Technical Specifications
TL-FO2-VLC

Features at a Glance

- Transmit HDMI and IR or RS232 over two fiber optic conductors
- LC connectors for fiber connection
- Single & multimode fiber compatible
- Extend 18G HDMI up to 10km
- HDMI 2.0 & HDCP 2.2 compliant
- 4K@60 compliant
- Immune to RF & EM interference

The TL-FO2-VLC is an HDMI 2.0 (18G signal) with HDCP 2.2 support fiber optic extender set that can reach up to 10km over a duplex fiber optic cable with common LC terminations. The unit supports HDMI video resolutions up to 4K@60, HDR video, IR or RS232 pass-through controls and multichannel audio. Integrated mounting ears are included on both the Tx and Rx units.

The TL-FO2-VLC uses color space conversion to reduce 18gbps bandwidth signals to 10gbps in order to successfully transmit the signal over the 10gbps link provided by the included SFP+ modules. The video is restored to the original signal at the receiver (Rx).

Bidirectional IR or RS232 control signals are extended simultaneously to the video and audio signals. Only one control method may be used at a time. The units include 'Mode' Switches to enable/disable the IR signal.
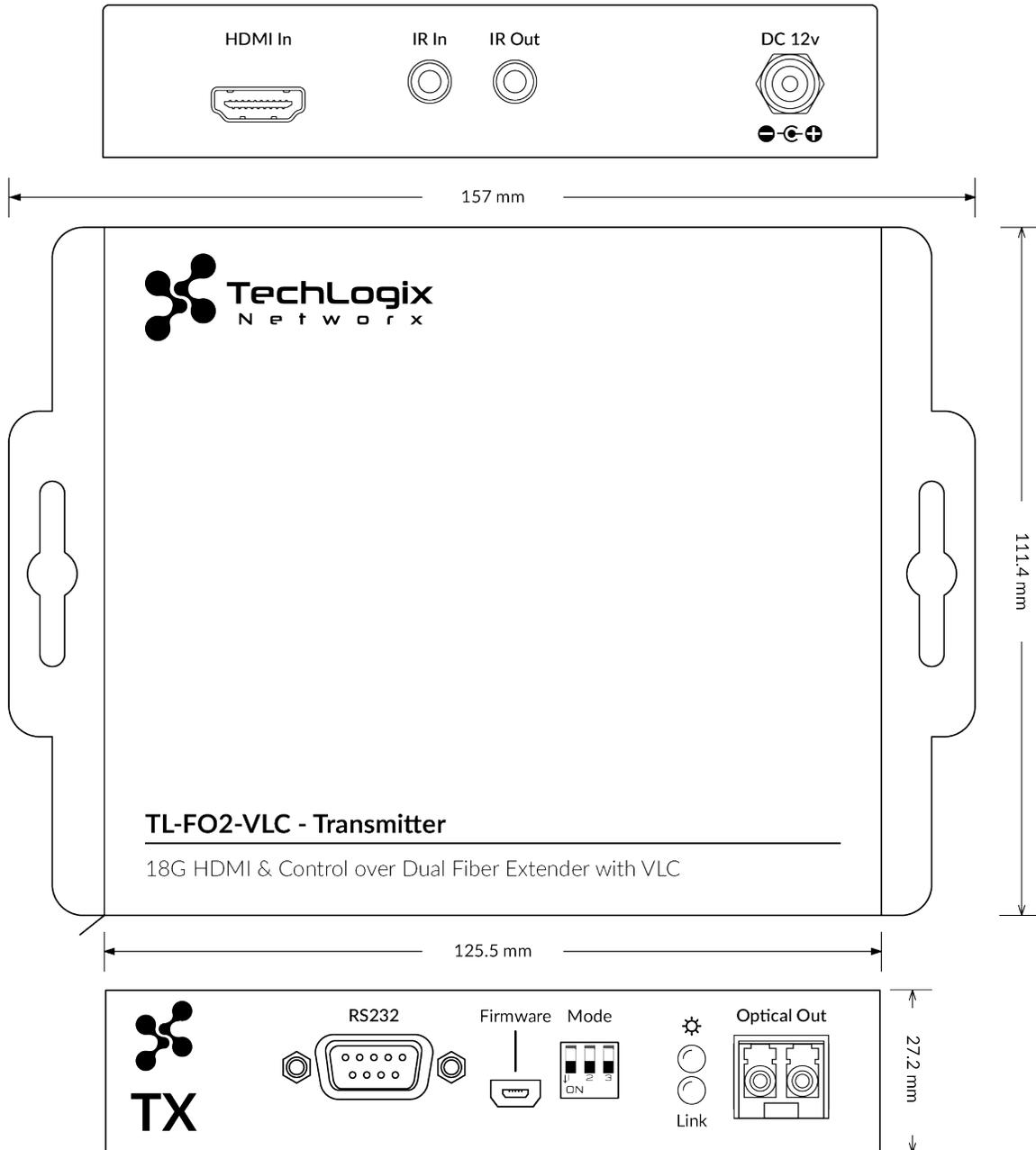
The product is available in two variations:
The **TL-FO2-VLC-SM** includes single mode fiber optic modules and have a maximum distance of 10km.
The **TL-FO2-VLC-MM** includes multimode fiber optic modules and has a maximum distance of 300m.

Specifications

Transmitter Input/Output

HDMI Input	1 HDMI Receptacle – Type A Female
Optical Output	2 LC Ports via SFP+ Module
IR Input/Output	2 3.5mm TRS Ports
RS232	1 DE-9 Female Connector
12V DC	1 5.5mm OD/2.5mm ID Barrel Connector
Mode Selector	3 2-position Rocker DIP Switch

Receiver Input/Output

HDMI Output	1 HDMI Receptacle – Type A Female
Optical Input	2 LC Ports via SFP+ Module
IR Input/Output	2 3.5mm TRS Ports
RS232	1 3-pin Removable Terminal Block
12V DC	1 5.5mm OD/2.5mm ID Threaded Barrel Connector
Control Selector	1 2-position Switch

Supported Audio, Video, and Control

Compatible Video Signals	All SD, HD, and other resolutions up to - 4K/60 Hz / RGB and 4:4:4 8 bit (HDR) - 4K/60 Hz / 4:2:2 10 bit (HDR) - 4K/60 Hz / 4:2:0 10 bit (HDR)
Video Compliance	HDMI 2.0, HDMI 1.4, DVI 2.0 (Pixel clock up to 600 MHz)
Digital Content Protection	HDCP 1.2 / HDCP 2.2 Compatible
Embedded Audio	LPCM, Dolby Digital/Plus/EX, Dolby True HD, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD
Supported RS232 Baud Rates	2400, 4800, 9600, 19200, 38400, 57600, 115200
Supported IR Carrier	20 to 60 kHz

Fiber Optic Transmission Characteristics

Required Cable Type	TL-FO2-VLC-MM: 2 strand OM3/4/5
	TL-FO2-VLC-SM: 2 strand OS2
Maximum Bandwidth	10 Gbps
Maximum Distance with Included SFP+ Modules	TL-FO2-VLC-MM: 300m (984 ft)
	TL-FO2-VLC-SM: 10km (32,808 ft)
Signal Compression	1.8:1 Maximum; Compression starts when video signal >9 Gbps

Chassis and Environmental

Product Construction	Painted Steel
Product Dimensions (W*H*D)	157 mm (6.18 in) x 23 mm (0.91 in) x 112 mm (4.41in)
Product Operational Chassis Temperature	35 to + 44°C (95 to + 111 °F)
Environmental Operating Temperature	0 to + 45°C (32 to + 113 °F)
Environmental Operating Humidity	10% to 90%, non-condensing
Environmental Storage Temperature	-20 to +70°C (-4 to + 158 °F)
Environmental Storage Humidity	10% to 90%, non-condensing

Power and Regulatory

Power Supply Inlet	IEC 60320/C8
Power Supply Input	100-240V AC at 50/60 Hz; 0.5A Max
Power Supply Output	12V DC at 2 A
Maximum Power Consumption	20 watts
ESD Protection	Human-body Model: ±8kV Air-gap discharge and ±4kV Contact discharge
Regulatory Compliance	UL/C-UL, C-Tick, TUV/GS, FCC, CE, RoHS, WEEE

Other

Warranty	Three years
Diagnostic LEDs	Link and Power
Included Accessories	TL-FO2-VLC-MM: Receiver (1 ea), Transmitter (1 ea), 12V 2A DC Power Supply (2 ea), IR Receiver (1 ea), IR Transmitter (1ea), TL-10GSFPP-MM300 (2 ea)
	TL-FO2-VLC-SM: Receiver (1 ea), Transmitter (1 ea), 12V 2A DC Power Supply (2 ea), IR Receiver (1 ea), IR Transmitter (1ea), TL-10GSFPP-SM10K (2 ea)

Transmitter Dimensional Drawings

HDMI In   IR In   IR Out   DC 12v

157 mm

TechLogix
N e t w o r x

111.4 mm

TL-FO2-VLC - Transmitter

18G HDMI & Control over Dual Fiber Extender with VLC

125.5 mm

TX   RS232   Firmware   Mode   Optical Out

ON   1 2 3

Link

27.2 mm

Receiver Dimensional Drawings

HDMI Out   IR In   IR Out   DC 12v

157 mm

111.4 mm

TechLogix
N e t w o r x

TL-FO2-VLC - Receiver

18G HDMI & Control over Dual Fiber Extender with VLC

125.5 mm

27.2 mm

RX

RS232   Firmware   Mode   Optical In

Link