4-channel digitally-encoded video + 2 bi-directional data channels transmitter and receiver

Description
The ComNet™ FVT412M1 and FVR412M1 transmit four (4) channels of video utilizing state of the art digital encoding and decoding for high-quality video transmission, along with two (2) channels of bi-directional data over one multimode optical fiber. This equipment is environmentally hardened and suitable for use in unconditioned roadside or out-of-plant installations. The FVT/FVR412 is compatible with NTSC, PAL and SECAM video transmission protocols and supports bi-directional RS232, 422 and RS485 (2 & 4 Wire) data. Plug-and-play design ensures ease of installation and no electrical or optical adjustments are required. Bi-Color (RED/GREEN) LED indicators are provided to indicate the status of the system, video and data. Packaged in the exclusive ComNet ComFit housing, these units may be either wall or rack-mounted, or may be DIN-rail mounted by the addition of ComNet model DINBKT1 adaptor plate. No additional parts or power supplies are required.

Features
- Digitally-encoded video transmission: transmits 4 real-time color video signals and 2 bi-directional data signals on one optical fiber
- Supports RS232, RS422, and 2- or 4-wire RS485
- Compatible with all NTSC, PAL, or SECAM CCTV camera systems
- Tested and certified by an independent laboratory for full compliance with the environmental requirements (ambient operating temperature, mechanical shock, vibration, humidity with condensation, high-line/low-line voltage conditions and transient voltage protection) of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment.
- Voltage transient protection on all power and signal input/output lines provides unconditional protection from power surges and other voltage transient events.
- Robust design ensures extremely high reliability in unconditioned out-of-plant environments
- Bi-color (Red/Green) LED status indicators provide rapid indication of critical operating parameters
- Hot-swappable rack modules
- Interchangeable between stand-alone or rack mount use
  - ComFit
  - Lifetime Warranty

Applications
- High-Performance CCTV (Fixed Video)
COMPAK412M1
FVT412M1 + FVR412M1
4-channel digitally-encoded video + 2 bi-directional data channels transmitter and receiver

specifications

VIDEO
Video Input: 1 volt pk-pk (75 ohms)
Overload: >1.5V pk-pk
# Input/Output Channels: 4
Bandwidth (minimum): 10 Hz - 6.5 MHz per channel
Differential Gain: <4%
Differential Phase: <0.7˚
Tilt: <1%
Signal-to-Noise Ratio (SNR): 57 dB Typical
Max. RG-59 COAX Distance: 100m (300ft) Camera to Fiber Optic Module to maintain 6Mhz Bandwidth

DATA
Data Channels: 2
Data Interface: RS232, RS422 and RS485 (2W/4W)
Data Format: NRZ, NRZI, Manchester, Bi-Phase and Senorsnet
Data Rate: DC-250 Kbps (NRZ)
Bit Error Rate: <1 in 10-9 @ Maximum Optical Loss Budget
Operating Mode: Simplex or Full-Duplex

WAVELENGTH
1310/1550 nm, Multimode

NUMBER OF FIBERS
1

LED INDICATORS
- Video Sync Presence for Each Video Channel
- Received Data
- Transmitted Data
- Optical Carrier Detect

OPTICAL EMITTER
Laser Diode

CONNECTORS
Optical: ST
Power: Terminal Block
Video: BNC (Gold Plated Center-Pin)
Data: Terminal Block

ELECTRICAL & MECHANICAL
Power:
Surface Mount: 8-15 VDC @ 4W
Mounting: From Rack
Number of Rack Slots: 2

current Protection: Automatic Repeatable Solid-State

Circuit Board:
Meet IPC Standard

Size (in/cm) (LxWxH):
6.1 × 5.3 × 3.3 in.,
(15.5 × 13.5 × 8.3 cm)

Shipping Weight:
<2 lb./0.9 kg

ENVIRONMENTAL
MTBF: >100,000 hours
Operating Temp: -40˚ C to +75˚ C
Storage Temp: -40˚ C to +85˚ C
Relative Humidity: 0% to 95% (non-condensing)
† May be extended to condensation conditions by adding suffix '/C' to model number for conformal coating.

NOTE: This product requires a fiber installation with a minimum 30 dB connector return loss. The use of Super Polish Connectors is recommended.

**Distance may be limited by optical dispersion.

Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

In a continuing effort to improve and advance technology, product specifications are subject to change without notice.

PART NUMBER DESCRIPTION FIBERS REQUIRED FIBER OPTICAL PWR BUDGET MAX. DISTANCE** # RACK SLOTS
FVT412M1 Video Transmitter/Data Transceiver (1310/1550 nm) 1 Multimode 62.5/125μm 16 dB 3 km (2 miles) 2
FVR412M1 Video Receiver/Data Transceiver (1550/1310 nm)

Accessories 9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)
Options Add ‘/C’ for Conformally Coated Circuit Boards (Extra charge, consult factory)
DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINBKT1)

NOTE: This product requires a fiber installation with a minimum 30 dB connector return loss. The use of Super Polish Connectors is recommended.

**Distance may be limited by optical dispersion.

Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

In a continuing effort to improve and advance technology, product specifications are subject to change without notice.