



1. Introduction

The optical extension module consists of transmitter module and receiver module, each of which has a LC connectors and a HDMI plug. Users could decide extension length at their discretion by choosing the length of fibre-optic cables with LC ferrules at the ends. It offers graphic TMDS signals to be extensible up to the limits of modal bandwidth of selected OM3 multi-mode glass fibers or Single-Mode fibers.

The communication between the TX and RX is bidirectional ,the data rate from the –T to –R is 10.2Gb/s with 1310nm, and from the –R to –T is 250Mb/s with 1550nm, the 1310nm and 1550nm optical signals are multiplexed to one fiber with a 1310/1550nm WDM filter insider the HDMI extender.

The HDMI Extender compliant HDMI 1.4 standard, It Support resolution is up to 3840*2016/30Hz (YUV 4:4:4) or 3840*2016/60Hz (YUV 4:2:0). It support distance up to 300m over OM3 MMF and SMF.

2. Features

- Resolution up to 3840*2160/30Hz(Y:U:V 4:4:4);
- Support resolution 3840*2160/30Hz(Y:U:V 4:2:0)
- Extend the HDMI data up to 300 meters over OM3 MMF or SMF Fiber;
- Support HDCP;
- Detachable feature with 1x LC OM3 MM Fiber or SM Fiber;
- Includes two (2) +5V DC power adapters for the transmitter and receiver
- Micro USB-B power connector;
- Data security with negligible RFI/EMI emissions and loss of video quality due to no copper conductor present

3. Specifications

	Parameter	Specifications
Resolution	4k*2k 30Hz	3840x2160/30Hz (YUV 4:4:4)
	4k*2k 60Hz	3840x2160/60Hz.(YUV 4:2:0)
Components	Laser Diodes in Tx Module	1310nm FP laser and 1550nm PIN PD
	Photo Diodes in Rx Module	1550nm FP laser and 1310nm PIN PD
	WDM filter	Integrated 1310nm/1550nm filter
Electrical	Input and Output Signals	TMDS Level (complying with DVI1.0)
	Data Transfer Rate (Graphic Data)	Max. 3.4Gbps
	Maximum Pixel Clock Frequency	340Mb/s
	Maximum Video Bit Rate	10.3Gb/s
	Total Jitter at the end of Rx output	Max. 309 ps
	Skew inter-channels	Max. 6ns
Optical	Link Power Budget	Min 8.5dB
Mechanical	Module dimension (mm)	59.5LX20.0WX10.5H
Connector	Optical Connector	1X LC connector
	Fiber connector	OM3 MM Fiber or Single-mode Fiber

4. DIAGRAM

