



INSTALLATION AND OPERATION MANUAL

FVTRD

10-BIT DIGITAL BI-DIRECTIONAL VIDEO OR VIDEO SYNC + BI-DIRECTIONAL DATA

The FVTRD(M)(S)1 supports simultaneous transmission of short-haul quality 10-bit bi-directional digital video or video sync plus bi-directional data over one multimode or single mode optical fiber. The module is universally compatible with major CCTV camera manufacturers and supports RS232, RS422 and 2 or 4-wire RS485 data interfaces, and most major data protocols. Plug-and-play design ensures ease of installation and no electrical or optical adjustments are ever required. Bi-color (Red/Green) LED indicators are provided for rapidly ascertaining equipment operating status. These units are interchangeable between stand-alone or card mount configurations. See **Figure A** on **Page 5** for installation instructions.

Each Data Channel is configured for the electrical interface by means of the “DATA SELECT” switch on the front panel. **Figure 4** on **Page 3** illustrates the switch settings to set the type of data for each channel.

Figure 5 on **Page 4** illustrates the specific data connections for RS232, 2-Wire RS485 and RS422/4-Wire RS485. (This last data connection also applies to Manchester & Bi-Phase data transmission.) It also illustrates the electrical connections between the “Customer Equipment” and the FVTRD.

See **Figures 1 – 5** for complete installation details.

FIGURE 1 – FVTRD TRANSCEIVER

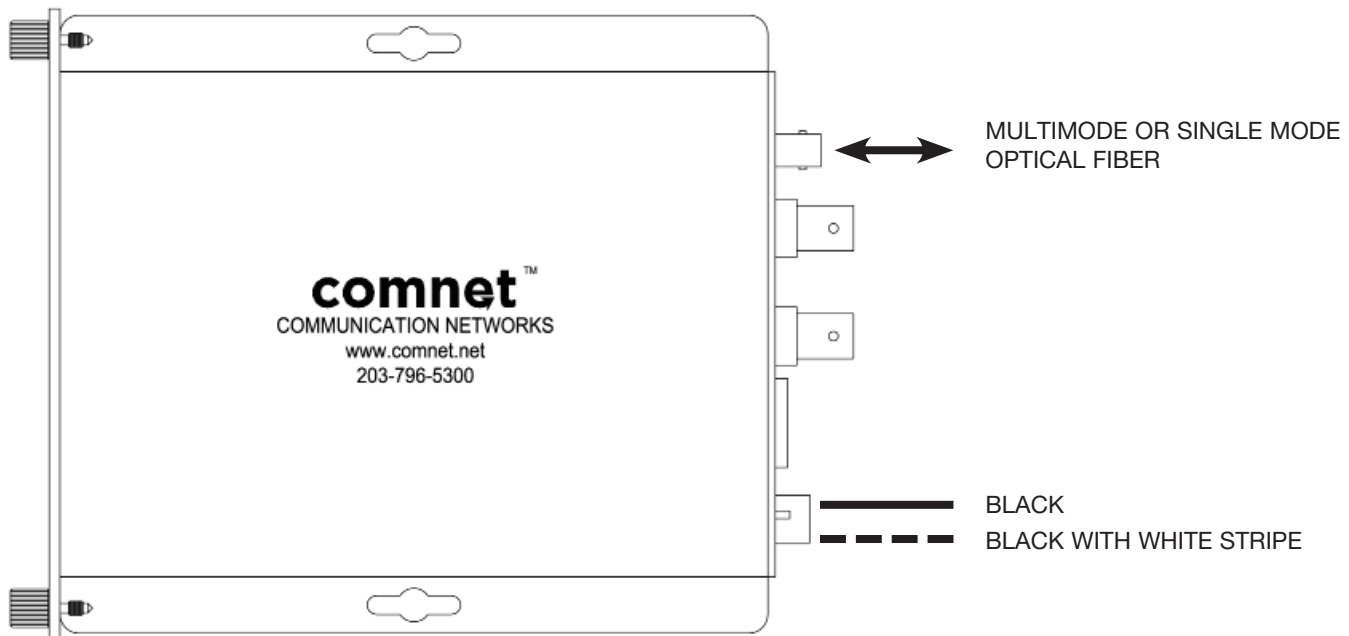


FIGURE 2 – FVTRD TRANSCEIVER

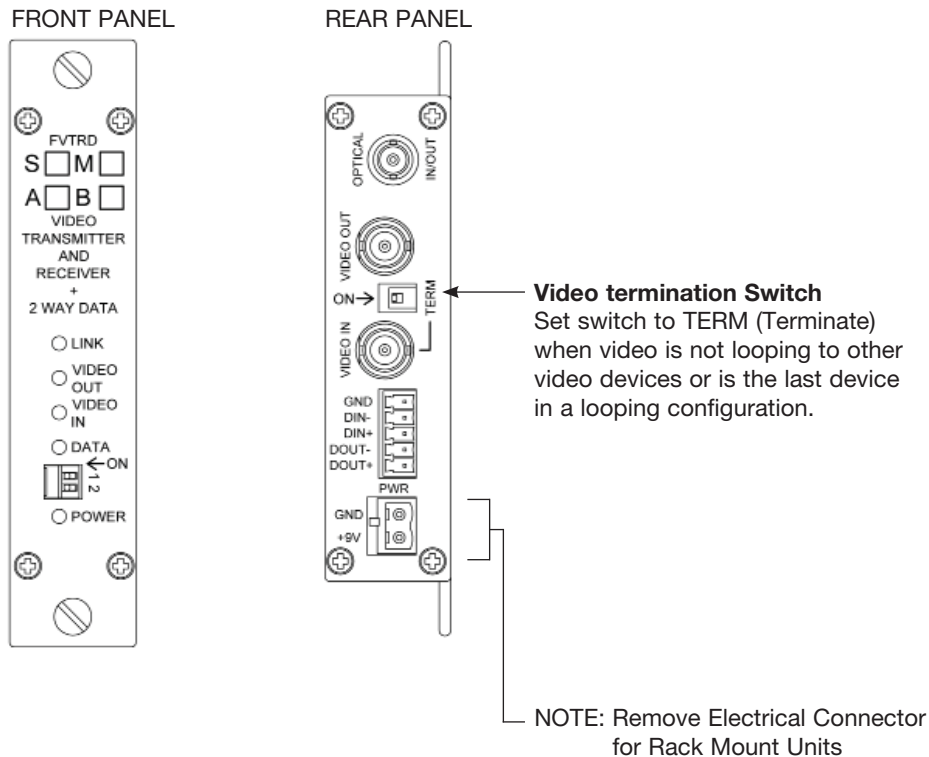


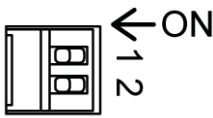
FIGURE 3 – LED INDICATORS

	LINK	VIDEO IN	VIDEO OUT	DATA	POWER
GREEN	Communication link has been established over optical fiber	An active video signal is present on the BNC connector.	An active video signal is present on the BNC connector.	An active data signal is present on the pins of the data connector.	Unit powered up
RED	Communication link has not been established.	No video input signal	No video output signal	–	–
OFF	Unit powered down				

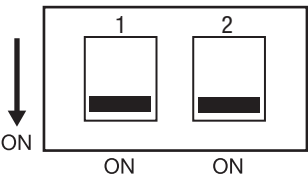
FIGURE 4 – SWITCH POSITIONS

The mode for each data channel is configured using a pair of switches on the front panel of the unit.

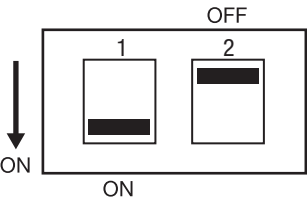
Front Panel



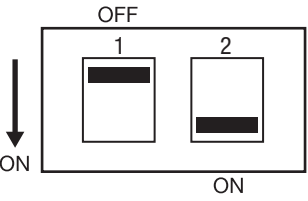
1) RS-232 DATA



2) RS-422, BI-PHASE or MANCHESTER DATA



3) RS-485, 2-WIRE SENSORNET DATA



4) RS-485, 4-WIRE DATA

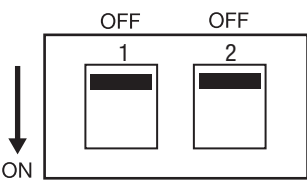
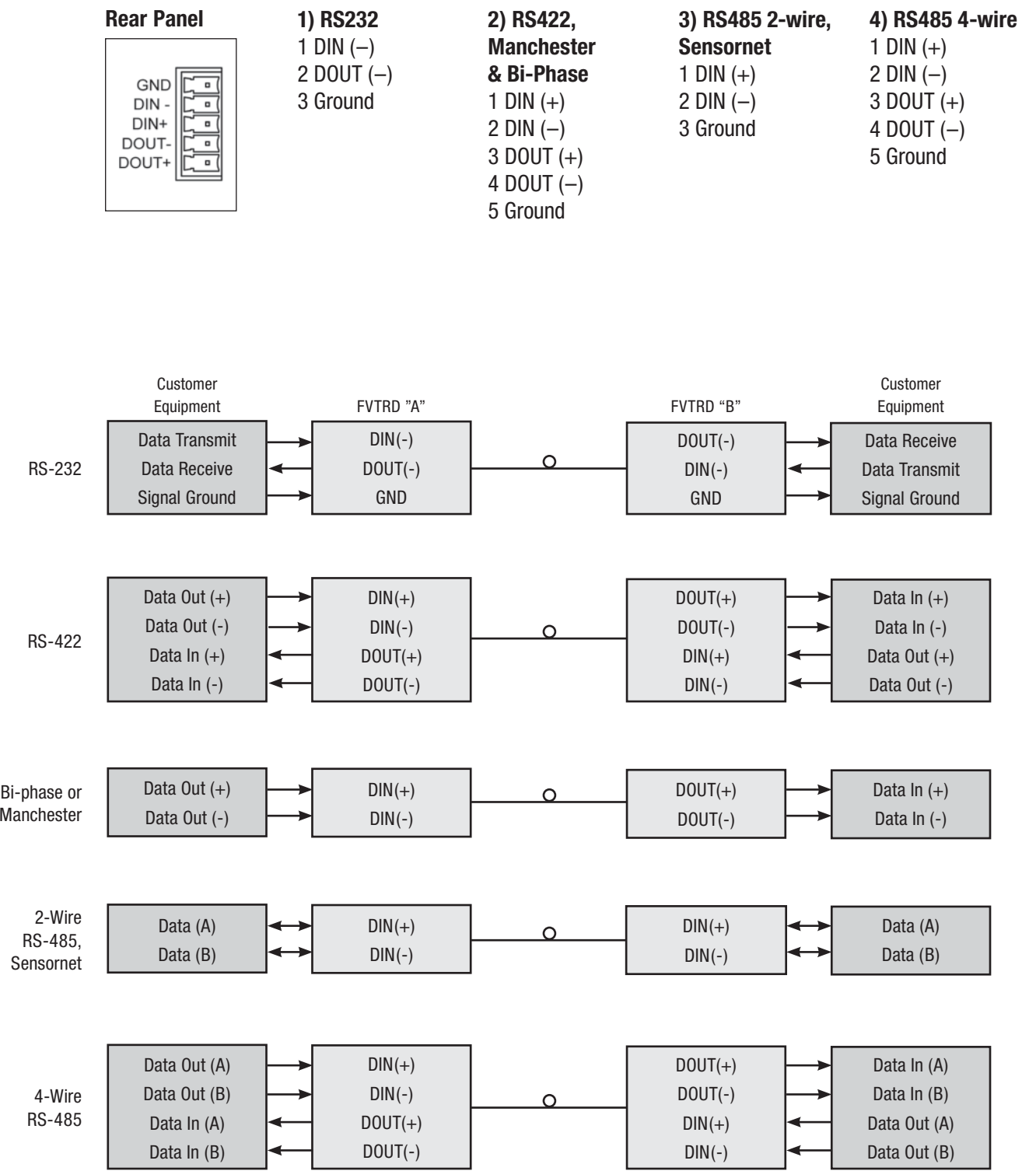


FIGURE 5 – DATA CONNECTIONS

See Page 3 for Switch Settings



Customer Equipment

RS-232

Data Transmit

Data Receive

Signal Ground

FVTRD "A"

DIN(-)

DOUT(-)

GND

FVTRD "B"

DOUT(-)

DIN(-)

GND

Customer Equipment

Data Receive

Data Transmit

Signal Ground

Customer Equipment

RS-422

Data Out (+)

Data Out (-)

Data In (+)

Data In (-)

FVTRD "A"

DIN(+)

DIN(-)

DOUT(+)

DOUT(-)

FVTRD "B"

DOUT(+)

DOUT(-)

DIN(+)

DIN(-)

Customer Equipment

Data In (+)

Data In (-)

Data Out (+)

Data Out (-)

Customer Equipment

Bi-phase or Manchester

Data Out (+)

Data Out (-)

FVTRD "A"

DIN(+)

DIN(-)

FVTRD "B"

DOUT(+)

DOUT(-)

Customer Equipment

Data In (+)

Data In (-)

Customer Equipment

2-Wire RS-485, Sensornet

Data (A)

Data (B)

FVTRD "A"

DIN(+)

DIN(-)

FVTRD "B"

DIN(+)

DIN(-)

Customer Equipment

Data (A)

Data (B)

Customer Equipment

4-Wire RS-485

Data Out (A)

Data Out (B)

Data In (A)

Data In (B)

FVTRD "A"

DIN(+)

DIN(-)

DOUT(+)

DOUT(-)

FVTRD "B"

DOUT(+)

DOUT(-)

DIN(+)

DIN(-)

Customer Equipment

Data In (A)

Data In (B)

Data Out (A)

Data Out (B)

MECHANICAL INSTALLATION INSTRUCTIONS

INSTALLATION CONSIDERATIONS

This fiber-optic link is supplied as a Standalone/Rack module. Units should be installed in dry locations protected from extremes of temperature and humidity.

STANDALONE MODULE:

The unit is provided with a mounting plate with holes for two No. 6 pan head screws (3 mm or 3.55 mm). **Attach the module to a solid piece of wood using two No. 6 pan head wood screws with a minimum penetration into the wood of 3/4 inch. (Screws not supplied). See Figure A.**

RACK MODULE:

The unit is designed to be installed in the ComNet 19-inch (483-mm) EIA standard card-cage rack, the C1-US, C1-EU, or the C1-CH. Follow these guidelines to install rack cards after performing module setup procedures.

C1-US, C1-EU, C1-AU OR C1-CH CARD CAGE RACKS

CAUTION: Although the units are hot-swappable and may be installed without turning power off to the rack, ComNet recommends that the power supply be turned off and that the rack power supply is disconnected from any power source. **Note:** Remove electrical connector before installing in card cage rack.

1. Make sure that the card is oriented right side up, and slide it into the card guides in the rack until the edge connector at the back of the card seats in the corresponding slot in the rack's connector panel. Seating may require thumb pressure on the top and bottom of the card's front panel.

CAUTION: Take care not to press on any of the LEDs.

2. Tighten the two thumb screws on the card until the front panel of the card is seated against the front of the rack.

WARNING: Unit is to be used with a Listed Class 2 or LPS power supply rated 9-12 VDC @ 1A.

WARNING: This unit should be installed in a restricted access location; available through the use of a lock and key or other means of security. Access should be limited to service personnel who have been instructed about the reasons for the restrictions to the location. Any and all precautions should be taken and controlled by the authority responsible for the location.

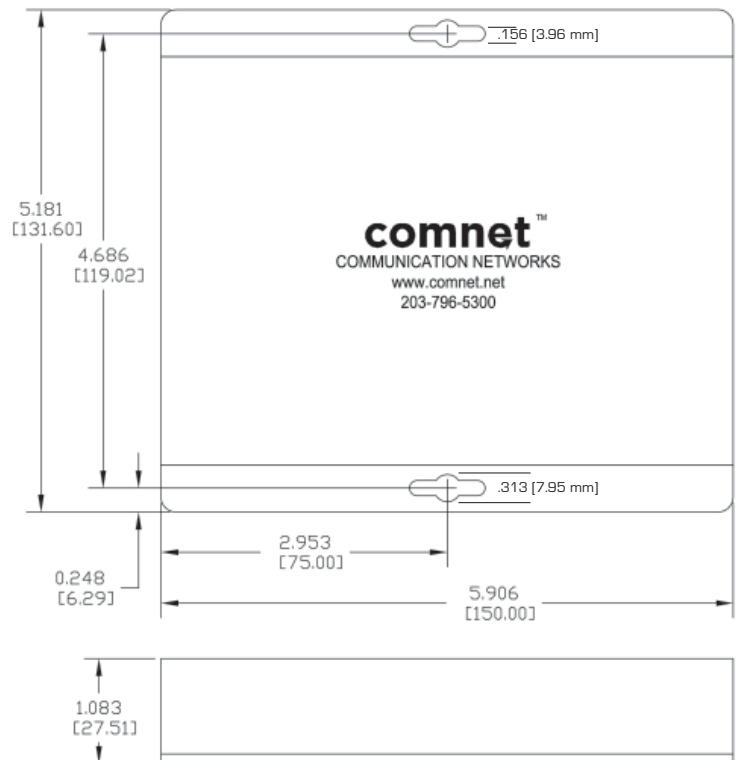
IMPORTANT SAFEGUARDS:

A) Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.

B) Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

FIGURE A

Dimensions are for a standard ComNet™ one slot module



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