

HDAV[®]

DirectPlug DVI to HDMI Digital Video CAT5/RJ45 Mini-Extender Kit

User Manual

(MHDVI-C5)



[Must be used with Solid CAT5e or CAT6 Cable]

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Rev.1002

Full HD
1080

WUXGA
×1920
×1200

dvi
digital visual interface

HDMI[™]
HIGH-DEFINITION MULTIMEDIA INTERFACE
HDCP[™]
HIGH-DEFINITION CONTENT PROTECTION

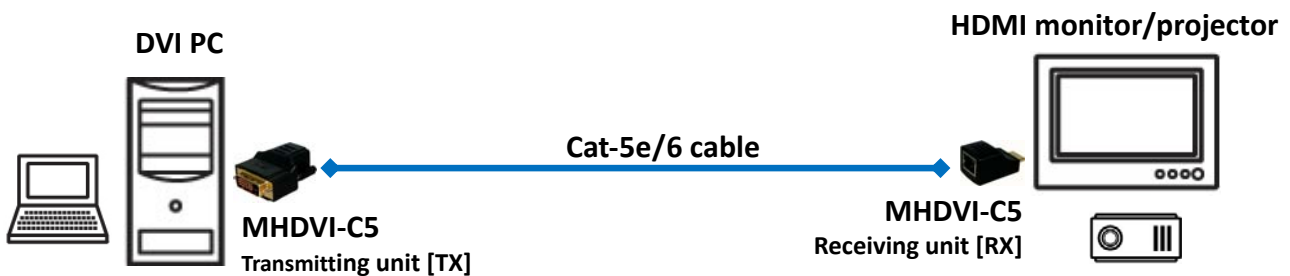
FC CE
RoHS
Compliance

Made in Taiwan

INTRODUCTION

The **MHDVI-C5 DirectPlug DVI to HDMI Digital Video CAT5/RJ45 Mini-Extender Kit** extends the DVI to HDMI transmission distance up to 25m (80ft) under HD resolution 720p or 1080i. With MHDVI-C5, users can transmit high quality digital video of PC applications through one cost effective Cat-5e/6 cable to the remote HDMI display or projector, instead of using short and expensive DVI-HDMI cables. With embedded EDID inside the extender, your PC will continue to send the digital video even when the HDMI display is not connected.

The MHDVI-C5 includes a transmitting unit and a receiving unit. The transmitting unit is connected to your PC DVI output and the receiving unit is connected to the HDMI display or projector. While successfully connected, the two LED lights on each RJ-45 connector will blink. The transmission distance between the transmitting and receiving units can be up to 25m (80ft) under XGA (1024x768@60) or HD (720p/1080i); or 15m (80ft) under WUXGA (1920x1200@60) or Full HD (1080p). With compact size and requiring no power, MHDVI-C5 is the most cost effective choice for bringing your impressive digital video to the remote HDTV.



Features

- DirectPlug DVI-D to RJ-45 and HDMI to RJ-45 adapters with programmable EDID feature
- Extend the transmission distance from the DVI sources up to 25m (80ft) under XGA (1024x768 @60) or HD (720p/1080i)
- Extend the transmission distance from the DVI sources up to 15m (80ft) under WUXGA (1920x1200@60) or Full HD (1080p).
- No external power required
- Easy to install & compact size
- DVI 1.1 compliant
- HDMI 1.2a compliant
- RoHS compliant
- Perfectly integrated with other DVI over CAT5 series products



The length depends on the characteristics and quality of the cables. Higher resolutions and longer transmission distances require low skew cables (<math><25\text{ns}/100\text{m}</math>) for best performance. Unshielded CAT6 with metal RJ-45 connectors is recommended.

Specifications & Package Contents

Model Name		MHDVI-C5	
Technical			
Role of usage		Transmitter [TX]	Receiver [RX]
DVI compliance		DVI 1.1	
HDMI compliance		HDMI 1.2a	
HDCP compliance		No	
Video bandwidth		Single-link 165MHz [4.95Gbps]	
Video support		Up to WUXGA [1920x1200@60Hz] & UXGA [1600x1200@60Hz]	
Transmission over CAT5e cable		1080p / 1920x1200@60Hz – 15m [50ft] 720p / 1080i / 1024x768@60Hz – 25m [80ft]	
Audio support		No audio for DVI signal	
Equalization		None	
Input TMDS signal		1.2 Volts [peak-to-peak]	
Input DDC signal		5 Volts [peak-to-peak, TTL]	
PCB stack-up		4-layer board [impedance control – differential 100Ω; single 50Ω]	
Input		1x DVI	1x RJ-45
Output		1x RJ-45	1x HDMI
DVI connector		DVI-I [29-pin male digital only]	
HDMI connector		Type A [19-pin female]	
RJ-45 connector		WE/SS 8P8C with 2 LED indicators	
Mechanical			
Housing		Plastic molding	
Dimensions [L x W x H]	Model	50 x 40 x 20mm [2"x1.6"x0.9"]	45 x 25 x 22mm [1.8"x1"x0.9"]
	Package	170 x 115 x 40mm [6.7"x4.5"x1.6"]	
Weight	Model	50g [1.8 oz]	25g [0.9 oz]
	Package	136g [4.8 oz]	
Fixedness		Direct plug	
Power supply		None	
Power consumption		0.5 Watt [max]	
Operation temperature		0~40°C [32~104°F]	
Storage temperature		-20~60°C [-4~140°F]	
Relative humidity		20~90% RH [no condensation]	
Package Contents		1x MHDVI-C5 (in a pair set) 1x User Manual	

INSTALLATION

1. Connect the transmitting unit of the MHDVI-C5  to your DVI source.
2. Connect the receiving unit of the MHDVI-C5  to your HDMI display.
3. Connect a Cat-5e/6 cable between the DVI source and HDMI display with the MHDVI-C5.
4. The installation is done.

NOTICE

1. The MHDVI-C5 may not be compatible with the DVI sources and HDMI displays that feature resolutions not in the aspect ratio of 4:3, 16:9 and 16:10.
2. All DVI over CAT5 transmission distances are measured using Belden 1583A CAT5e 125MHz UTP cable and ASTRODESIGN Video Signal Generator VG-859C.
3. The transmission length is largely affected by the type of Cat-5e/6 cables, the type of HDMI sources, and the type of HDMI display. The testing result shows solid UTP cables (usually in the form of 300m [1,000ft] bulk cables) can transmit a lot longer signals than stranded UTP cables (usually in the form of fixed length patch cords). Shielded STP cables are better suited than unshielded UTP cables. A solid UTP Cat-5e cable shows longer transmission range than stranded STP Cat-6 cable. For long extension applications, solid UTP/STP cables are the only viable choice.
4. EIA/TIA-568-B termination (T568B) for Cat-5e/6 cables is recommended for better performance.
5. To reduce the interference among the unshielded twisted pairs of wires in Cat-5e/6 cables, use double shielded STP cables to improve EMI problems, which is worsen in long transmission.
6. Because the quality of the Cat-5e/6 cables has the major effect on how long the transmission limit can achieve and how good is the received picture quality, the actual transmission range is subject to one's choice of Cat-5e/6 cables. For desired resolutions greater than 1080i or 1280x1024, a Cat-6 cable is recommended.



Performance Guide for DVI over Category Cable Transmission

Performance rating		Type of category cable		
Wiring	Shielding	CAT5	CAT5e	CAT6
Solid	Unshielded (UTP)	★★★	★★★★	★★★★★
	Shielded (STP)	★★★	★★★	★★★★★
Stranded	Unshielded (UTP)	★	★★	★★
	Shielded (STP)	★	★	★★
Termination		Please use EIA/TIA-568-B termination (T568B) at any time		