

SPECIFICATIONS:

Video

Format	NTSC, PAL, SECAM
Voltage/Impedance	1 Vp-p, 75 Ohm, 1.5 Vp-p max.
Bandwidth	5 Hz to 10 MHz @ -3 dB
Differential Gain	<2% typical
Differential Phase	<1.5° typical
SNR	67 dB weighted*
Return Loss	>30 dB
Field Tilt	<0.5% max.
Carrier Frequency	70 MHz

Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	ST™, FC
Power	2 Pin Terminal Blocks

Power**

Transmitter Card	2 W
Transmitter Module	80 mA @ 24 VAC
Receiver Card	2 W
Receiver Module	90 mA @ 24 VAC

Indicator

Module (Bi-Color LED):	
Green	Video Sync Present
Red	Video Sync Absent
Off	Absence of Power
Rack Card (LED):	
Red	Power On

Physical

Dimensions:	
Module***	90 mm (3.5") L, 60 mm (2.3") W
	25 mm (1") H
Card	160 mm (6.3") L, 20 mm (0.8") W
	100 mm (4") H

Weight:	
Module	858 g (3 oz.)
Card	450 g (16 oz.)
Number of Rack Slots	One

Environmental

Operating Temperature	-40°C to +74°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

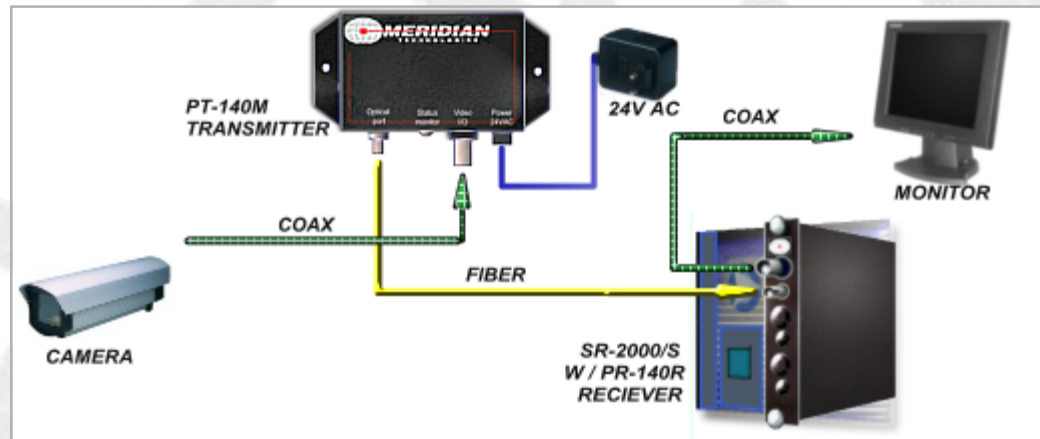
Quality

MTBF	>290,000 hours @ Ground Fix
	35 degree Celsius per MIL217F

* As per RS-250C, measured @ 1Km (multimode), @ 10Km (singlemode)

** Due to variations of drivers and diagnostic options power shown at maximum measurements

*** Add 30mm to include mounting flanges



OPTICAL:

Fiber Type/Size (um)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)
Multimode* (SLED)						
62.5/125	-13	-33	20**	850	ST	39
62.5/125	-16	-33	17**	1300	ST	39
Singlemode (Laser)						
9/125	-7***	-35	28	1310	ST, FC	41
9/125	-10***	-35	25	1550	ST, FC	41

* Distance is limited to fiber loss, splices and fiber bandwidth

** For 50/125µm fiber, subtract 3dB

*** Higher output lasers available

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