comnet
Communication Networks

INSTALLATION AND OPERATION MANUAL

FVT/FVR(X)MI[/M]
HD DIGITAL VISUAL INTERFACE MULTIMODE
FIBER LINK WITH HDCP / EDID / CEC

This manual serves the following ComNet Model Numbers:

FVT1MI

FVR1MI

FVT2MI

FVR2MI

FVTRMI

FVT1MI/M

FVR1MI/M

The ComNet™ FVT/FVR(X)MI[/M] features an HDMI™ fiber link for uncompressed high-resolution bi-directional communication with full HDCP copyright protection, EDID and CEC connection functionality. The high-resolution signal is transmitted over one multimode fiber using multiple wavelengths up to 1000m. Resolutions of up to 1080p60 are supported. HDCP encryption is not affected or compromised by the FVT/FVR(X)MI units.

The FVT/FVR(X)MI transmits pixel-for-pixel images and full 24-bit scan rate with no contouring or bit reduction. This unit is fully compatible with HDMI™ compliant sources and monitors, supporting all possible horizontal and vertical sync configurations. The CEC support provided by these units allows the user to communicate with up to ten CEC-enabled devices connected via HDMI™.

A locking HDMI™ screw prevents the connectors from accidental disconnection.

Packaged in either a small stand-alone housing or the exclusive ComNet ComFit housing, the FVT/FVR(X)MI standard size product may be either wall or rack-mounted, or may be DIN-rail mounted by the addition of ComNet model DINBKT1 adaptor plate.

Bi-color (Red/Green) LED indicators are provided for rapidly ascertaining equipment operating status. **Figure 12** on **Page 6** describes the indicators for each light on the unit.

The FVT/FVR(X)MI standard size (ComFit) unit is interchangeable between stand-alone or card mount configurations, or may be DIN-rail mounted by the addition of ComNet model DINBKT1 adaptor plate. The FVT1MI/M has a small footprint, making it suitable for shelf- or wall-mounting where space is at a premium. See **Figure A** on **Page 7** for mounting instructions.
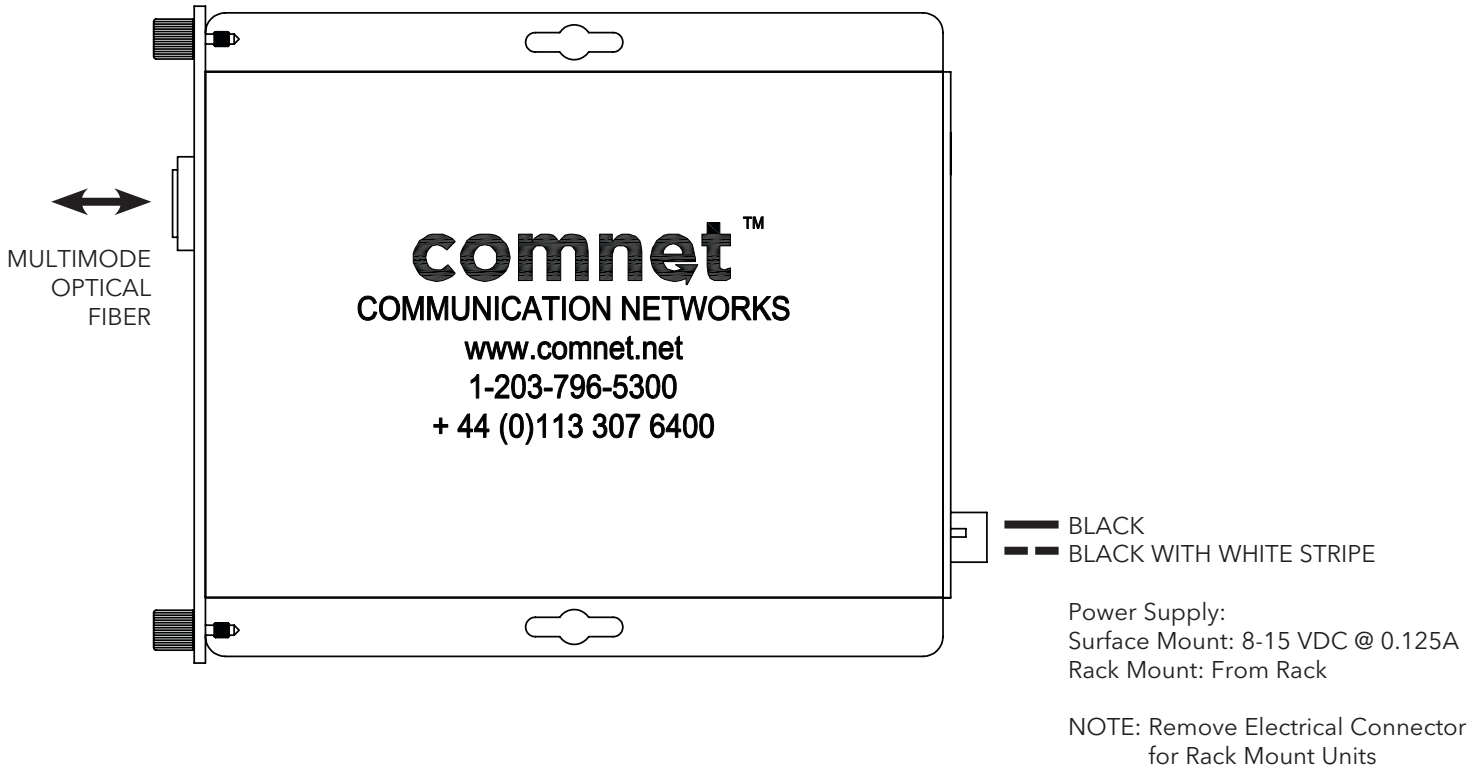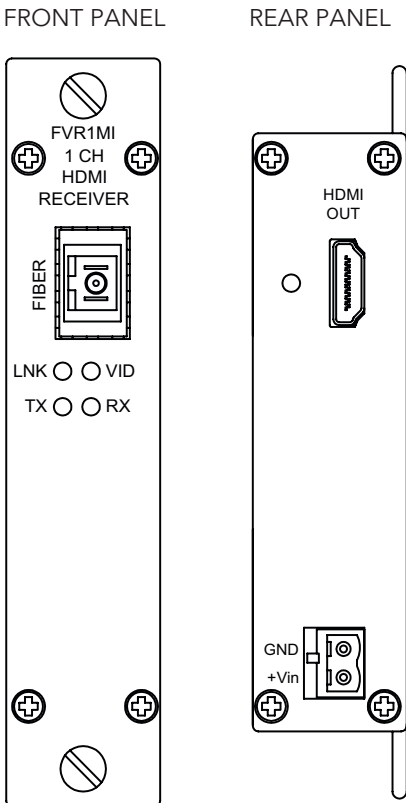
FIGURE 1 – FVT/FVR1MI SINGLE FIBER

MULTIMODE
OPTICAL
FIBER

comnet™
COMMUNICATION NETWORKS
www.comnet.net
1-203-796-5300
+ 44 (0)113 307 6400

━━ BLACK
━ ━ BLACK WITH WHITE STRIPE

Power Supply:
Surface Mount: 8-15 VDC @ 0.125A
Rack Mount: From Rack

NOTE: Remove Electrical Connector
for Rack Mount Units

FIGURE 2 – FVR1MI RECEIVER

FRONT PANEL   REAR PANEL

FVR1MI
1 CH
HDMI
RECEIVER

FIBER

HDMI
OUT

LNK ○ ○ VID
TX ○ ○ RX

GND
+Vin

FIGURE 3 – FVT1MI TRANSMITTER

FRONT PANEL   REAR PANEL

FVT1MI
1 CH
HDMI
TRANSMITTER

FIBER

HDMI
IN

LNK ○ ○ VID
TX ○ ○ RX

GND
+Vin
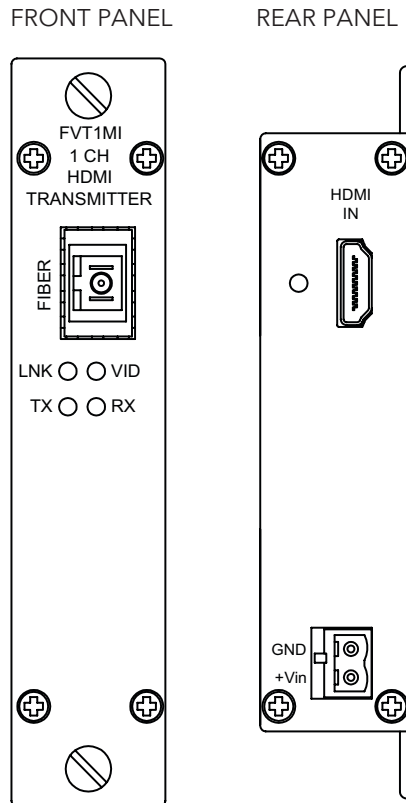
FIGURE 4 – FVT/FVR2MI TWO FIBER

MULTIMODE
OPTICAL
FIBER

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━━ BLACK
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Power Supply:
Surface Mount: 8-15 VDC @ 0.250A
Rack Mount: From Rack

NOTE: Remove Electrical Connector
        for Rack Mount Units
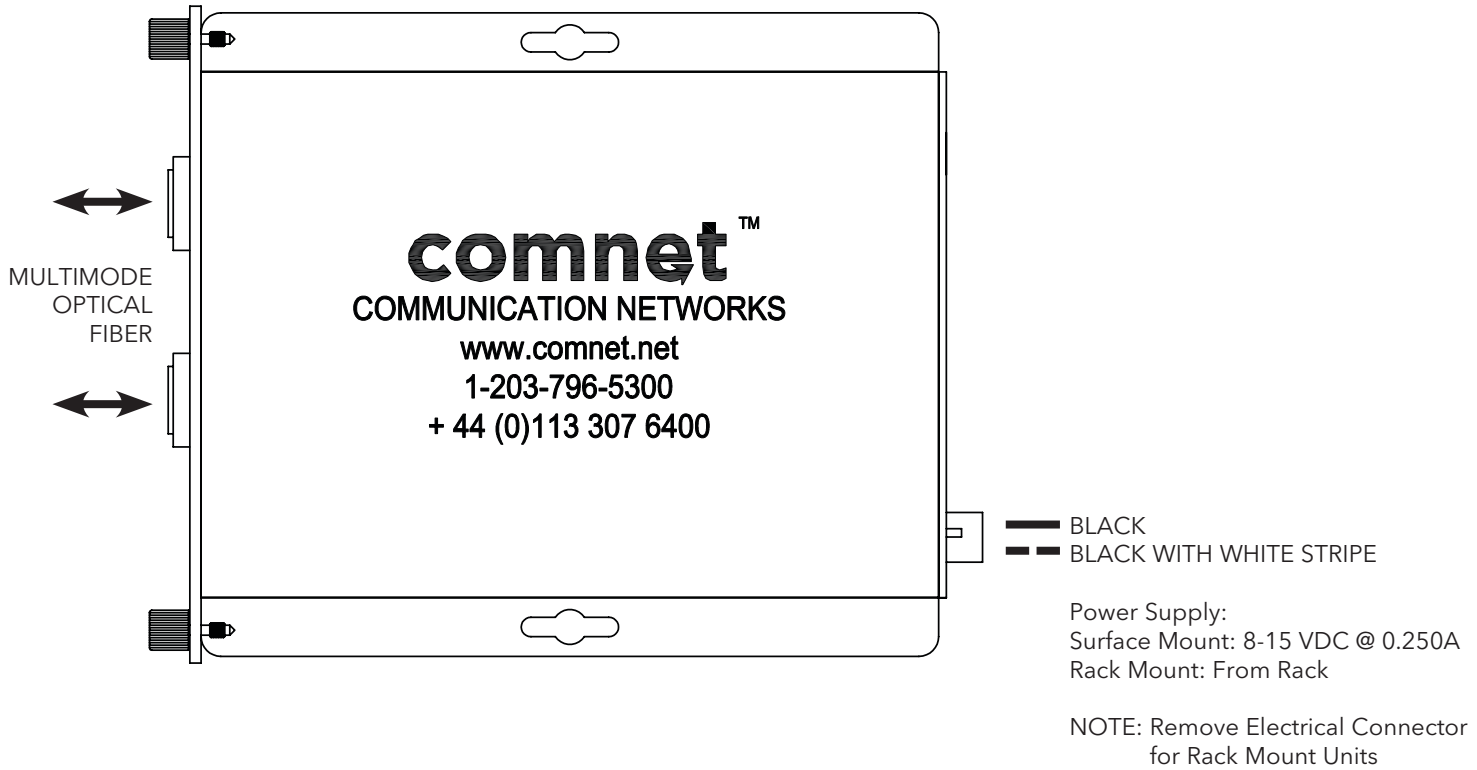
FIGURE 5 – FVR2MI RECEIVER

FRONT PANEL   REAR PANEL

FVR2MI
2 CH
HDMI
RECEIVER

FIBER

LNK ○ ○ VID
TX ○ ○ RX

FIBER

LNK ○ ○ VID
TX ○ ○ RX

HDMI
OUT

HDMI
OUT

GND
+Vin
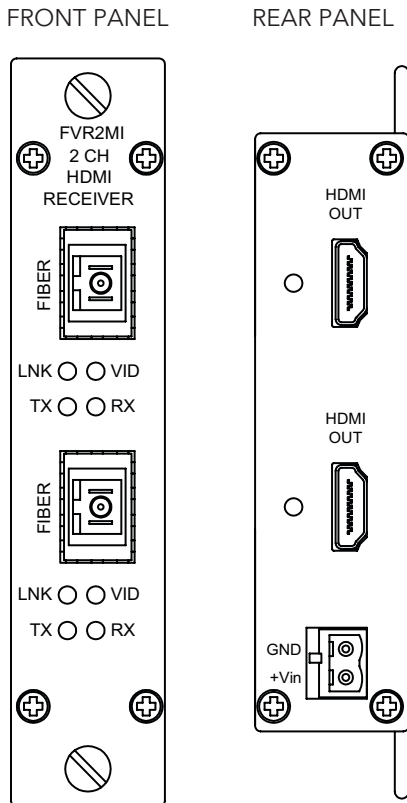
FIGURE 6 – FVT2MI TRANSMITTER

FRONT PANEL   REAR PANEL

FVT2MI
2 CH
HDMI
TRANSMITTER

FIBER

LNK ○ ○ VID
TX ○ ○ RX

FIBER

LNK ○ ○ VID
TX ○ ○ RX

HDMI
IN

HDMI
IN

GND
+Vin
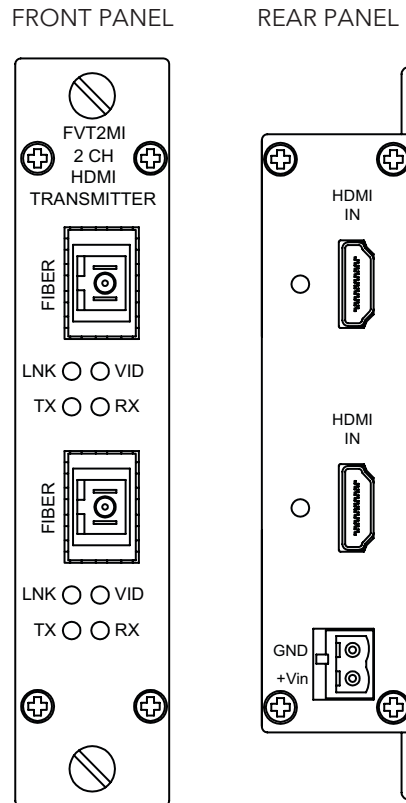
FIGURE 7 – FVTRMI TRANSCEIVER

MULTIMODE
OPTICAL
FIBER

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BLACK
BLACK WITH WHITE STRIPE

Power Supply:
Surface Mount: 8-15 VDC @ 0.250A
Rack Mount: From Rack

NOTE: Remove Electrical Connector
          for Rack Mount Units

FIGURE 8 – FVTRMI

FRONT PANEL   REAR PANEL

FVTRMI
1 CH HDMI TX
1 CH HDMI RX

TX
FIBER

LNK ○ ○ VID
TX ○ ○ RX

RX
FIBER

LNK ○ ○ VID
TX ○ ○ RX

HDMI
IN

HDMI
OUT

GND
+Vin
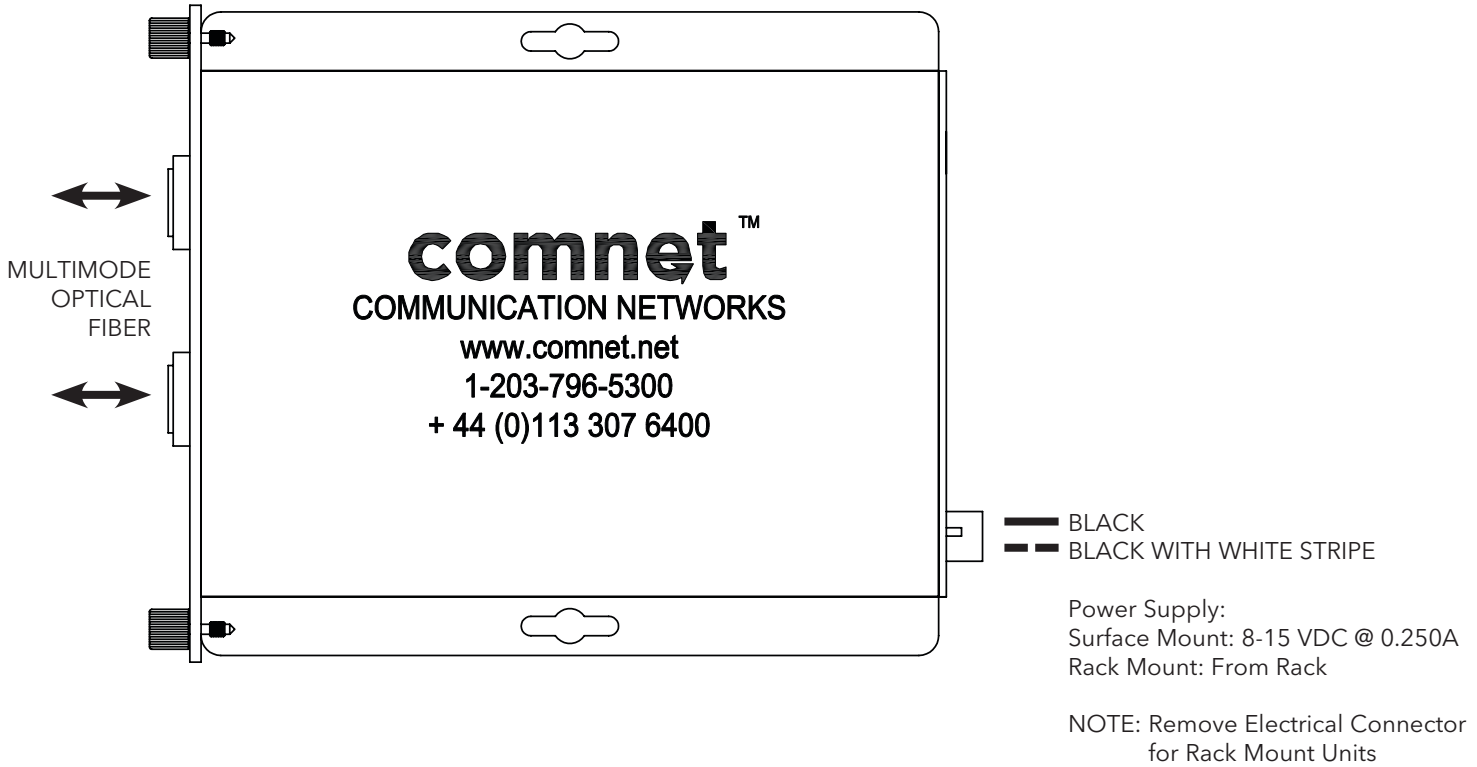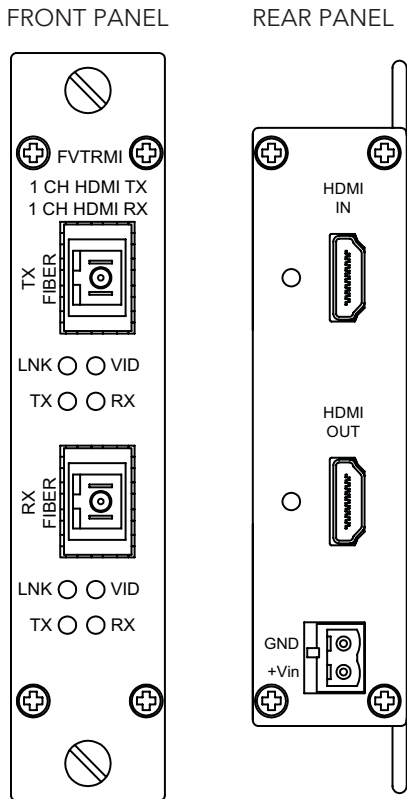
FIGURE 9 – FVR1MI/M MINI SINGLE FIBER RECEIVER

FVR1MI/M
1 CHANNEL HDMI
MINI RECEIVER

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FIBER

MULTIMODE
OPTICAL
FIBER

LINK
VIDEO
RX
TX

HDMI
OUT

GND
+Vin

BLACK
BLACK W/ WHITE STRIPE

Power Supply: 8-15 VDC @ 0.125A
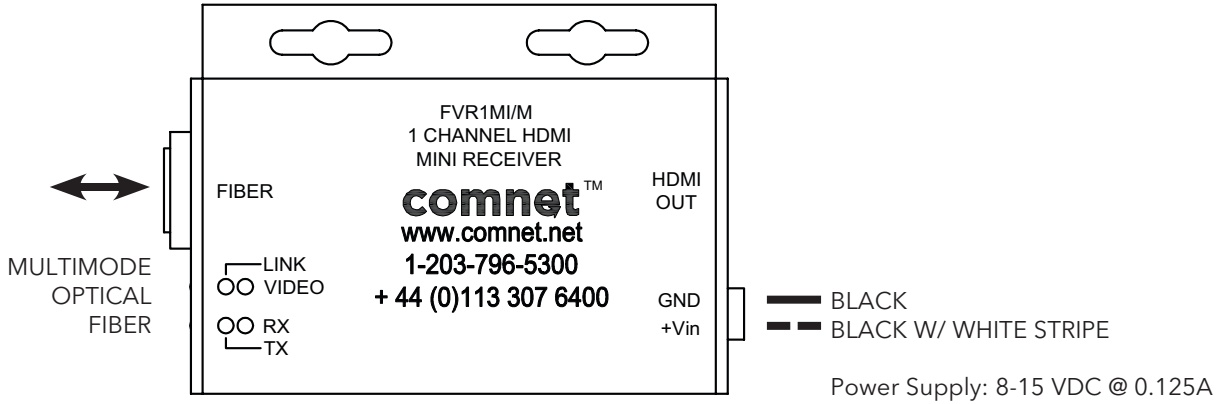
FIGURE 10 – FVT1MI/M MINI SINGLE FIBER TRANSMITTER

FVT1MI/M
1 CHANNEL HDMI
MINI TRANSMITTER

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FIBER

MULTIMODE
OPTICAL
FIBER

LINK
VIDEO
RX
TX

HDMI
OUT

GND
+Vin

BLACK
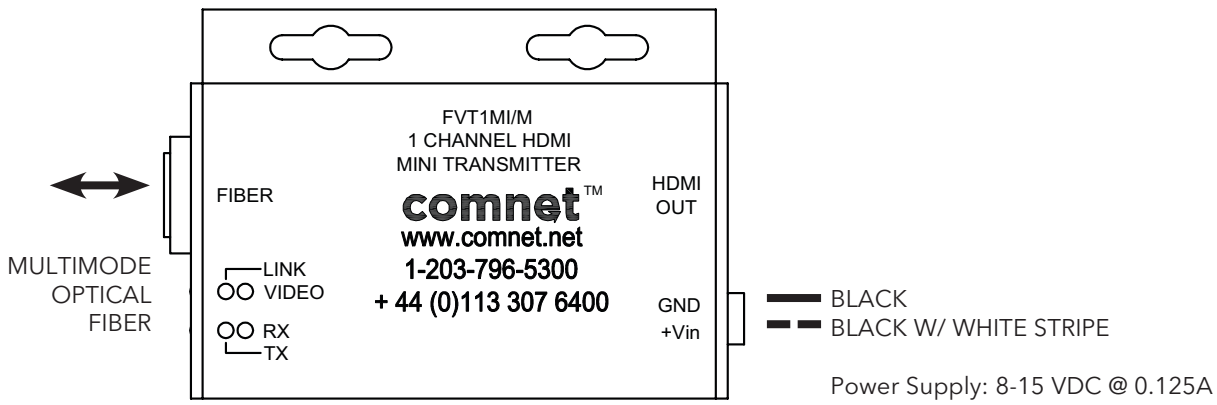BLACK W/ WHITE STRIPE

Power Supply: 8-15 VDC @ 0.125A

FIGURE 11 – FVT/FVR1MI/M MINI SINGLE FIBER

FRONT PANEL

REAR PANEL
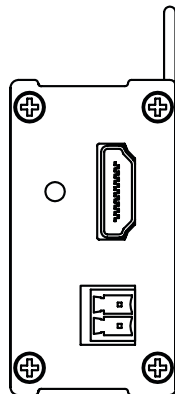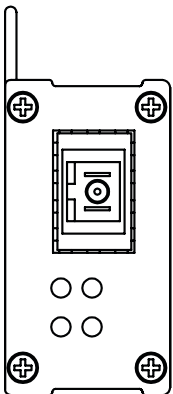
FIGURE 12 – LED INDICATORS

	LINK	**VIDEO**	**TX**	**RX**
SOLID GREEN	Communication link has been established over optical fiber	Sink Power On	Source Cable OK	Sink Cable OK
FLASH GREEN	Communication link has not been established over optical fiber	N/A	N/A	N/A
OFF	Unit powered down.	Sink Power Off	Source Cable Disconnected	Sink Cable Disconnected

NOTE: "Source" refers to the HDMI™ Input (e.g. Blu-Ray player, Camera or Set Top Box).
      "Sink" refers to the HDMI™ output device, (e.g. Monitor).

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.

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.

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 (Tma) 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.

MADE IN THE
USA

FIGURE A

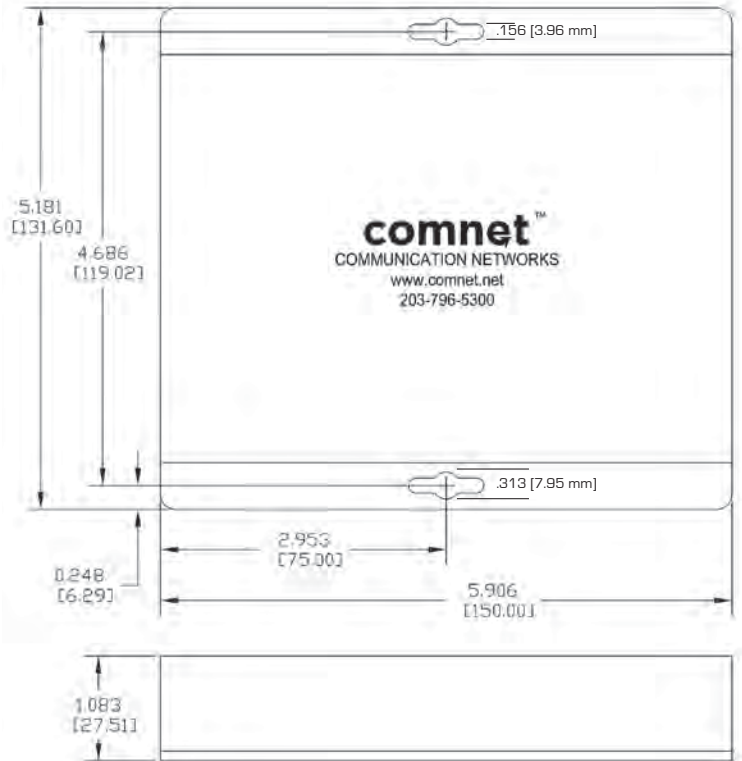*Dimensions are for a standard ComNet™ one slot module*

FIGURE B

Dimensions are for a ComNet™ mini long tall module

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