

Product Specifications

4-in-1 Video over Gigabit Fiber Bundle Kit
Transceiver / Receiver

VF-101G/102G/106G-KIT

Version 1.0

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Change History:

Revision:	Date:	Author:	Change List
Version 1.0	2017/06/15	Keithy	Initial Release

Author:	Keithy	Editor:	Keithy
Reviewed By:	Jonas	Approved By:	Kent

1. PRODUCT DESCRIPTION



Long Distance Analog Surveillance Transmission System

To deploy AHD/CVI/TVI/CVBS analog camera in a remote place efficiently and provide high video quality and reliable signal, PLANET has developed the video over Gigabit fiber media converter kit, VF-101G/102G/106G-KIT, which is ideal for extending the distance and signal conversion by transmitting the AHD/CVI/TVI/CVBS video and data over the fiber-optic cable. Adopting the intelligent encoding/decoding technology and with the compact box, the VF-101G/102G/106G-KIT video over fiber media converter enables videos to be delivered in high quality over a distance of up to 20km long.

Fiber Optic Communication for Video and Serial Data

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

- **VF-101G/102G/106G-T:** 1-channel Video over Gigabit Fiber **Transmitter**
- **VF-101G/102G/106G-R:** 1-channel Video over Gigabit Fiber **Receiver**

Model Name	Video Type	Fiber Speed	Optical Distance	Optical Connector
VF-101G	AHD/TVI/CVI/CVBS	1.25G/84M	20km in single mode	ST
VF-102G				FC
VF-106G				WDM-SC

The VF-101G/102G/106G-KIT is a digital fiber-optic transmission system that brings users a cost-effective solution for transmission of 1 channel uncompressed digital video and one reverse RS485 async data over one single fiber cable. The VF-101G/102G/106G-KIT is an adjustable free device providing high-quality and real-time video transmission. It can be widely used in intelligent transportation systems (ITS), traffic surveillance, security monitoring, automation control, intelligent residential districts, etc.

Easy Installation

Simply by Plug and Play, the installation of the VF-101G/102G/106G-KIT media conversion is quite easy. 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-101G/102G/106G-T or VF-101G/102G/106G-R to maintain the video over fiber-optic transmission system at the central location.

2. PRODUCT FEATURES

- Compliant with hybrid video (AHD/TVI/CVI/CVBS)
- Long-distance data transmission of 20km
- Status indication for power supply, optical signal and video
- High-speed synchronous digital transmission technology
- Guarantees safe transmission under poor electromagnetic environment
- Video and data transmission over Gigabit fiber optic cable
- PAL, NTSC, SECAM compatible
- Data type: RS485
- 8-/10-bit digital Video Signal sampling
- Standalone or work with PLANET MC-700/1500/1500R media converter chassis
- Compact size, wall-mount design, easy installation

3. PRODUCT SPECIFICATIONS

3.1 Main Components

CPLD	ALTERA
Fiber Transceiver	Vary by models

3.2 Function Specifications

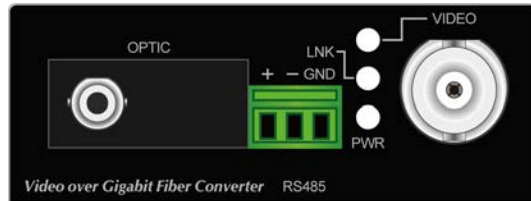
Model	VF-101G-KIT	VF-102G-KIT	VF-106G-KIT
Video Characteristics			
Video Channel	1 channel bi-direction		
Signal Mode	NTSC/PAL/SECAM		
Video Connector	BNC		
Supported Video Type	1080p: AHD/TVI/CVI 480p: CVBS		
Video Input/Output Impedance	75ohm/unbalanced interface		
Video Input/Output Voltage	1.0 Vpp/typical peak-to-peak value		
Video Bandwidth	60MHz		
Video Digital Bit Width	8/10 bit		
Differential Gain (DG)	<1.3% (typical value)		
Differential Phase (DP)	<1.3° (typical value)		
SNR Weighted	>67dB (typical value)		
Data Interface			
Data Channel	1 channel		
Physical Protocol	RS485		
Operation Mode	Simplex		
Data Connector	3-pin terminal block with clamps		
Data Rate	DC-115.2Kbps		
Bit Error Rate (BER)	< 10ns		
Optical Interface			
Optical Connector	ST	FC	WDM-SC
Distance	20km in single mode		
Optical Wavelength	VF-101G-T	VF-102G-T	VF-106G-T
	TX: 1310nm RX: 1550nm	TX: 1310nm RX: 1550nm	TX: 1310nm RX: 1550nm

	VF-101G-R	VF-102G-R	VF-106G-R
	TX: 1550nm RX: 1310nm	TX: 1550nm RX: 1310nm	TX: 1550nm RX: 1310nm
Launch Power (dBm)	Max.: 0, Min.: -9		
Receive Sensitivity (dBm)	-26		
Max. Input Power (dBm)	-3		
Cable	9/125µm single mode cable		
Hardware Specifications			
LED Indicators	<ul style="list-style-type: none"> • Power • Video • Link (fiber optic) 		
Dimensions (W x D x H)	94 x 70 x 26 mm		
Weight	200g		
Power Requirement	5V DC, 2A		
Power Consumption	4.8 watts (maximum)		
Mechanical	Metal		
Installation	Wall-mountable, DIN rail (with optional kit), chassis installation (with optional chassis)		
Compatible Converter Chassis	MC-700/MC-1500/MC-1500R		
Standards Conformance			
Regulatory Compliance	FCC, CE		
Environment			
Operating	Temperature: -25 ~ 70 degrees C Relative Humidity: 0 ~ 95% (non-condensing)		
Storage	Temperature: -30 ~ 80 degrees C Relative Humidity: 0 ~ 95% (non-condensing)		
Standard Accessories			
Packet Contents	VF-101G/102G/106G-T x 1 VF-101G/102G/106G-R x 1 User's manual x 1 5V power adapter x 2		

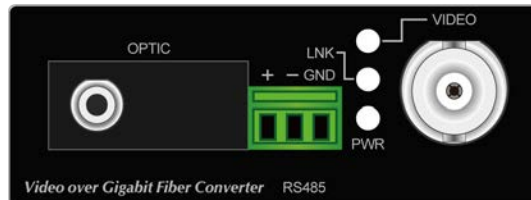
3.3 Physical Specifications

Dimensions (W x D x H)	94 x 70 x 26 mm
Weight	200g (gross weight)

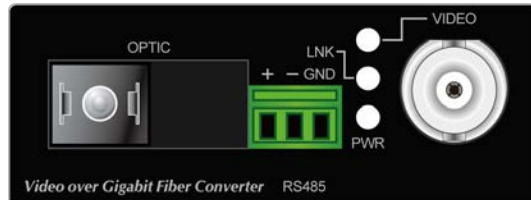
■ **Front Panel:**
VF-101G-KIT



VF-102G-KIT



VF-106G-KIT



■ **LED definition:**

LED	Color	Function
PWR	Green	Lights to indicate that the device is powered.
VIDEO	Green	Lights to indicate the device receives video signal.
LNK	Green	Lights to indicate the fiber connection is established.

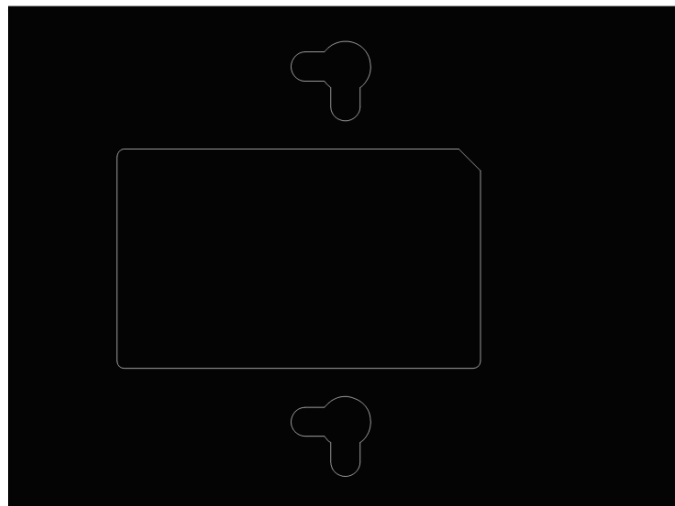
■ **Real Panel:**



■ **Top Panel:**



■ **Bottom:**



3.4 Environmental Specifications

Operating	-25 ~ 70 degrees C Relative Humidity: 0 ~ 95% (non-condensing)
Storage	-30 ~ 80 degrees C Relative Humidity: 0 ~ 95% (non-condensing)

3.5 Electrical Specification

Device Input Voltage	5V DC, 2A
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3.6 Regulatory Compliance

FCC, CE.

3.7 Reliability

MTBF > 50,000 hrs @ 25 Degree C

3.8 Basic Packaging

- VF-101G/102G/106G-T/Transmitter x 1
- VF-101G/102G/106G-R/Receiver x 1
- 5V DC, 2A Adapter x 2
- User's Manual x 1

3.9 Package Information

Dimensions (W x D x H)	295 x 245 x 76 mm
Weight	930g
Carton Dimensions (W x D x H)	424 x 324 x 296 mm
Carton Weight	4.7kg
Carton Unit	5pcs in one carton