HDMI Extender over Fibre
4K/60Hz, 4:4:4

Operating Instructions

Version 1.0

Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Table of Contents

1.0 Introduction

The SC05.9000F extends the distance between the HDMI source and display using a single or multi mode fibre up to 10km. Uncompressed 4K/60Hz video is transmitted without delay or signal degradation. This extender supports full duplex RS232, embedded/de-embedded audio and bi-directional infrared. The units are only 18mm in height making them a perfect solution for installing behind any display.

The extender is supplied as a pair and includes fibre modules, RS232 Phoenix terminals and PSU's.

2.0 Features

- HDMI 2.0b, HDCP 2.2 and DVI 1.0 compliant
- Uncompressed 4K@60Hz 4:4:4 up to 18Gbps video bandwidth
- HDR, HDR10, HDR10+, Dolby Vision and HLG pass through
- LPCM, Dolby Digital/Plus/EX, Dolby True HD, DTS, DTS-EX, DTS-96/24,
- DTS High Res, DTS-HD Master Audio, DSD pass through
- Transmission distance up to 10km over single-mode, 300m over multi-mode
- Transmitter has HDMI loop through for a local display
- Bi-directional IR and Full Duplex RS-232
- Analogue audio embedding and de-embedding

3.0 Package Contents

1 x Transmitter
1 x Receiver
1 x IR Blaster Cable (1.5m)
1 x IR Receiver Cable (1.5m)
2 x 3-Pin Phoenix Terminals
2 x 5V/1A Power Adaptor

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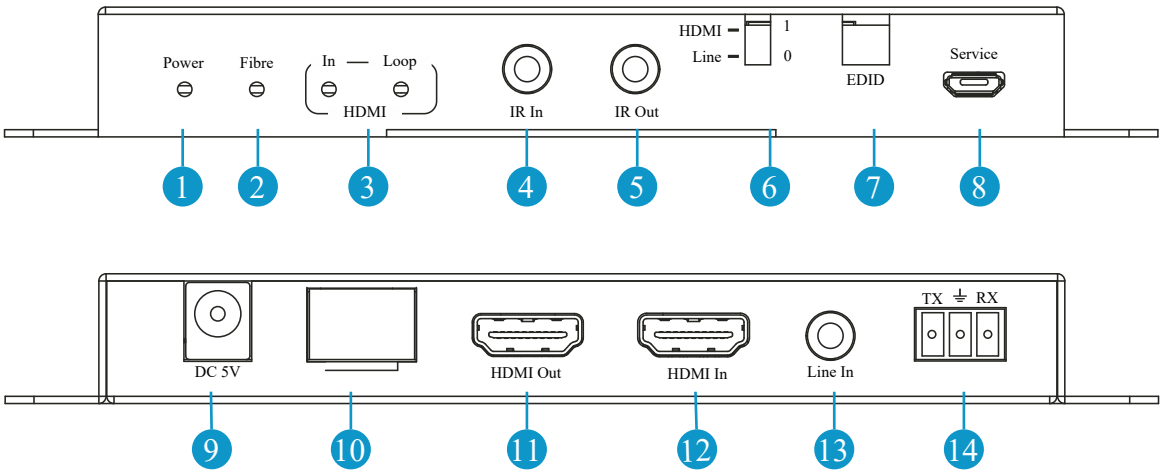
4.0 Specifications

Technical		
HDMI Compliance	HDMI 2.0b	
HDCP Compliance	HDCP 2.2	
Video Bandwidth	18Gbps	
Video Resolution	Up to 4K@60Hz 4:4:4	
HDBaseT Bandwidth	16Gbps on main and 2Gbps on return link	
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG	
Colour Space	RGB, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0	
Colour Depth	8/10/12-bit	
Audio Formats	LPCM2/5.1/7.1CH, Dolby Digital/Plus/EX, Dolby True HD, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS HD Master Audio, DSD	
L/R Audio Formats	PCM 2.0	
IR Level	12V p-p	
IR Bandwidth	20K - 60KHz	
RS232	4800 to 115200bps	
Transmission Distance	10km over Single Mode and 300m over Multi Mode	
ESD Protection	Human Body Example - +/-8kV (air gab discharge) & +/-4kV (contact discharge)	
Connections		
Transmitter	Inputs	1 x HDMI (Type-A, 19-Pin Female)
		1 x Stereo Audio (3.5mm Jack Socket)
		1 x IR Input (3.5mm Jack Socket)
		1 x RS232 (3-Pin Phoenix Terminal)
		1 x Service Port (mini USB)
	Outputs	1 x HDMI (Type-A, 19-Pin Female)
		1 x Optical Fibre (LC Female)
		1 x IR Output (3.5mm Jack Socket)
Receiver	Inputs	1 x Optical Fibre (LC Female)
		1 x IR Input (3.5mm Jack Socket)
		1 x Service Port (mini USB)
	Outputs	1 x HDMI (Type-A, 19-Pin Female)
		1 x RS232 (3-Pin Phoenix Terminal)
		1 x IR Output (3.5mm Jack Socket)
		1 x Stereo Audio (3.5mm Jack Socket))
Mechanical		
Housing		Metal Enclosure
Colour		Black
Dimensions	Transmitter	(W) 134 x (D) 68 x (H) 18mm
	Receiver	(W) 134 x (D) 68 x (H) 18mm
Weight		Transmitter 280g and Receiver 278g
Power	Input	AC 100 - 240V 50/60Hz
	Output	DC 5V/1A
	Consumption	Transmitter 3.85W and Receiver 2.7W
Operating Temperature		0 - 40ºC
Storage Temperature		-20 - 60ºC
Relative Humidity		20 - 90% RH (no condensation)

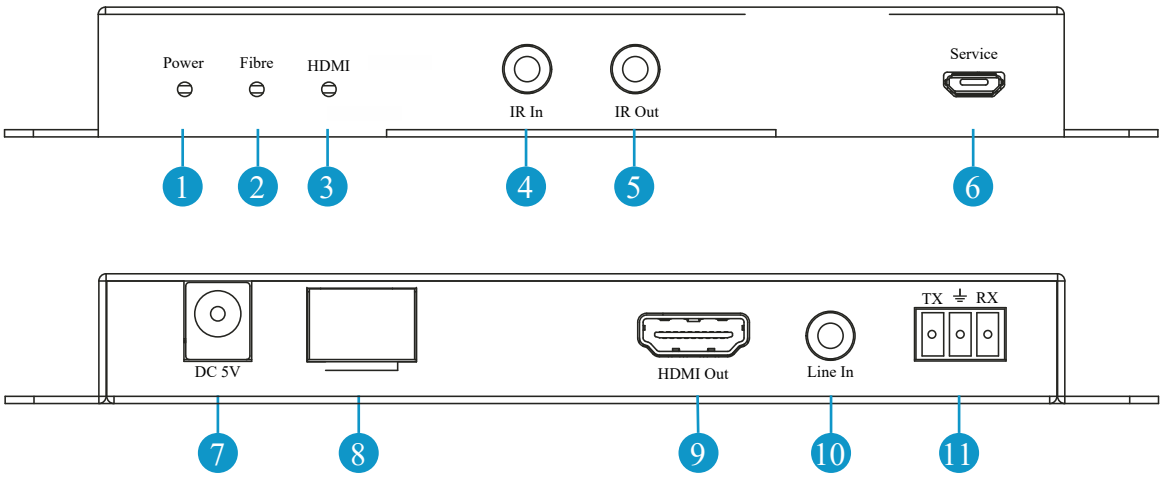
5.0 Controls and Functions

5.1 Transmitter Panel



No.	Name	Function / Description
1	Power LED	Illuminates when powered on
2	Fibre LED	Illuminates when a fibre connection is made between the TX and RX
3	HDMI LED	HDMI LED's illuminate when a signal/display is detected
4	IR in	Connect IR Receiver cable to send IR data to the receivers IR out
5	IR Out	Connect IR Blaster cable to receive IR data from the receivers IR In
6	Audio Switch	Switches between HDMI In and Line In.
7	EDID DIP Switch	11 : Copy RX HDMI Out 10 : Copy TX HDMI Loop Out 01 : 4K60_2CH 00 : 1080P_2CH
8	Service	Firmware upgrade only
9	DC 5V	Connect Power Supply. DC 5V/1A
10	Fibre	Insert the transmitter optical fibre module and cable
11	HDMI Out	Connect to a local HDMI display
12	HDMI In	Connects to HDMI source
13	Line In	Connects to a stereo audio source
14	RS-232	RS-232 Pass-Through to the receiver

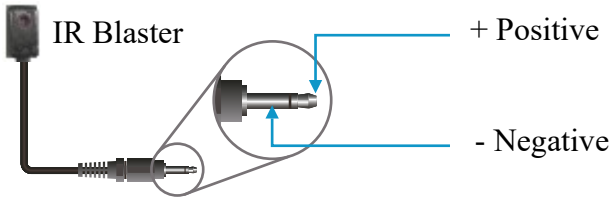
5.2 Receiver Panel

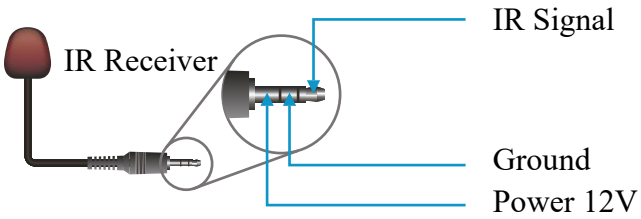


No.	Name	Function / Description
1	Power LED	Illuminates when powered on
2	Fibre LED	Illuminates when a fibre connection is made between the TX and RX
3	HDMI LED	HDMI LED's illuminate when a display is detected
4	IR in	Connect IR Receiver cable to send IR data to the transmitter IR out
5	IR Out	Connect IR Blaster cable to receive IR data from the transmitter IR In
6	Service	Firmware upgrade only
7	DC 5V	Connect Power Supply. DC 5V/1A
8	Fibre	Insert the receiver optical fibre module and cable
9	HDMI Out	Connect to a HDMI display
10	Audio Out	Extracted analogue audio from HDMI signal
11	RS-232	RS-232 Pass-Through to the transmitter

5.3 IR Pin Connections

IR Blaster IR Receiver





Note: When the angle between the IR receiver and the remote control is +/- 45 degrees, the transmission distance is 0-5 meters. When the angle between the IR receiver and the remote control is +/- 90 degrees, the transmission distance is 0-8 meters.

6.0 Application Drawing