





## VL-4-V Series Digital Video Fiber Converters <sup>VL-4</sup>

Models	Channel Count			
	 video	 data	 audio	 1CC alarm
VL-4-V	4	--	--	1
VL-4-VD	4	1	--	1
VL-4-V2D	4	2	--	1
VL-4-V4D	4	4	--	1
VL-4-VA	4	--	1	1
VL-4-V2A	4	--	2	1
VL-4-VDA	4	1	1	1
VL-4-V2D2A	4	2	2	1
VL-4-V4D2A	4	4	2	1



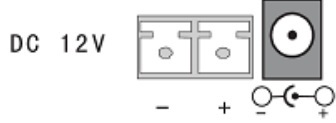
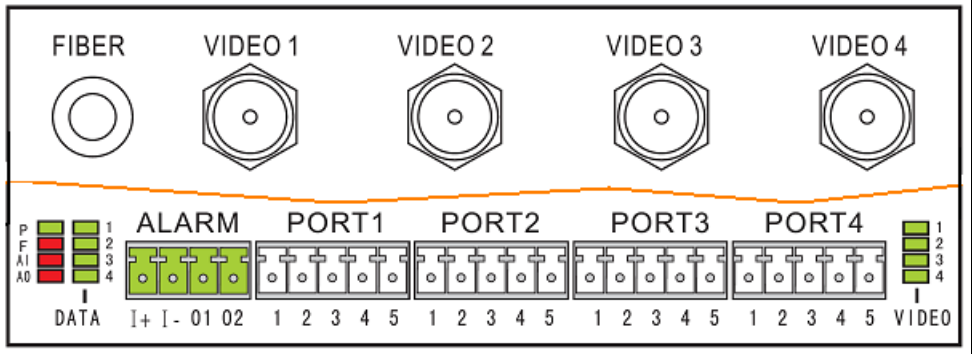
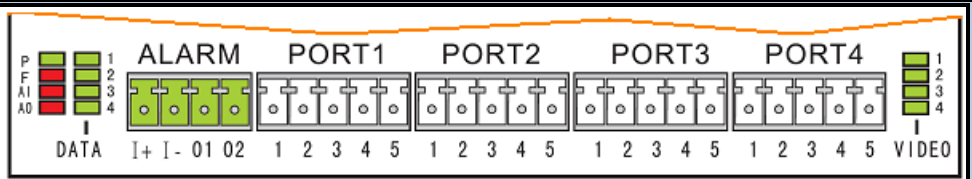
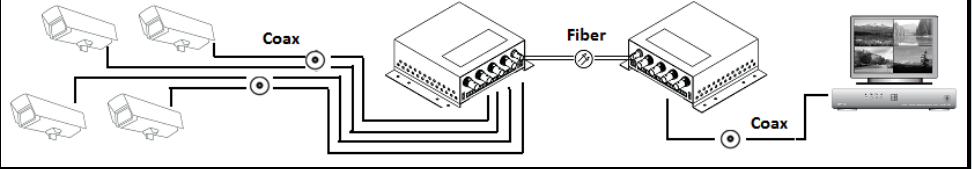
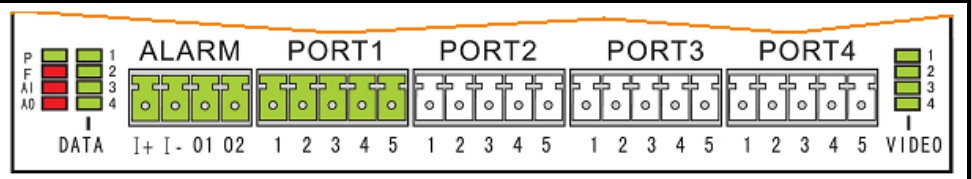
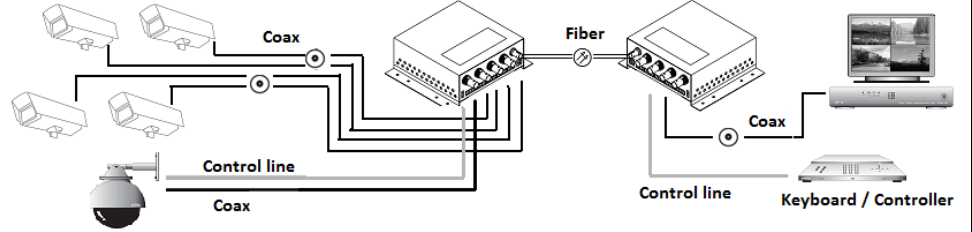
### PRODUCT DESCRIPTION

- **VL-4-V** series digitally encoded video fiber converter is specifically designed for surveillance systems requiring seamless transmission over long distances. And it has been widely used in premises, factories, airports, freeways and tunnels.
- **VL-4-V,nD,mA** all models are capable of transmitting video channels in one way, multiport data channels via **RS-232, RS-485 or RS-422** and bi-directional contact closure alarm over one single strand of single-mode or multimode fiber.
- **VL-4-V** series models can be *stand-alone* unit (powered by external adaptor), and *slide-in card* type to fit in **VR-1** (16 slots) series 19-in 3.5U-chassis for central wiring cabinet and management.

### KEY FEATURES

- Compatible with NTSC, PAL and SECAM formats
- Digitally encoded transmission without compression
- No crosstalk, signal attenuation and distortion existing in baseband and FM products
- Plug-and-play, no adjustment needed
- Simultaneous transmission of video and alarm signals over one single strand of fiber
- Ultra-long transmission ability using state-of-the-art fiber optic encoding and modulation technology
- Designed for reliable operation in harsh environments
- Comprehensive diagnostic LEDs for easy maintenance
- Stand-alone units and slide-in cards (compatible with VR-1 rack chassis)
- RoHS Compliance

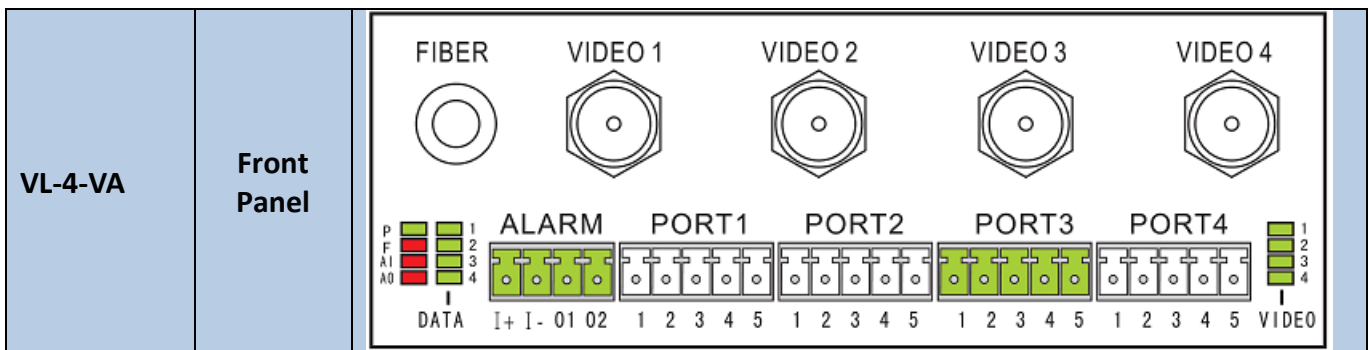
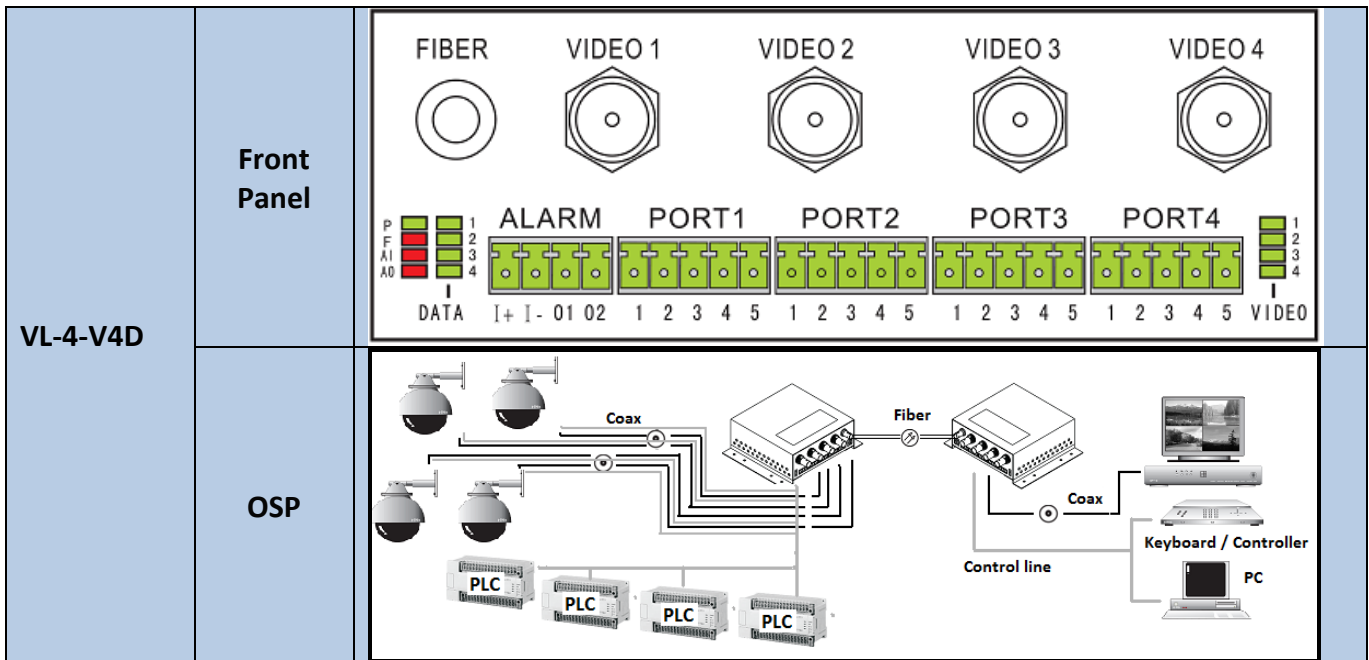
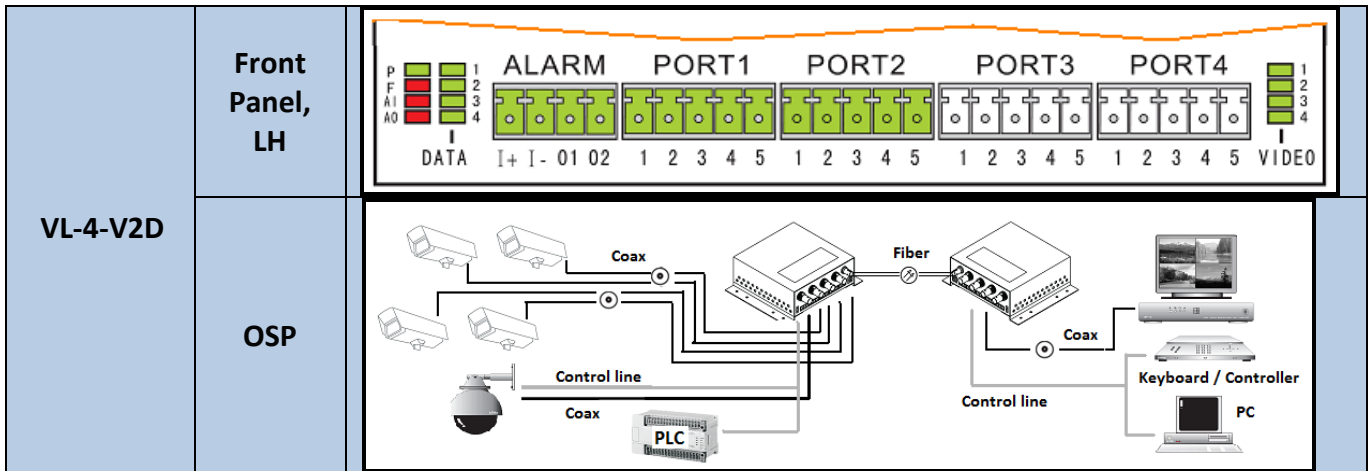
**TYPICAL APPLICATIONS**

Models	Panels & Out Side Plant (OSP) Applications	
ALL	Rear Panel	
	Front Panel (Upper Half, UH)  (Lower Half, LH)	
VL-4-V	Front Panel (Lower Half, LH)	
	OSP	
VL-4-VD	Front Panel, LH	
	OSP	



**VL-4-V Series Digital Video Fiber Converter** <sup>VL-4</sup>  
VL-4-V- Order Form VL-1-V Series

Access Technologies ... FTTX, IP Digital Surveillance Networking

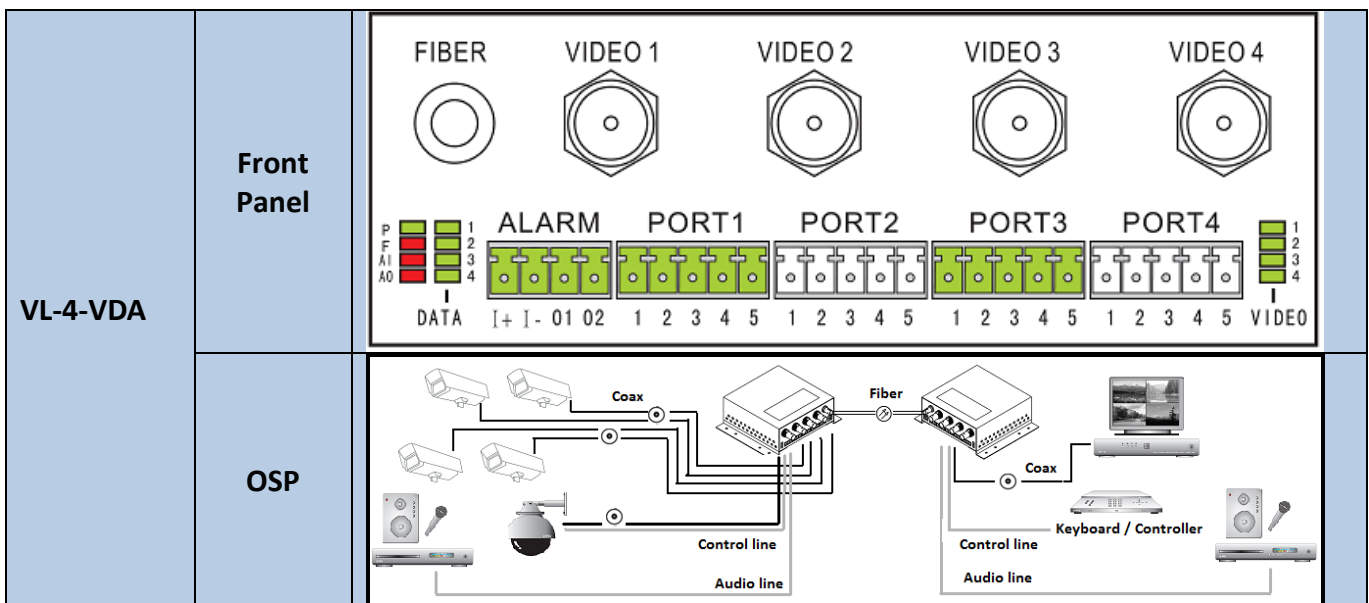
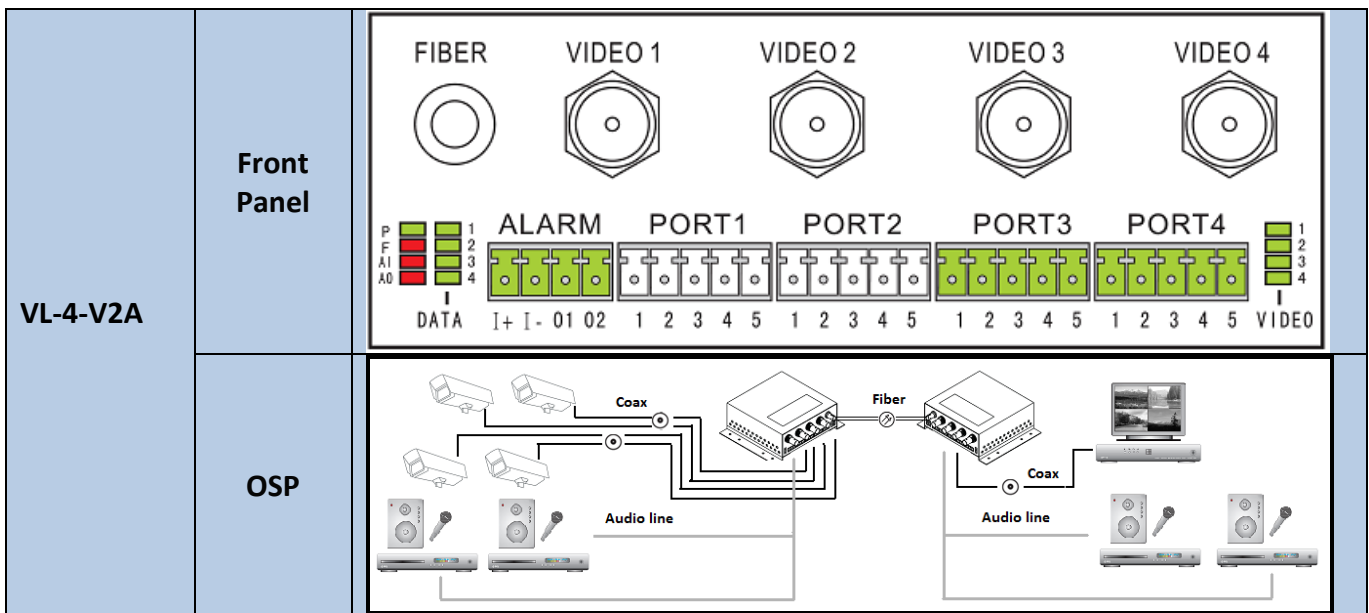
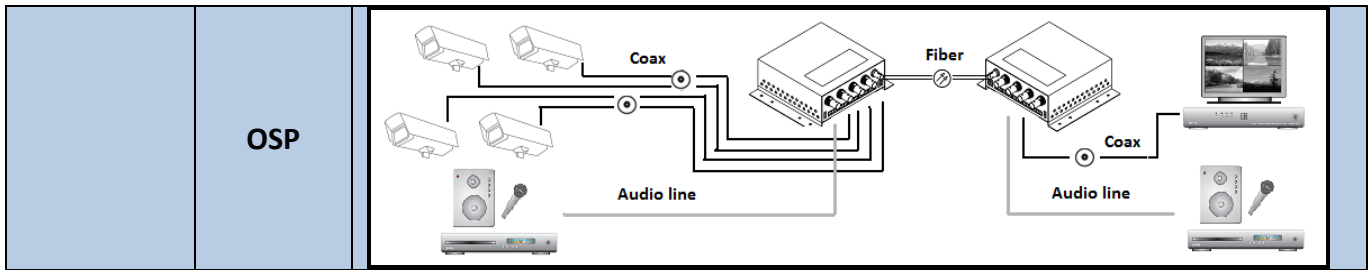




# VL-4-V Series Digital Video Fiber Converter <sup>VL-4</sup>

[VL-4-V- Order Form](#)
[VL-1-V Series](#)

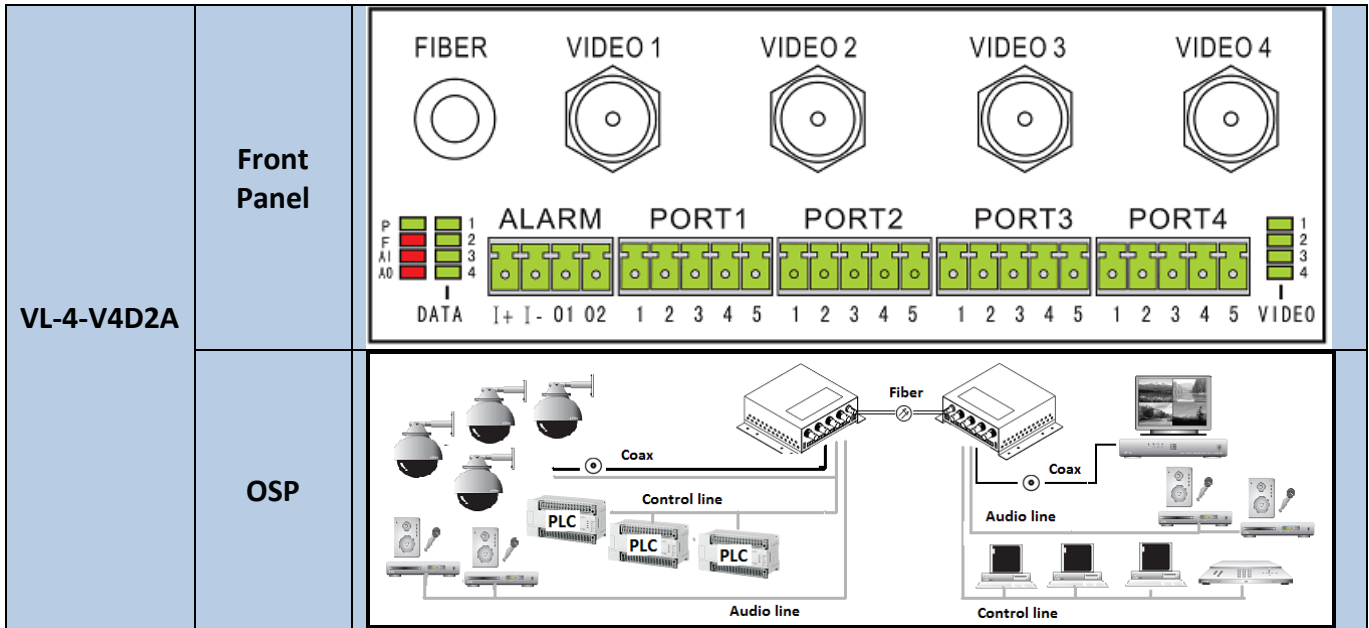
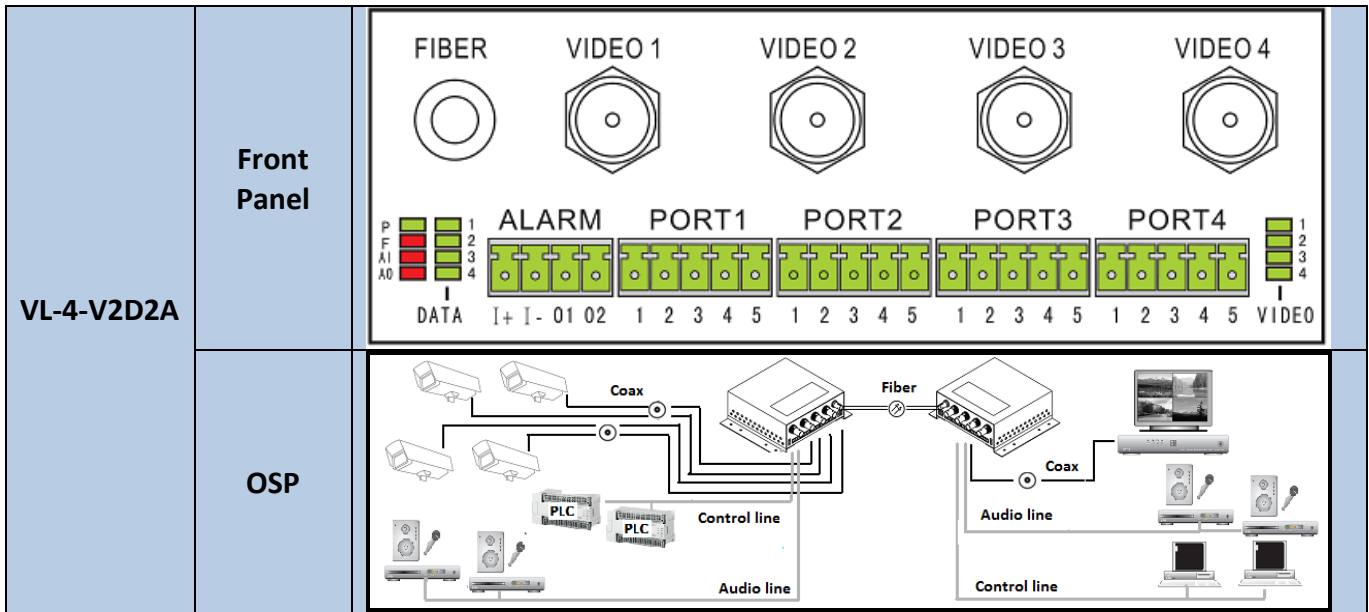
Access Technologies ... FTTX, IP Digital Surveillance Networking





**VL-4-V Series Digital Video Fiber Converter** <sup>VL-4</sup>  
VL-4-V- Order Form VL-1-V Series

Access Technologies ... FTTX, IP Digital Surveillance Networking





### General Specifications

<b>Power Supply</b>	12 VDC, from adaptor for stand-alone units; from rack chassis for slide-in cards
<b>Power Consumption</b>	< 10 W
<b>Dim. (Excl. Connector)</b>	Stand-alone unit (mm): 121.5 x 43 x 121; Slide-in card(mm): 155.2 x 42.8 x 121.2
<b>Weight</b>	Stand-alone unit: 580 g; Slide-in card: 380 g
<b>Operating Temperature</b>	Main unit: -20 ~ +60°C; Power adaptor: 0 ~ +40°C
<b>Storage Temperature</b>	-40 ~ +80°C
<b>Operating Humidity</b>	0 ~ 95%, non-condensing
<b>EMI compliance</b>	FCC Class A, CE Class A

### Optics

<b>Optical Wavelength</b>	Multimode: 1310 nm Single-mode: 1550 nm at CO-monitor end; 1310 nm at Remote-camera end; Wavelengths can be interchanged for ultra long distance transmission.
<b>Fiber Type</b>	Multimode (50/125 μm or 62.5/125 μm) or single-mode (9/125 μm) fiber
<b>Link Distance</b>	Multimode: < 3 km; Single-mode: < 30 km~50km
<b>Connector</b>	Simplex ST (FC on request)

### Video

<b>Numbers of Channels</b>	4, one-direction	<b>Video Bandwidth per Channel</b>	5 Hz ~ 8 MHz
<b>Connector</b>	BNC female		
<b>Input Impedance, Transmitter1</b>	75 Ω typical	<b>SNR</b>	> 62 dB (weighted)
		<b>Video Gain</b>	1 ± 5%
<b>Output Impedance, Receiver2</b>	75 Ω typical	<b>Differential Gain (DG)</b>	< 1.5%
		<b>Differential Phase (DP)</b>	< 2°
<b>Video Input Level, Transmitter1</b>	1 V <sub>p-p</sub> typical, 1.5V <sub>p-p</sub> max.	<b>Tilt</b>	< 0.5%

### Data

	1D	2D	4D
<b>No. Channels</b>	1 (two-direction)	2 (two-direction)	4 (two-direction)
<b>Connector per Channel</b>	5-wire terminal block, 3.5 mm		
<b>Data Format</b>	2-wire RS-485 (RS-232 or 4-wire RS-422/485 on request)		
<b>Baud Rate per Channel</b>	0 ~ 115 kbps		
<b>Bit-Error Rate</b>	< 10 <sup>-9</sup>		

### Audio

	1A	2A
<b>No. of Channels (stereo)</b>	1, two-direction	2, two-direction
<b>Connector per Channel</b>	5-wire terminal block, 3.5 mm	
<b>Audio Max. Input/Output Level</b>	3.5V <sub>p-p</sub>	
<b>Audio Input Impedance</b>	High impedance	
<b>Audio Output Impedance</b>	10 Ω typical	
<b>Audio Gain</b>	0 dB ± 1 dB	
<b>Audio Bandwidth per Ch</b>	0.07 ~ 14 kHz	
<b>SNR</b>	> 80 dB	

### Alarm

<b>No. of Channels</b>	1, two-direction
<b>Connector per Channel</b>	4-wire terminal block, 3.5 mm
<b>Input Type</b>	Open/closed sensing
<b>Input Short Current</b>	< 20 mA
<b>Output Type</b>	Contact closure
<b>Output Max. Load Current</b>	0.5 A @ 125 VAC, 2 A @ 30 VDC
<b>Output Max. Load Voltage</b>	250 VAC, 220 VDC



**VL-4-V Series Ordering Information**

The Digital Video Fiber Converter supports the following models.

Please check into the box  **V** firstly to select the model required while ordering.

<input checked="" type="checkbox"/> <b>V</b> ↓ ↓ ↓	Models	Channel Count			
		<input checked="" type="checkbox"/> <b>V</b> video	<input checked="" type="checkbox"/> <b>D</b> data	<input checked="" type="checkbox"/> <b>A</b> audio	<input checked="" type="checkbox"/> <b>1CC</b> alarm
<input type="checkbox"/>	VL-4-V	4	--	--	1
<input type="checkbox"/>	VL-4-VD	4	1	--	1
<input type="checkbox"/>	VL-4-V2D	4	2	--	1
<input type="checkbox"/>	VL-4-V4D	4	4	--	1
<input type="checkbox"/>	VL-4-VA	4	--	1	1
<input type="checkbox"/>	VL-4-V2A	4	--	2	1
<input type="checkbox"/>	VL-4-VDA	4	1	1	1
<input type="checkbox"/>	VL-4-V2D2A	4	2	2	1
<input type="checkbox"/>	VL-4-V4D2A	4	4	2	1

Please check into the box  **V** to specify the working parameters, below, are common to all models.

Specify the transmission or receiving of video signal.	
<input type="checkbox"/>	Transmit the video signal from camera end.
<input type="checkbox"/>	Receive the video signal at monitor end.

Specify the type of optical connector.	
<input type="checkbox"/>	ST Connector
<input type="checkbox"/>	FC Connector

Specify the mode of optical fibre.	
<input type="checkbox"/>	Multimode (<3km)
<input type="checkbox"/>	Standard Single Mode (<30km)
<input type="checkbox"/>	Long Distance Single Mode (<50km)
<input type="checkbox"/>	Ultra Long Distance Single Mode (<80km)

Specify the unit type.	
<input type="checkbox"/>	Stand alone
<input type="checkbox"/>	Slide in card
<input type="checkbox"/>	
<input type="checkbox"/>	

Data channels, shown below, are specific to model ordered.

VL-4-VD;	VL-4-VDA	<input type="checkbox"/> RS 232 ;	<input type="checkbox"/> RS 422;	<input type="checkbox"/> RS 485
----------	----------	-----------------------------------	----------------------------------	---------------------------------

Specify the number N of data channel in the parenthesis (N), where N=1, 2 or 3.

VL-4-V2D;	VL-4-V2D2A	<input type="checkbox"/> RS 232 (    );	<input type="checkbox"/> RS 422 (    );	<input type="checkbox"/> RS 485 (    )
-----------	------------	---	---	--

For example, check into box and parenthesis as shown below for one RS232 and two RS422 data channels when ordering VL-4-V2D or VL-4-V2D2A.

RS 232 ( 1 );  RS 422 ( 2 );  RS 485 (    )

Specify the number N of data channel in the parenthesis (N), where N=1, 2, 3 or 4 is allowed.

VL-4-V4D	<input type="checkbox"/> RS 232 (    );	<input type="checkbox"/> RS 422 (    );	<input type="checkbox"/> RS 485 (    )
VL-4-V4D2A	Note that only 4 channels of RS485 two wires are allowed when ordering VL-4-V4D2A.		

Upon receipt of this Ordering Form, Wamin Sales Representative will respond customer with Ordering Code for confirming the configuration that customers intend to order.