



HDMI/DVI Extender

Quick Reference & Setup Guide



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1. Specifications

Cable Required: Category 5, 5e, 6 twisted pair (UTP)

Video Support: HDMI/DVI Video modes

Maximum Resolution and Refresh Rate:

1080P, 1600x1200 (UXGA)

Bandwidth: 4.95 Gbps

Connectors: (1) HDMI type A, (2) RJ-45, (1) DC power inlet

Temperature

Tolerance: Operating: 32 to 104°F (0 to 40°C);
Storage: -4 to +140°F (-20 to +60°C)

Humidity

Tolerance: Up to 80% noncondensing

Enclosure: Metal

Power: +5 VDC @ 260 mA max each unit
Consumption: 1.3 watts maximum each unit

Size: 0.88"H x 2.62"W x 3.06"D (2.2 x 6.6 x 7.9 cm) each unit

Weight: 0.41 lb. (0.18 kg) - each unit

Recommended maximum cable lengths:

	Cat5	Cat6
1080P	50 ft (15.2m)	100 ft (30.5m)
1080I	100 ft (30.5m)	150 ft (45.7m)
720P	150 ft (45.7m)	150 ft (45.7m)
UXGA	50 ft (15.2m)	100 ft (30.5m)

2. Introduction

2.1 Overview

The Cyan HDMI extenders extend HDMI or DVI signals over Category 5/5e/6 cable.

WARNING

This equipment is not intended for, nor does it support, distribution through an Ethernet network. Do not connect these devices to any sort of networking or telecommunications equipment!

2.2 Equipment You May Also Need

- HDMI cables
- HDMI to DVI adapter cables

2.3 Compatible Cabling

Cyan HDMI extender products are compatible with Cat5/5e/6 data cabling.

CAT5/5e/6 cabling for the Cyan HDMI extender must be pinned to the TIA-EIA T568B wiring specification (see appendix A) We also highly recommend that all CAT5/5e/6 cables be pre-terminated and tested. Cables terminated on-site or in an existing infrastructure should be tested before use to ensure compliance with the TIA-EIA T568B specification. Using incorrectly terminated CAT5/5e/6 cables can damage the units.

3. Setup and Installation

3.1 Cabling Considerations

- We recommend mounting and connecting all cabling to the Cyan HDMI components before applying power.
- Make sure that the CAT5/5e/6 cable you intend to use has been tested to comply with the T568B wiring specification (See **Appendix A**).

3.2 Making the Connections

3.2.1 CONNECTIONS AND SETUP IN GENERAL

This section contains figures showing connections with the specific Cyan HDMI units. In general, however, the connection and setup procedure at both transmitter and receiver ends is as follows:

NOTE:

All units should be cabled and powered on prior to turning on the video source device and display. It is recommended to cable/power on receiver unit, transmitter unit, then the display, and lastly the video source.

At the transmitter end:

1. Connect the source video to the Cyan transmitter HDMI INPUT port using an HDMI type A cable (If using DVI video an HDMI to DVI adapter is required).
2. Connect the CAT5/5e/6 cables to the transmitter. PORT 1 is the video signal and PORT 2 is the DDC data channel. If you do not need HDCP or DDC data, a single CAT5/5e/6 cable can be used on PORT 1. Note that protected content will not be displayed in this case.
3. Apply power to the transmitter. The LED's on the RJ45 sockets will come on (see Figure 3-3 for LED status modes)

At the receiver end :

1. Connect the display to the HDMI OUTPUT connector of the receiver (If a DVI connector is on the display, an HDMI to DVI adapter is required).
2. Connect the CAT5/5e/6 cables to the UTP connection. PORT 1 is the video signal and PORT 2 is the DDC data channel. If you do not need HDCP or DDC data, a single CAT5/5e/6 cable can be used on PORT 1. Note that protected content will not be displayed in this case.
3. Apply power. The LED's will come (see Figure 3-3 for LED status modes)

CYAN HDMI EXTENDER

3.2.2 CONNECTIONS ON THE CYAN HDMI EXTENDER:

Figure 3-1 shows the Transmitter connections, and Figure 3-2 shows the Receiver connections.

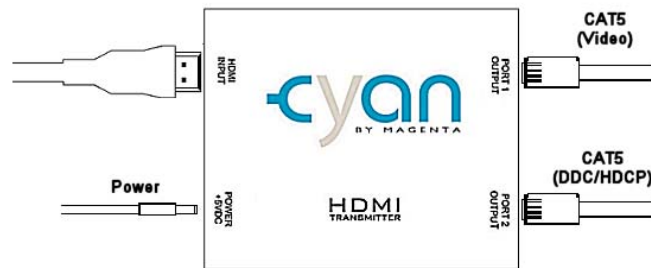


Figure 3-1. Connections on the Transmitter



Figure 3-2. Connections on the Receiver

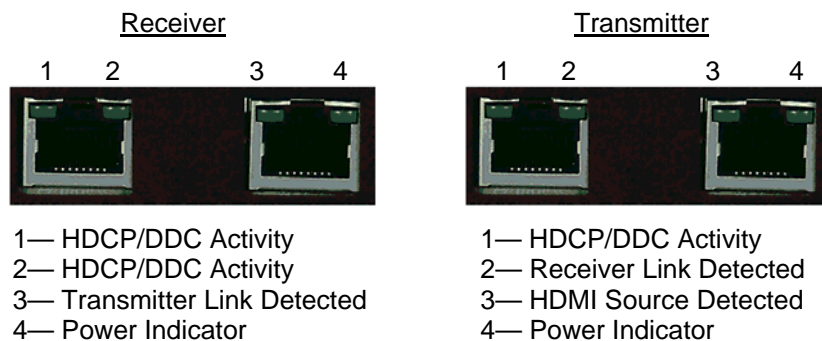


Figure 3-3. LED Status Indicators

4. Troubleshooting

4.1 Common Problems

THERE ARE NO USER CONFIGURABLE SETTINGS FOR THE CYAN HDMI EXTENDERS

In most cases, nearly every issue with the Cyan HDMI Extenders can be resolved by checking the CAT5/5e/6 termination and making sure that it's pinned to the T568B wiring specification. However, there may be other problems that cause the system to not perform as it's designed. Below are solutions to the most common installation errors.

Problem: No video or poor video quality.

Solution:

- Check that both units are powered.
- Power units in the sequence noted in section 3.2.1.
- Make sure the CAT5 cable is terminated correctly per the T568B wiring specification.
- **Screened** Cat5/5e/6 cable (ScTP) may be required for noisy EMI environments. Ensure the shield is properly connected at each RJ45 end.
- Is the display device powered on and functioning?
- Some HDMI sources can take up to 5 minutes to initialize and will not output video signals during this time.
- Cell phones may cause interference at close range (3 ft) and cause the video signal to be interrupted or lost. All devices may need to be power cycled if video is lost.

Appendix A. Cabling Pinouts

T568B CAT5 Specification

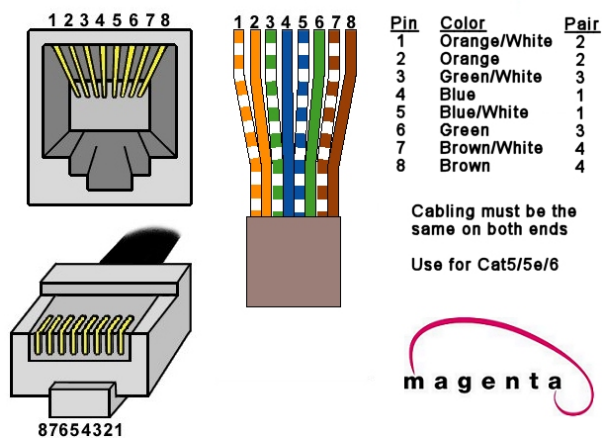


Table A-1. T568B CAT5 pinout

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