

# HDAV<sup>®</sup>

## DirectPlug DVI Digital Video CAT5/RJ45 Mini-Extender Kit

User Manual

(MDVI-C5)



**[Must be used with Solid CAT5e or CAT6 Cables]**

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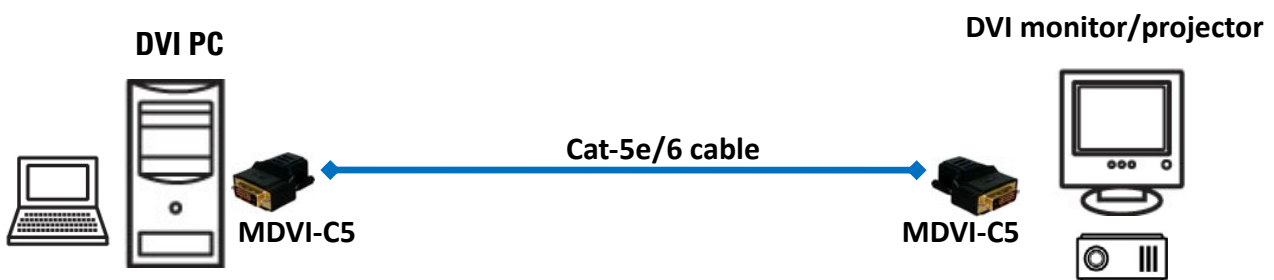
Rev.1002



Made in Taiwan

The **MDVI-C5 DirectPlug DVI Digital Video CAT5/RJ45 Mini-Extender Kit** extends your PC DVI transmission distance up to 30m (100ft) with resolution 1024x768 @60Hz. With MDVI-C5, users can transmit high quality digital video of PC applications through one cost effective Cat-5e/6 cable to the remote monitor or projector, instead of using short and expensive DVI cables. With embedded EDID inside the extender, your PC will continue to send the digital video even when the monitor is not connected. The user can then disconnects the monitor, place it in a remote location and reconnect it without rebooting the operating system.

The MDVI-C5 includes two identical units: transmitting and receiving units. The transmitting unit is connected to your PC DVI output and the receiving unit is connected to the monitor 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 30m (100ft) under XGA (1024x768@60Hz) or 15m (50ft) under UXGA (1600x1200@60Hz). With compact size and requiring no power, MDVI-C5 is the most cost effective choice for bringing your impressive digital video to the remote display.



## Features

- DVI 1.1 compliant
- Handy DVI-D to RJ-45 adapters with programmable EDID feature
- Extend the transmission length from the sources up to 30m (100ft) under XGA (1024x768@60Hz) or 15m (50ft) under UXGA (1600x1200@60Hz)
- Identical units work at both transmitting and receiving end. Easy to install.
- No external power required
- Compact size
- Direct plug-in
- 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 (<25ns/100m) for best performance. Unshielded CAT6 with metal RJ-45 connectors is recommended.*

## Specifications & Package Contents

Model Name		MDVI-C5	
<b>Technical</b>			
Role of usage	Transmitter [TX]	Receiver [RX]	
DVI compliance	DVI 1.1		
HDCP compliance	No		
Video bandwidth	Single-link 165MHz [4.95Gbps]		
Video support	Up to WUXGA [1920x1200@60Hz] & UXGA [1600x1200@60Hz]		
Transmission over CAT5e	1920x1200@60Hz – 15m [50ft] 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 DVI	
DVI connector	DVI-I [29-pin male digital only]		
RJ-45 connector	WE/SS 8P8C with 2 LED indicators		
<b>Mechanical</b>		<b>MDVI-C5</b>	
Housing	Plastic molding		
Dimensions [L x W x H]	Model	[TX/RX] 50 x 40 x 20mm [2"x1.6"x0.8"]	
	Package	170 x 115 x 40mm [6.7" x 4.5" x 1.6"]	
Weight	Model	[TX/RX] – 50g [1.8 oz]	
	Package	180g [6.3 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]		
<b>Package Contents</b>	1x MDVI-C5 (in a pair set) 1x User Manual		

# INSTALLATION

1. Connect one of the MDVI-C5 to your DVI source.
2. Connect the other MDVI-C5 to your DVI display.
3. Connect a Cat-5e/6 cable between the DVI source and display with the MDVI-C5.
4. The installation is done.

## NOTICE

1. The MDVI-C5 may not be compatible with the DVI sources and 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-5/5e/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-5/5e/6 cables, use double shielded STP cables to improve EMI problems, which is worsen in long transmission.
6. Because the quality of the CAT5/6 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-5/5e/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 <b>EIA/TIA-568-B</b> termination ( <b>T568B</b> ) at any time		