



DisplayPort Extender Series

User Manual

Model : DP02U

4K DisplayPort KVM with USB CAT5e Extender 150M



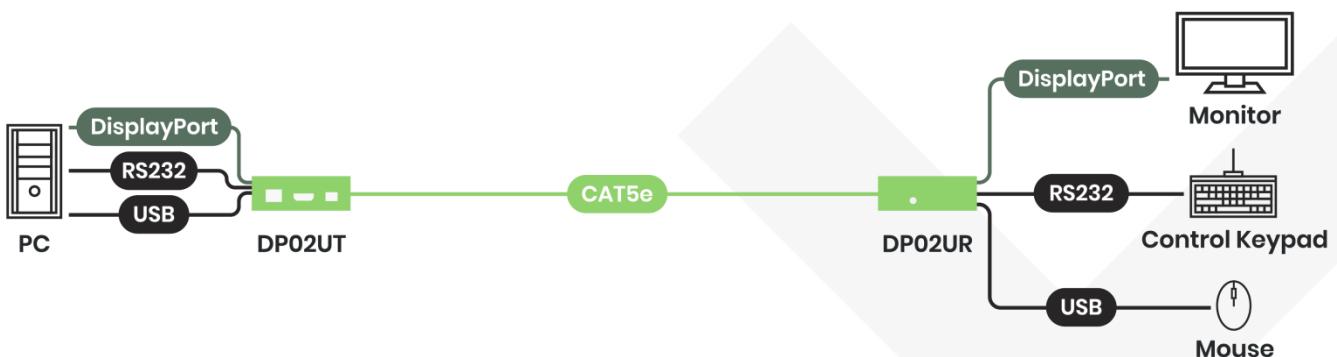
Introduction

DP02U is a DisplayPort over HDBaseT™ Extender that uses cost-effective Ethernet cable to send uncompressed video & audio, USB, bi-directional RS232 signals, with the resolution up to 4K@30Hz 4:4:4 and the transmission distance up to 150M. The 4 built-in USB ports at RX unit can connect multiple USB devices, such as keyboards, mouse, and flash drives. It is an ideal solution to show video from a PC/laptop on a projector/monitor.

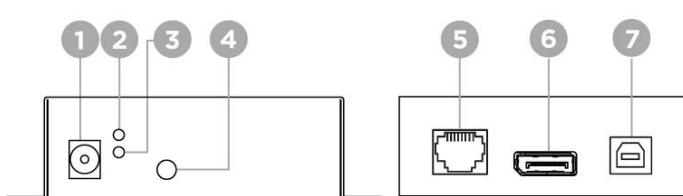
Features

- Resolution up to 4K@30Hz 4:4:4.
- Signal extension up to 150M over CAT5e or greater.
- Built-in 4 ports USB at RX unit.
- Supports bi-directional RS232 transmission.

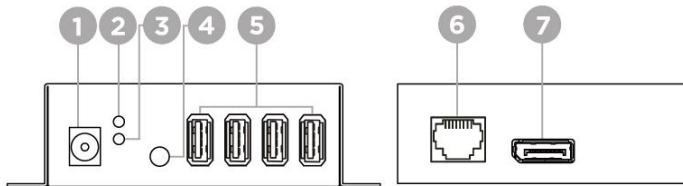
Installation View



Panel View



No.	Interface	Functionality
1	Power Jack	To connect with 5V 2A power adapter
2	Power Indication	To indicate power status (Refer to Description 1)
3	Link Indication	To indicate link status (Refer to Description 1)
4	3.5 mm Phone Jack	To connect with RS232 cable (Refer to Description 2)
5	RJ45 Connector	To connect with Ethernet cable (Refer to Description 3)
6	DisplayPort Connector	To connect with DisplayPort cable
7	USB-Type B Connector	To connect with USB cable



No.	Interface	Functionality
1	Power Jack	To connect with 5V 2A power adapter
2	Power Indication	To indicate power status (Refer to Description 1)
3	Link Indication	To indicate link status (Refer to Description 1)
4	3.5 mm Phone Jack	To connect with RS232 cable (Refer to Description 2)
5	USB-Type A Connector	To connect with USB cables
6	RJ45 Connector	To connect with Ethernet cable (Refer to Description 3)
7	DisplayPort Connector	To connect with DisplayPort cable

Transmission Distance Chart

Cable	Distance	Resolution
CAT5e / CAT6	150M	1080p 60Hz 8bit
CAT6a / CAT7		
CAT5e / CAT6	100M	1080p 60Hz 12bit
CAT5e	90M	1080p 60Hz 16bit
CAT6 / CAT6a / CAT7	100M	4096x2160@30Hz 4:4:4

If the Ethernet cable passes through the wall socket, the length of the cable between DP02U and Wall Jack must be fewer than 3 meters as connection diagram shown below:



Cable

We recommend using high-quality CAT5e, CAT6, CAT6a, CAT7 UTP/STP, or FTP cables to connect DP02U and DP02UR. Poor quality cables and any improper connection will cause video or audio disruptions and picture noise.

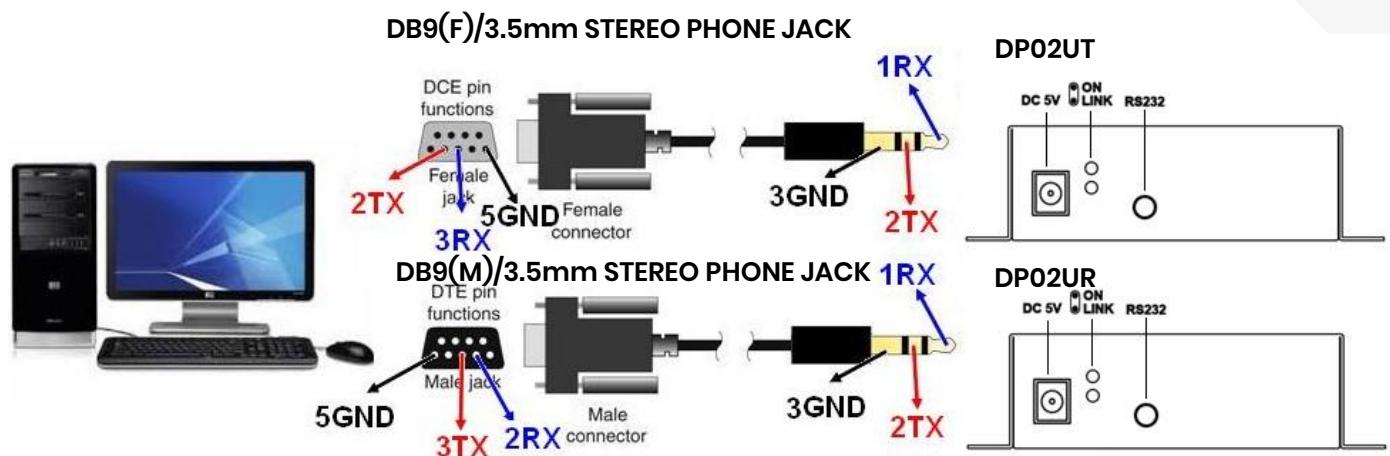
LED Indication

LED Indication	LED Color	Status
Power	Green ON/OFF	Power ON/OFF
LINK	Blue ON/OFF	Linked/ Unlinked
	Flash	Power Saving Mode ON

Power Saving Mode

When no video displaying or no connecting with any device, DP02U will automatically activate Power Saving Mode to disable RS232 and USB transmission function.

RS232 Define



DB9(F)/3.5mm STEREO PHONE JACK

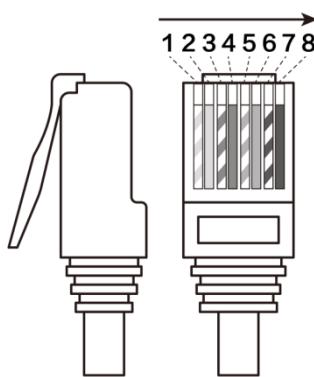
RS232		3.5 mm Phone Jack	
Footprint	Define	Footprint	Define
Pin 2	TX	Pin 1	RX
Pin 3	RX	Pin 2	TX
Pin 5	GND	Pin 3	GND

DB9(M)/3.5mm STEREO PHONE JACK

RS232		3.5 mm Phone Jack	
Footprint	Define	Footprint	Define
Pin 2	RX	Pin 1	RX
Pin 3	TX	Pin 2	TX
Pin 5	GND	Pin 3	GND

RJ45 Define

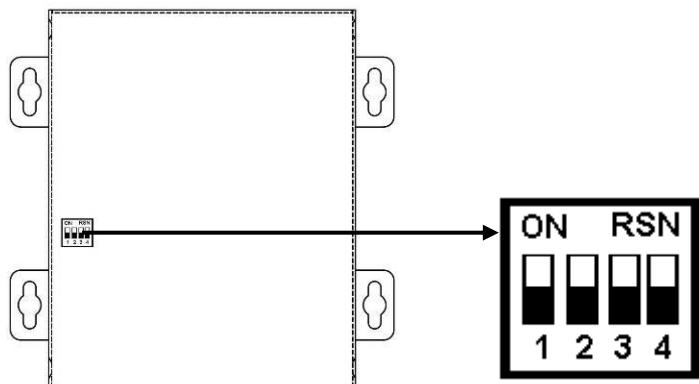
Pin	Color	Data
1	Orange-white	DATA0 +
2	Orange	DATA0 -
3	Green-white	DATA1 +
4	Blue	DATA2 +
5	Blue-white	DATA2 -
6	Green	DATA1 -
7	Brown-white	DATA3 +
8	Brown	DATA3 -



Switch Function

Switch	Position/Function			
	Position	Function	Position	Function
1	Off	4K Resolution	On	Long Reach Mode 1080p
2	Off		Off	
3	Off	RS232	On	Firmware update
4	Off	Reserved	On	Reserved

Switch combinations not listed in this table have no function



Trouble Shooting

- The connection cables must keep a distance from any equipment with an electromagnetic wave, i.e., mobile phone, microwave, radio equipment, fluorescent lamp, high voltage power lines.
- The cable must remain straight to avoid any crosstalk interference and to maintain good stability of the transmission.
- The HDBaseT technology does not communicate through the general Ethernet signal. Therefore, using the HDBaseT port to connect with network devices may cause damage to the extender.
- If there is interference or multiple DP02U used in the environment, using STP or FTP cable is highly recommended.
- This device does not support MST (Multi Stream Transport) hub function based on DP1.2

Trouble Shooting

- The wiring must away from any equipment with electromagnetic wave, i.e.: mobile phone, microwave, radio equipment, fluorescent lamp, high voltage power lines.
- The cable must pull in straight to avoid any crosstalk interference and the transmission stability.
- This device HDBaseT port is not general Ethernet signal; do not connect with Network devices to avoid damage.
- The receiver unit working temperature is higher which is in normal condition.
- The bottom dip switch was no function which is reserve.
- This device not support MST (Multi Stream Transport) hub function based on DP1.2

Package Includes

Item	Amount
DP02UT (Transmitter Unit)	1 pc
DP02UR (Receiver Unit)	1 pc
DC5V2A Power Adapter	2 pcs
USB A/B Cable	1 pc
DB9 (Male) 3.5mm Stereo Phone Jack	1 pc
DB9 (Female) 3.5mm Stereo Phone Jack	1 pc
Mounting Screw pack	1 bag

Specification

ITEM NO.	DP02UT	DP02UR
Support		
Compliance	DP 1.2a, HDCP, USB 2.0, 1.1, 1.0	
Max. DisplayPort Resolution	4K@30Hz 4:4:4	
Max. Transmission Distance	150M at 1080p@60Hz, 100M at 4K@30Hz 4:4:4	
Audio Format	LPCM 7.1 @ 192KHz, Dolby TrueHD, DTS-HD MA	
RS232 Baud Rate	115200 bps/ Full Duplex	
Ports & Interfaces		
Video Input	1 x DisplayPort	1 x HDBaseT
Video Output	1 x HDBaseT	1 x DisplayPort
USB Interface	1 x USB-Type B	4 x USB-Type A
RS232 Interface	1 x DB9(F)/3.5mm Stereo Phone Jack	1 x DB9(M)/3.5mm Stereo Phone Jack
Power		
Power Supply	DC 5V 2A Regulated	DC 5V 2A Regulated
Power Consumption	5W (Max), 1W (Power Saving)	6W (Max), 1W (Power Saving)
Ambient Temperature		
Operation	-10 to 45°C	
Storage	-30 to 70°C	
Humidity	up to 90%	
Physical Characteristics		
Dimensions	109.6 x 108 x 30mm	109.6 x 108 x 30mm
Weight	265	265