

# Fiber Transmission Products (10-Bit) Transmitter/Receiver

## Overview

The video and data series fiber transmission products support optical transmission of 10-Bit PCM coded video (up to 8 channels) through one fiber either in multi-mode or single-mode for convenience and flexibility. Adjustment and maintenance free, these modules are universally compatible with major CCTV camera manufacturers and support data interface.

The unit's unique modular design for in field configuration also accommodates installation and system growth and delivers long operating distances of up to 60 Km. Featuring robust construction well suited for harsh environments the unit is available in wall mount configuration. Plug-and-Play design ensures ease of installation requiring no electrical or optical adjustments.

## Standard Features

### Video

- Non-compressed 10-Bit Digitally Encoded Video Transmission
- Supports NTSC P, PAL & SECAM video systems
- No video degradation over max. operating distance

### LEDs

- Duplicated LED indicators on the front and rear of the unit for the convenience of observation

### Network management system for rack communications

- Web browser support
- Systems video, audio, data and contact closure performance monitoring
- System devices and components transmitters, receivers, modules, etc. status monitoring and operational management
- LAN, Ethernet networking capabilities
- IP addressable
- Alarm activation, execution, message responding and reporting
- Operational level determination and access control
- Network ready for health and connection monitoring

Single-, Two-, Four- Eight-Channel Video

# (10-Bit) Transmitter/Receiver



## Specifications

Video		
Number of Channels	1, 2, 4, 8	
Color Systems	NTSC	PAL
I/O Impedance	75 Ohm	75 Ohm
I/O Composite Video Level	1Vp-p ± 5.5 IRE	700mVp-p ± 40 IRE
Sync Amplitude	40± 2 IRE	300± 20 IRE
Burst Amplitude	40± 2 IRE	300± 20 IRE
Bandwidth	≥4.6MHz	≥5.8MHz
Differential Gain	<2%	<2%
Differential Phase	<1 Degree Typical	<1 Degree Typical
SNR-CCIR weighted	> 60dB	> 60dB
Tilt	<1 %	<1 %
K-factor	1%	1.5%
Signal Indication (Video Presence/ Absence)	Green/Red LED lit	Green/Red LED lit
Input/output Connectors	BNC	BNC

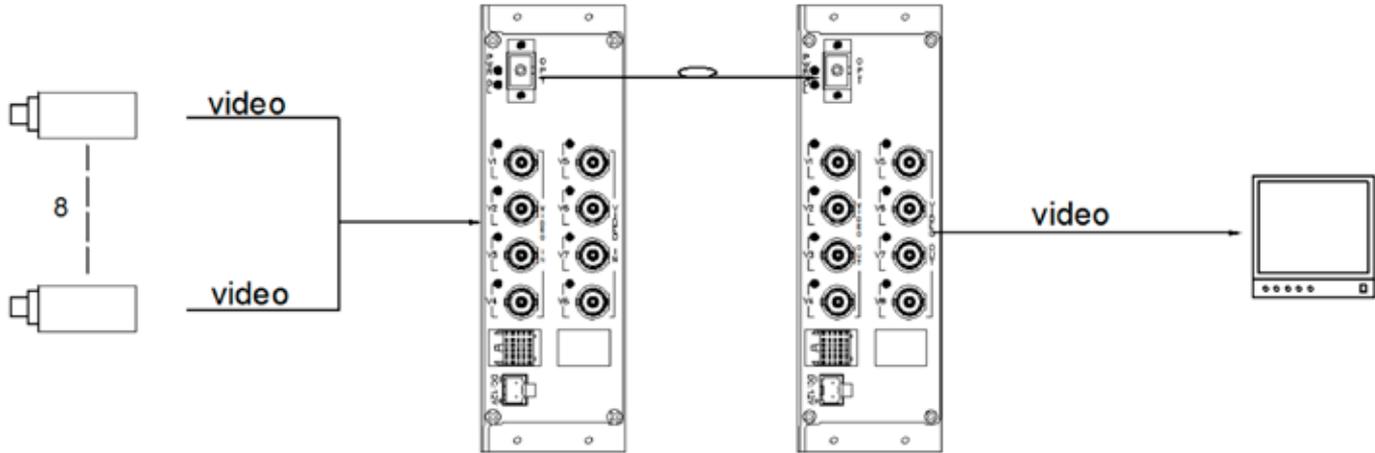
Optical		
Wavelength	1310 and 1550	
Number of Fiber	1	
<b>Tx Output Power:</b>		
Single Mode (40Km) DFVSM1-T/R	1310nm	-9dBm ± 3 dBm
Single Mode (40Km) DFVSM2-T/R, DFVSM4-T/R & DFVSM8-T/R	1550nm	-8dBm ± 2 dBm
Multi-mode (4Km) DFVMM1-T/R	1310nm	-7dBm ± 3 dBm
Multi-Mode (2Km) DFVMM2-T/R, DFVMM4-T/R & DFVMM8-T/R	1310nm	-8dBm ± 3 dBm
<b>Optical Budget:</b>		
Multi-mode (62.5µm/125µm)	12dB (DFVMM1-T/R) 10dB (DFVMM2-T/R) 8dB (DFVMM4-T/R & DFVMM8-T/R)	
Single-mode (9µm/125µm)	18dB (DFVSM1-T/R) 14dB (DFVSM2-T/R, DFVSM4-T/R & DFVSM8-T/R)	
Single-mode (9µm/125µm) - Long Haul	25dB (DFVSM1-T/R) 19dB (DFVSM2-T/R, DFVSM4-T/R & DFVSM8-T/R)	
<b>Transmission Distance:</b>		
Multi-Mode (Limited by Fiber Bandwidth)	4Km (DFVMM1-T/R) 3Km (DFVMM2-T/R) 2Km (DFVMM4-T/R) 1Km (DFVMM8-T/R)	
Single-Mode	40Km	
Single-Mode (Long Haul version)	60Km	
Fiber Connector (Standard Supply)	ST	

Mechanical	
Dimensions or Module H x W x D in mm	(a) 25.4 x 158.4 x 231.8 1-Slot (b) 50.8 x 158.4 x 231.8 2-Slot
Shipping weight	(a) 0.55kg 1-slot (b) 0.80kg 2-slot

Environmental	
Operating Temperature	-40° C to +75° C
Storage Temperature	-40° C to +85° C
Relative Humidity	0 to 95% non-condensing

Power Requirement	
Supply Voltage	12V DC (Standalone: derived from an external adaptor via the 2-pin connector at rear of the module. Rack chassis: derived from the chassis PSU via the 30-pin connector at rear of the module.)
Card Protection	Poly Fuse (1 A)
Current Consumption	Max. 500mA

## Application Diagram



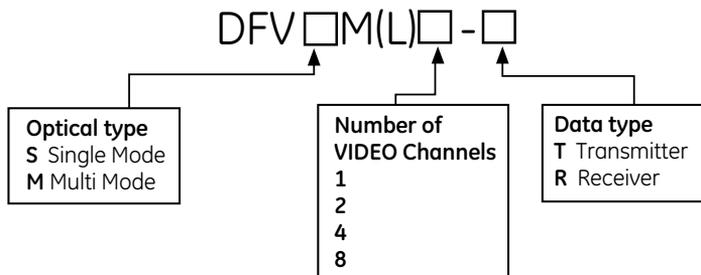
## Model Number Key

DF	10 bit rack/module
F	8 bit rack/module
MF	8 bit module only
V	Video
D	Data
A	Audio
CC	Contact Closure

SM	Single mode
MM	Multimode
L	Long distance
D	Duplex
F	Forward data (Only for contact closures 8 CH)

First digit	Number of video channels
Second digit	Number of audio channels
Third digit	Number of data channels
Forth digit	Number of contact closures
T	Transmitter
R	Receiver

## Part Number Key



North America  
 T 888-GE-SECURITY  
 888-437-3287  
 F 503-691-7566

Asia  
 T 852-2907-8108  
 F 852-2142-5063

Australia and New Zealand  
 T 613-9239-1200  
 F 613-9239-1299

Europe  
 T 32-2-719-98-47  
 F 32-2-719-98-46

Latin America  
 T 305-593-4301  
 F 305-593-4300

Specifications subject to  
 change without notice.

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## Ordering Information

Fiber Type	Part Number	Description	Wavelength (nm)	Opt. PWR. Budget dB	Max. Distance (Km)	Number of slots	
(I) Single-mode (9/125µm)	(i) V	a) DFVSM1-T	1-Ch. Video Transmitter	1310	18	40	1
		b) DFVSM1-R	1-Ch. Video Receiver	1310	18	40	1
	(ii) 2V	a) DFVSM2-T	2-Ch. Video Transmitter	1550	14	40	1
		b) DFVSM2-R	2-Ch. Video Receiver	1550	14	40	1
	(l) 4V	a) DFVSM4-T	4-Ch. Video Transmitter	1550	14	40	1
		a) DFVSM4-T	4-Ch. Video Receiver	1550	14	40	1
	(vii) 8V	a) DFVSM8-T	8-Ch. Video Transmitter	1550	14	40	2
		b) DFVSM8-R	8-Ch. Video Receiver	1550	14	40	2
For Long Distance Transmission (II) Single-mode (9/125µm)	(i) V	a) DFVSM1-T	1-Ch. Video Transmitter	1310	25	60	1
		b) DFVSM1-R	1-Ch. Video Receiver	1310	25	60	1
	(iii) 2V	a) DFVSM2-T	2-Ch. Video Transmitter	1550	19	60	1
		b) DFVSM2-R	2-Ch. Video Receiver	1550	19	60	1
	(v) 4V	a) DFVSM4-T	4-Ch. Video Transmitter	1550	19	60	1
		b) DFVSM4-R	4-Ch. Video Receiver	1550	19	60	1
	(vii) 8V	a) DFVSM8-T	8-Ch. Video Transmitter	1550	19	60	2
		b) DFVSM8-R	8-Ch. Video Receiver	1550	19	60	2
(III) Multi-mode (62.5/125µm)	(i) V	a) DFVMM1-T	1-Ch. Video Transmitter	1310	12	4	1
		b) DFVMM1-R	1-Ch. Video Receiver	1310	12	4	1
	(ii) 2V	a) DFVMM2-T	2-Ch. Video Transmitter	1310	10	3	1
		b) DFVMM2-R	2-Ch. Video Receiver	1310	10	3	1
	(iii) 4V	a) DFVMM4-T	4-Ch. Video Transmitter	1310	8	2	1
		b) DFVMM4-R	4-Ch. Video Receiver	1310	8	2	1
	(iv) 8V	a) DFVMM8-T	8-Ch. Video Transmitter	1310	8	1	2
		b) DFVMM8-R	8-Ch. Video Receiver	1310	8	1	2

Accessories DFR. 19' Rack mount chassis purchased separately for housing modules

Options ST type connector is standard

Notes: Transmission distance will suffer if additional losses are introduced by the optical connectors, fusions, splices and the fibers within the network. Operating distance of multimode is limited by the characteristics of the fiber bandwidth

