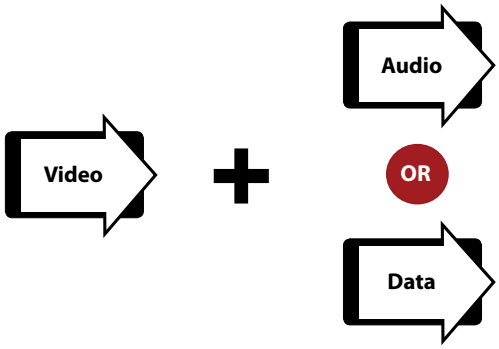
MERIDIAN TECHNOLOGIES

SERIES 160

FM Video with One Channel



FEATURES:

- Surface Mount Technology (SMT) for High Reliability and Repeatability
- Hot Swappable Cards
- Laser Based Back-Biased Photo Detection Circuitry for Stable Optical Output Over Full Temperature Range (Singlemode)
- ST™, FC Optical Connector
- 7MHz Video Bandwidth
- 10Hz to 20KHz Audio Bandwidth
- DC to 300Kb/s Data Rate
- Meets EIA RS-170, RS-343A
- Frequency Modulated (FM) Transmission
- SpectraSmart™ Compatible
- Meets NEMA TS1/TS2 and Caltrans Specifications
- Utilizes Internal Switching Power Supplies
- Meets RS-250C Transmission Requirements
- Compatible with AII 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 160 is a Frequency Modulated (FM) state-of-the-art fiber optic video system that transmits and receives a real time video signal plus high fidelity audio or data signals 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). Available formats are Balanced/Unbalanced Audio, GenLock, Manchester, Biphase, RS-232D, RS-422A, 4-20mA Current Loop, TTL, and Contact Closure. The capabilities of the Model 160 are enhanced by it's compatibility with Meridian's PC based SpectraSmart™ Network Management and Diagnostic software system.SpectraSmart™ supervises the operating parameters of the transmission system such as status on video levels, sync, FM carrier detect, voltage, temperature, optical levels, etc., and external equipment which are attached to the Meridian equipment. See the SpectraSmart™ brochure for more details.

CONFIGURATIONS:

The Series 160 is available as rack mount cards that can be installed in all of Meridian's card chassis and 19" racking frames. The Series 160 can be converted to module by installing it in the SR-500 card chassis. This system can be configured in either star (module to rack) or trunking (rack to rack) configurations. This product requires no user adjustments and features superior quality and performance.

APPLICATIONS:

Security and Surveillance
Distance Learning
Video Teleconferencing

SPECIFICATIONS:

Video

Format	NTSC, PAL, SECAM
Voltage/Impedance	1 Vp-p, 75 Ohm, 1.5 Vp-p max.
Bandwidth	5 Hz to 7 MHz @ -3 dB
Differential Gain	<2% typical
Differential Phase	<1.5° typical
SNR	65 dB weighted*
Return Loss	>30 dB
Field Tilt	<0.5% max.
Carrier Frequency	70 MHz

Audio

I/O Impedance	600 Ohm, 10 kOhm, 47 kOhm
	Balanced/Unbalanced
I/O Level	-6 to +6 dBm
Frequency Responce	10 Hz to 20 KHz
THD	<1%, 1 KHz @ max modulation
SNR	>60 dB (weighted)*

Data

Formats	RS-232D, RS-422A, GenLock,
	Manchester, Biphase, 4-20 mA
	Current Loop, TTL,
	Contact Closure
Rate	DC to 300 Kb/s
Bit Error Rate	10^{-9} *
Carrier Frequency	9.3 MHz

Connectors

Video	75 Ohm BNC (Gold Center Pin)
Audio	DE-15 Female
Data	DE-15 Female
Optical	ST™, FC
Power	2 pin Terminal Block

Power**

Card	2.5 W
Module	100 mA @ 24 VAC,
Adapter for SR-500/S	Model WP-24

Indicators (LEDs)

Green	Video,Audio,
	Data Activity
Red	Power On

Physical

Dimensions:	
Module (w/SR-500)	181 mm (7.15") L, 24 mm (.95")W
	132 mm (5.20") H
Card	160 mm (6.3") L, 20mm (0.8") W
	100 mm (4") H
Weight:	
Module (w/SR-500)	900 g (32 oz.)
Card	450 g (16 oz.)
Number of Rack Slots	One

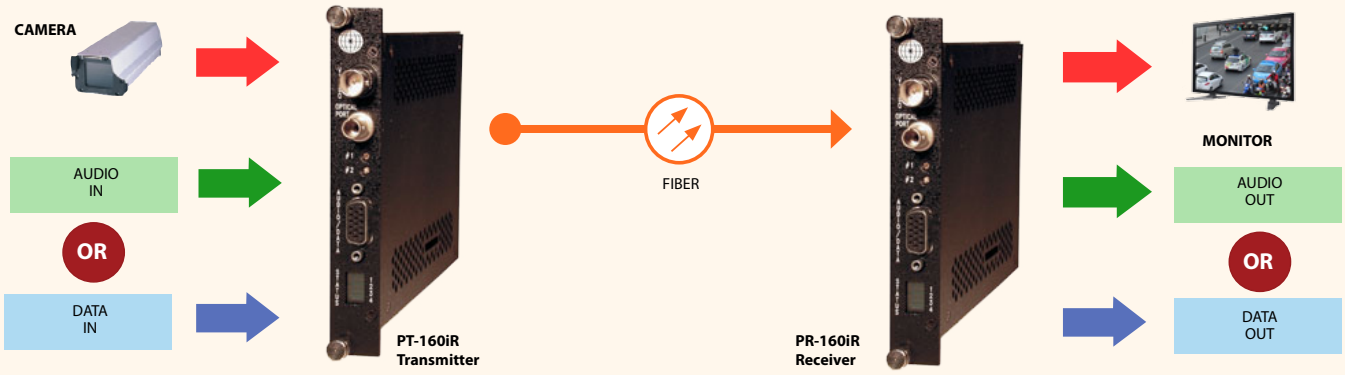
Enviromental

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

Quality

MTBF	>210,000 hours @ Ground Fix
	35°C per MIL217F

* *Measured @ 1Km (multimode), @ 10Km (singlemode)*
** *Due to variations of drivers and diagnostic options power shown at maximum measurements*



OPTICAL:

Fiber Type/Size (um)	Optical Output (dBm)	Reciever Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)
Multimode* (SLED)						
62.5/125	-13	-34	21**	850	ST	39
62.5/125	-16	-34	18**	1300	ST	39
Singlemode (Laser)						
9/125	-7***	-36	29	1310	ST, FC	41
9/125	-10***	-36	26	1550	ST, FC	41

* *Distance is limited to fiber loss, splices and fiber bandwidth*
** *For 50/125µm fiber, subtract 3dB*
*** *Higher output lasers available*

Meridian Technologies Inc.
700 Elmont Road. •Elmont, NY 11003 • 516. 285. 1000 • FAX 516. 285. 6300 • E-mail sales@meridian-tech.com
Visit our web side: www.meridian-tech.com or www.meridian-tech.tv