ST-C5DVI-MINI

DVI Passive Extender over Single Cat.X

User Manual

⚠ Safety and Notice

The ST-C5DVI-MINI **DVI Passive Extender over Single Cat.X** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the extender should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.

- Do not attempt to service this unit yourself, except where explained in this manual.

- Provide proper ventilation and air circulation and do not use near water.

- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.

- Use only the power adapter and power cords and connection cables designed for this unit.

- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

ESD CAUTION

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INTRODUCTION

The ST-C5DVI-MINI **DVI Passive Extender over Single Cat.X** extends your PC DVI transmission distance up to 30m (100ft) with resolution 1024x768 @60Hz. With ST-C5DVI-MINI, users can transmit high quality digital video of PC applications through one cost effective CAT-5/5e LAN 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 extender 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 RJ45 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, ST-C5DVI-MINI, is the most cost effective choice for bringing your impressive digital video to the remote display.

FEATURES

- DVI 1.0 compliant
- Extends the transmission length from the sources up to 30m (100ft) under XGA (1024x768@60Hz) or 15m (50ft) under WUXGA (1920x1200@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 Cat.X series products

> (i) 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 RJ45 connectors is recommended.

PACKAGE CONTENTS

- 2x Extender Units (Transmitter and Receiver)
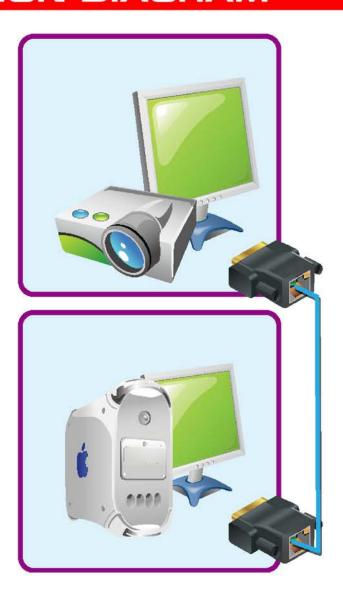- 1x User Manual

SPECIFICATIONS

Technical		
Role of usage	Transmitter [TX]	Receiver [RX]
DVI compliance	DVI 1.0	
HDCP compliance	Single-link 165MHz [4.95Gbps]	
Video bandwidth	Up to WUXGA [1920x1200@60Hz] & UXGA [1600x1200@60Hz]	
Video support	1920x1200@60Hz – 15m [50ft] 1024x768@60Hz – 25m [80ft]	
Video transmission over category cable	No audio for DVI signal	
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 RJ45
Output	1x RJ45	1x DVI
DVI connector	DVI-D [29-pin male, digital only]	
RJ45 connector	WE/SS 8P8C with 2 LED indicators	
Mechanical		
Housing	Plastic molding	
Dimensions [L x W x H]	Model	[TX/RX] 50 x 40 x 20mm [2" x 1.6" x 0.8"]
	Package	170 x 115 x 40mm [6.7" x 4.5" x 1.6"]
	Carton	450 x 370 x 300mm [1'6" x 1'3" x 11.8"]
Weight	Model	50g [1.8 oz]
	Package	180g [6.3 oz]
Fixedness	Direct plug-in	
Power supply	None	
Power consumption	0.1 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]	

HARDWARE INSTALLATION

1. Connect one of the extender units to your DVI source.

2. Connect the other extender unit to your DVI display.

3. Make sure the CAT-5/5e/6 cable is tightly connected between the DVI source and the display with the ST-C5DVI-MINI.

4. The installation is done.

CONNECTION DIAGRAM

Cat.X Cable

RESOLUTION CHART

Cable	Distance	Maximum Resolution
Cat5 solid STP	100ft	720x480p @ 60hz
Cat5e solid STP/UTP	50ft	1280x720p @ 60hz
Cat6 Stranded STP/UTP	25ft	1920x1080p@ 60hz 1920x1200 @60hz
Cat5e Stranded UTP	50ft	1280x720p @ 60hz
	25ft	1920x1080p@ 60hz 1920x1200 @60hz
Cat6 Solid UTP/STP	100ft	720x480p @ 60hz
	75ft	1280x720p @ 60hz
	50ft	1920x1080p@ 60hz 1920x1200 @60hz
Cat6(a) Stranded UTP	50ft	1280x720p @ 60hz
Cat6(a) Solid STP	75ft	1280x720p @ 60hz
	50ft	1920x1080p@ 60hz 1920x1200 @60hz
Cat7 Solid/Stranded STP	75ft	1280x720p @ 60hz
	50ft	1920x1080p@ 60hz 1920x1200 @ 60hz
Flat Cat7 Stranded STP	25ft	1920x1080p@ 60hz 1920x1200 @ 60hz

1. The ST-C5DVI-MINI 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. 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.

3. EIA/TIA-568-B termination (T568B) for Cat-5/5e/6 cables is recommended for better performance.

4. To reduce the interference among the unshielded twisted pairs of wires in Cat-5/5e/6 cable, one can use shielded STP cables to improve EMI problems, which is worsen in long transmission.

5. 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 HDMI over Category Cable Transmission

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