Intelix DIGI-HDMI-HR
Installation Manual

RoHS

Introduction

The active Intelix DIGI-HDMI-HR balun transmits an HDMI (high-definition multimedia interface) audio and video signal up to 150 feet via inexpensive twisted pair cabling, such as Cat 5e or Cat 6. The DIGI-HDMI-HR supports standard HDTV resolutions and is HDCP compliant.

Two individual runs of twisted pair cable are required when installing the DIGI-HDMI-HR balun. The unit is fully compatible with Cat 5e and Cat 6. In environments susceptible to high electromagnetic interference, two shielded twisted pair cables should be used.

The Intelix DIGI-HDMI-HR includes one send balun, one receive balun, one power supply, and two mounting brackets. The system is powered on either the send or receive end.

Installation

> **Caution: Do not attempt to disassemble or alter the balun housing. There are no user-serviceable parts inside the unit. Doing so will void your warranty.**

To install the Intelix DIGI-HDMI-HR baluns, perform the following steps:

1. Turn off power and disconnect the audio/video equipment by following the manufacturer's instructions.

> **Caution: To minimize the possibility of equipment damage from electrostatic discharge (ESD), all source and destination equipment must be powered off during installation. This includes signal extenders, splitters, and switches.**

2. Make certain that outlets and cross connects to which you will connect the DIGI-HDMI-HR are configured properly and labeled correctly to identify the point-to-point circuit.

> **Caution: Do not connect the balun to a telecommunication outlet wired to unrelated equipment. Doing so may damage the unit or any connected equipment. Ensure all connected twisted pair cabling is straight-through (point-to-point).**

3. Verify the desired twisted pairs are not being used for other LAN or telephony equipment.

> **Note: For your convenience, it is recommended that you uniquely mark the ends of the twisted pair cable before pulling them through a wall or conduit.**

4. Verify that the source and destination equipment work when directly connected with an HDMI cable. Be sure to test both HDMI cables required for system installation.

5. Connect the DIGI-HDMI-HR send balun to the HDMI output of the video source.

6. Connect the DIGI-HDMI-HR receive balun to the HDMI input of the receiving device at the remote end. Do **not** connect the 5V power supply.

7. Complete the connection between the send and receive baluns using two runs of twisted pair cable. Ensure the cable conforms to EIA 568B crimp standards and there are no split pairs or taps.

8. Connect the 5V power supply to the send or receive DIGI-HDMI-HR balun.

9. Power-on the video equipment.

10. Verify picture quality.

Troubleshooting

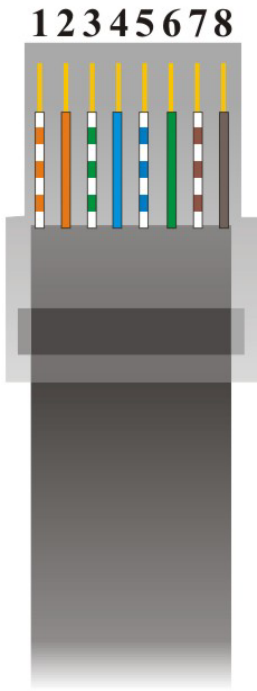| Symptom	Probable Causes	Possible Solutions
No signal Status LED is off	Incorrect cable termination	Verify that both ends of the twisted pair cables use 568B crimp pattern.
No signal Status LED is off	Incorrect cable connection	Swap the twisted pair cables in the AV and HDCP RJ45 inputs on the receive balun.
No signal	Insufficient power	Verify the power supply is connected to either the send or receive balun. Verify the power LEDs on both the send and receive units are brightly illuminated.
Unusual colors in the video	HDMI synchronization issues	Power off the destination device and power it back on to force renegotiation. Unplug and re-plug the HDMI cable from receive balun to force renegotiation.
No signal Screen is completely snowy Speckling in the video image Occasional signal dropouts Video without audio	Video signal exceeds bandwidth of cabling	Use shorter runs of twisted pair cabling. Drop the HDMI signal to the next lower resolution; i.e., decrease resolution from 1080i to 720p, etc. Replace the twisted pair cable with a higher grade twisted pair cable; i.e., replace Cat 5e with Cat 6.
Speckling in the video image	Unsupported video resolution	If the destination device is incapable of displaying the video signal, alter the source signal; i.e., decrease resolution from 1080i to 720p, etc.
Video without audio	Unsupported audio codec	Change source device to output PCM other than Bitstream audio Enable PCM down sampling if supported by your source device

Technical Specifications

Video Amplifier Bandwidth	1.65 Gbps
Supported Video Resolutions	480i, 480p, 576i, 576p, 720p, 1080i
Max Recommended Distance	150 feet
Input Video Signal	1.2 volts p-p
Input DDC Signal	5.0 volts p-p (TTL)
Input Unit Connectors	(1) Type A HDMI connector to (2) RJ45s
Output Unit Connectors	(2) RJ45s to (1) Type A HDMI connector
Cabling	Two individual runs of Cat 5e or Cat 6
Power	External 5 VDC
Power Connector	Powered on either send or receive end; side mounted connector
Dimensions	3.25" x 1.75" x 0.88"
Temperature	Operating: 0° to 55°C Storage: -20° to 85°C Humidity: up to 95%
Shipping Weight	1 lb.
Warranty	2 years
Regulatory	CE, RoHS
Intelix Part Number	DIGI-HDMI-HR
Ordering Information	*DIGI-HDMI-HR* package includes one send unit, one receive unit, two mounting brackets and one power supply

The Intelix DIGI-HDMI-HR conforms to HDMI and HDCP specifications. Intelix does not guarantee operation with devices that do not conform to these specifications. The Intelix DIGI-HDMI-HR passes HDCP signals and does not manipulate them in any way.

Distances and picture quality may be affected by cable grade, cable quality, source and destination equipment, RF and electrical interference, and cable patches. Intelix specifications are based on straight-through cabling with standard-grade Cat 5e.

Pin	Color
1	Orange/White
2	Orange
3	Green/White
4	Blue
5	Blue/White
6	Green
7	Brown/White
8	Brown

1 2 3 4 5 6 7 8

EIA/TIA 568B Crimp Pattern Standard