

# Video over Fiber Media Converter Kit



## Long Distances Analog Surveillance Transmission System

The analog cameras and DVRs are still applied mostly in traditional surveillance systems while the main stream turns to IP-Based surveillance gradually. To help the analog camera deployment in long distances to provide high video transmission quality and reliable signal, PLANET develops the Video over Fiber media converter which successfully integrates the **video** signal and **fiber optic** transmission in a compact size mini box. The Video over Fiber media converter enables the videos to be delivered in high quality up to 20km long distance by the intelligent encoding / decoding technology. It is ideal for extending the distance and signal conversion by transmitting the Video and data over the fiber-optic cable.

## Fiber Optic Communication for VIDEO and SERIAL DATA

This Video over Fiber Converter kit consists of a Video Transmitter and a Video Receiver:

- **VF-10x-T:** 1-channel Video over Fiber **Transmitter**
- **VF-10x-R:** 1-channel Video over Fiber **Receiver**

It is a digital **fiber-optic transmission** system which brings customer a cost-effective solution for transmission of 1 channel uncompressed digital video and 1 reverse **RS-485** async-data over one single fiber cable. It is an adjustment free device providing high quality and real-time video transmission. The system can be widely used in Intelligent Transportation Systems (ITS), Traffic Surveillance, security monitoring, automation control, intelligent residential districts and so on.

## Easy Installation

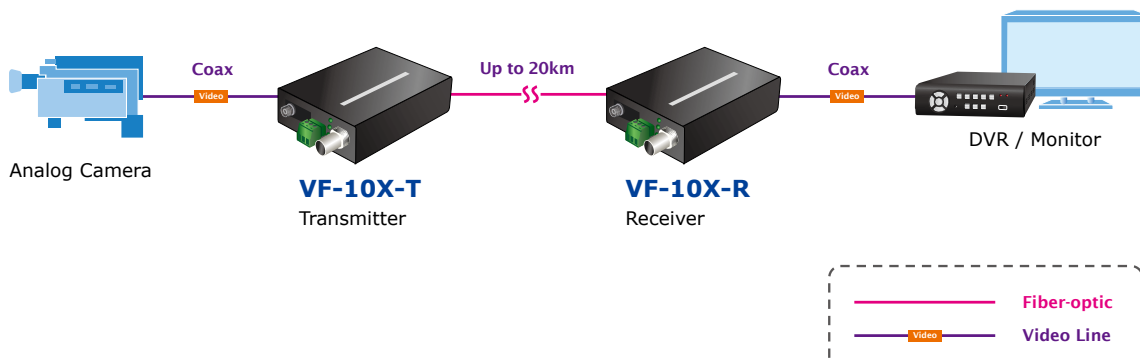
The VF-10x-KIT media conversion installation is quite easy by simply plug and play. They can be used as a stand-alone unit or as a slide-in module to the PLANET Media Converter Chassis (MC-700, MC-1500 and MC-1500R). When working with the media converter chassis, the media converter chassis provides DC power to VF-10x-T or VF-10x-R to maintain the video over fiber-optic transmission system at the central location.

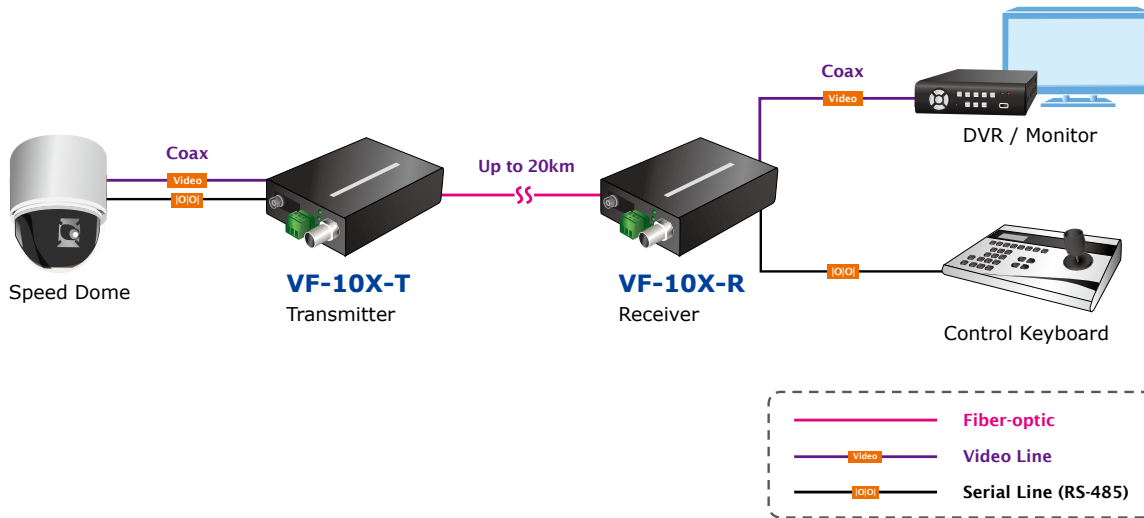
## KEY FEATURES

- Video and Data over fiber transmission
- 8 bit Video Signal digital sampling
- PAL, NTSC, SECAM compatible
- 20km max. transmission distance
- Data Type: RS-485
- High-Speed synchronous digital transmission technology
- Safe transmission guaranteed under poor electromagnetic environment
- Standalone or work with PLANET MC-700/1500/1500R media converter chassis
- Compact size, wall-mount design, easy installation

## APPLICATIONS

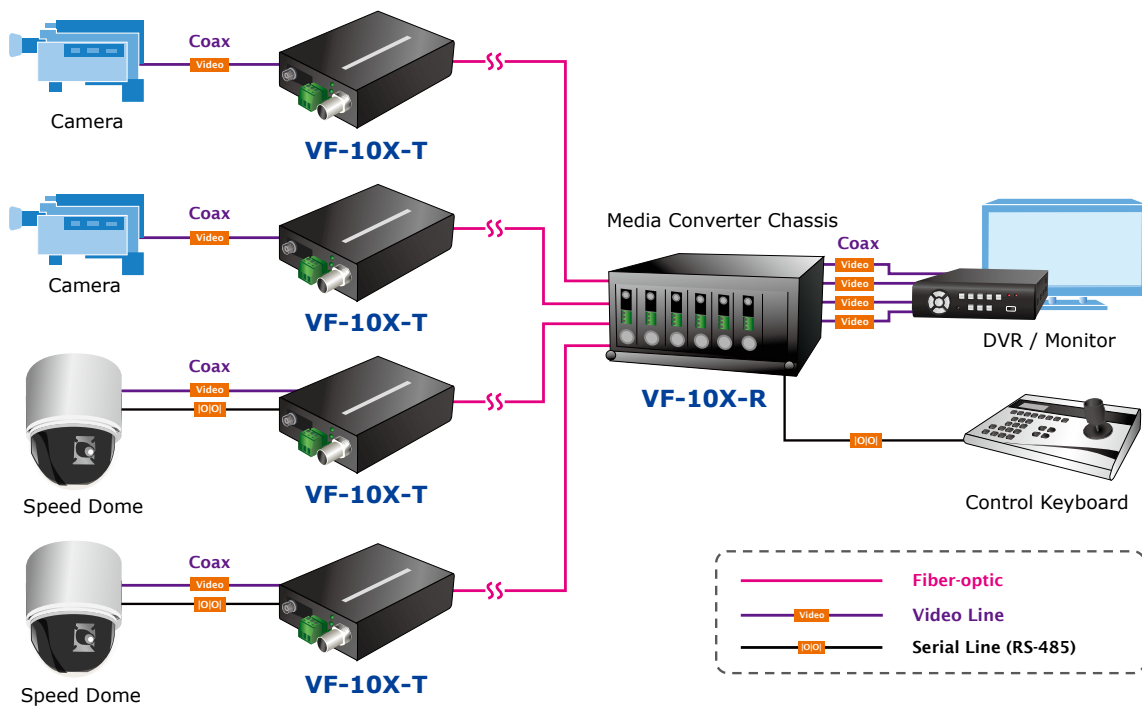
The VF-10x-KIT consists of 1 channel video over fiber optical transceiver and receiver to transmit **video** and **RS-485** signal through a reliable single mode / single fiber link. It is an ideal cost-effective solution for surveillance system that requires high display quality and high performance signal transmission over long distances. The VF-10x-KIT can be installed easily and **plug and play**; that means the operator does not need to configure the pair of the video over fiber transmission in advance.





The transmitter and receiver can work **stand-alone** or slotted into a **rack-mountable media converter chassis**. The flexible and maintenance-free design fits with different installation environments. Up to 20km distance of video camera deployment with one VF-10x-KIT ideally suits the following applications:

- Intelligent Transportation Systems (ITS)
- Toll Collection
- Traffic Surveillance
- Air Traffic Management (ATM)
- Rail Signaling
- Perimeter Alarms and Area Monitors
- Telemedicine and Teleconference
- Industrial Surveillance
- Intelligent Building



## SPECIFICATION

Product	Video over Fiber Media Converter Kit		
Model	VF-10x-KIT Series		
<b>Video Characteristic</b>			
Video Channel	1 channel Bi-direction		
Signal Mode	NTSC / PAL		
Video Connector	BNC		
Video Input/Output Impedance	75ohm / unbalanced interface		
Video Input/Output Voltage	1.0 Vpp / Typical peak-peak value		
Video Bandwidth	6.5MHz		
Video Digital Bit Width	8/10 bit		
Differential Gain(DG)	<1.3% (Typical Value)		
Differential Phase(DP)	<1.3° (Typical Value)		
SNR Weighted	63dB (Typical Value)		
<b>Data Interface</b>			
Data Channel	1 channel		
Physical Protocol	RS-485		
Operation Mode	Simplex		
Data Connector	3 Pin terminal block with screw clamps		
Data Rate	DC-115.2Kbps		
Data Distance	RS-485: 0-1200m		
Bit Error Rate (BER)	< 10ns		
<b>Optical Interface</b>			
Optical Connector	VF-101-KIT	ST	
	VF-102-KIT	FC	
	VF-102SC-KIT	SC	
	VF-102S15-KIT	SC	
	VF-106-KIT	SC, WDM	
Distance	VF-101-KIT	2Km for multi-mode	
	VF-102-KIT	20km for single-mode	
	VF-102SC-KIT	2km for multi-mode	
	VF-102S15-KIT	15km for single-mode	
	VF-106-KIT	20km for single-mode	
Optical Wavelength	VF-101-KIT	VF-101-T	TX & RX: 1310nm
		VF-101-R	TX & RX: 1310nm
	VF-102-KIT	VF-102-T	TX: 1310nm, RX: 1550nm
		VF-102-R	TX: 1550nm, RX: 1330nm
	VF-102SC-KIT	VF-102SC-T	TX & RX: 1310nm
		VF-102SC-R	TX & RX: 1310nm
	VF-102S15-KIT	VF-102S15-T	TX & RX: 1310nm
		VF-102S15-R	TX & RX: 1310nm
	VF-106-KIT	VF-106-T	TX: 1310nm, RX: 1550nm
		VF-106-R	TX: 1550nm, RX: 1330nm
Launch Power (dBm)	VF-101-KIT	Max. : -14, Min. : -19	
	VF-102-KIT	Max. : -7, Min. : -14	
	VF-102SC-KIT	Max. : -14, Min. : -19	
	VF-102S15-KIT	Max. : -7, Min. : -20	
	VF-106-KIT	Max. : -8, Min. : -14	
Receive Sensitivity (dBm)	VF-101-KIT	-34.5dBm	
	VF-102-KIT	-32dBm	
	VF-102SC-KIT	-34.5dBm	
	VF-102S15-KIT	-28dBm	
	VF-106-KIT	-31dBm	
Max. Input Power (dBm)	VF-101-KIT	-14	
	VF-102-KIT	0	
	VF-102SC-KIT	-14	
	VF-102S15-KIT	-8	
	VF-106-KIT	0	
Cable	50/125µm or 62.5/125µm multi-mode cable 9/125µm single-mode cable		

#### Hardware Specification

LED Indicators	<ul style="list-style-type: none"> <li>• One Power</li> <li>• One for Video <ul style="list-style-type: none"> <li>- Green, Link</li> </ul> </li> <li>• One for Fiber Optic <ul style="list-style-type: none"> <li>- Green, Link</li> </ul> </li> </ul>
Dimension (W x D x H)	94 x 70 x 26 mm
Weight	215g
Power Requirement	5V / 2A
Power Consumption	4.8 Watts (maximum)
Mechanical	Metal
Installation	Wall-mountable, DIN-Rail (with optional kit), Chassis installation
Compatible Converter Chassis	MC-700 / MC-1500 / MC-1500R
<b>Standards Conformance</b>	
Regulation Compliance	FCC Part 15 Class A, CE
<b>Environment</b>	
Operating	Temperature: -10 ~ 60 Degree C Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -10 ~ 70 Degree C Relative Humidity: 5 ~ 95% (non-condensing)

## ORDERING INFORMATION

VF-101-KIT	1-Channel Video over Fiber Bundle Kit (VF-101-T + VF-101-R / ST / MM / 2Km)
VF-102-KIT	1-Channel Video over Fiber Bundle Kit (VF-102-T + VF-102-R / FC / SM / 20Km)
VF-102SC-KIT	1-Channel Video over Fiber Bundle Kit (VF-102S15-T + VF-102S15-R / SC / SM / 15Km)
VF-102S15-KIT	1-Channel Video over Fiber Bundle Kit (VF-102SC-T + VF-102SC-R / SC / MM / 2Km)
VF-106-KIT	1-Channel Video over Fiber Bundle Kit (VF-106-T + VF-106-R / WDM / SM / 20Km)

## RELATED PRODUCTS

#### Analog Camera

CAN-BX53	Hi-Resolution CCD Box Camera
CAM-IR338	30-meter Infrared Camera
CAM-ISD48	23x Indoor Speed Dome Camera
CAM-IVP52V	25-meter Infrared Vari-Focal Vandal-Proof Camera

#### Media Converter Chassis

MC-700	7-Slot Media Converter Chassis
MC-1500	15-Slot Media Converter Chassis
MC-1500R	15-Slot Media Converter Chassis with Redundant Power

## ACCESSORIES

RKE-DIN	DIN-Rail Mounting Kit
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