Intelix DIGI-HD-IR2
Installation Manual

Introduction

The Intelix DIGI-HD-IR2 transmits HDMI and IR up to 300' over two twisted pair cables, such as Cat 5e or Cat 6. In environments with high electromagnetic interference (EMI), two shielded twisted pair cables should be used.

Built-in HDshāk® technology provides dynamic HDMI, EDID/DDC and HDCP mode selection, gauranteeing performance and image quality.

The DIGI-HD-IR2 features electrostatic discharge (ESD) protection circuitry which safegaurds the HDMI circuit against static electricity and other destructive stray voltage.

Design with Intelix and Design with Intelligence.

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-HD-IR2 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-HD-IR2 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 HDMI cables. Be sure to test both HDMI cables required for system installation.

5. Connect the DIGI-HD-IR2 send balun to the HDMI output of the video source. Do **not** connect the 5V power supply.

6. Connect the DIGI-HD-IR2 send balun to the IR emitter.

7. Connect the DIGI-HD-IR2 receive balun to the HDMI input of the receiving device at the remote end. Do **not** connect the 5V power supply.

8. Connect the DIGI-HD-IR2 receive balun to the IR receiver.

9. 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.

10. Connect the 5V power supply to the DIGI-HD-IR2 receive balun.

11. Connect the 5V power supply to the DIGI-HD-IR2 receive balun Power-on the video equipment.

12. Verify picture quality.

13. If necessary, adjust the dip switches on the send and receive baluns to select modes of operation.

Note: Dip switches are located under the cap on the side of the unit.

Pin	Color
1	Orange/White
2	Orange
3	Green/White
4	Blue
5	Blue/White
6	Green
7	Brown/White
8	Brown
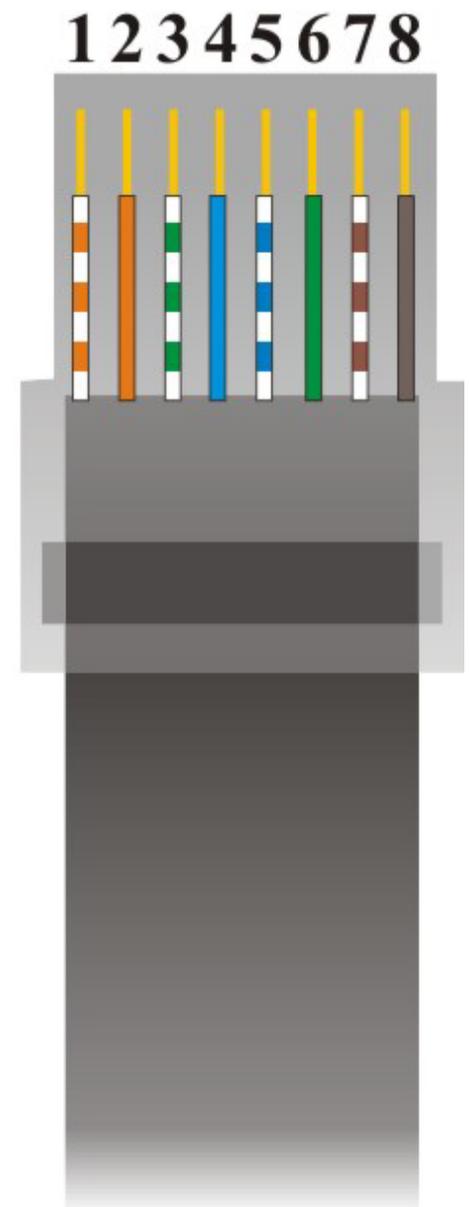
EIA/TIA 568B Crimp Pattern Standard

DIGI-HD-IR2-S Transmitter Dip Switch Positions		
Position 1	**Position 2**	**Mode**
Off	Off	Read and store EDID data from displays
Off	On	Turn on Dolby TrueHD and DTS-HD
On	Off	Turn on stereo audio
On	On	No function

DIGI-HD-IR2-R Receiver Switch Positions		
Position 1	**Position 2**	**Mode**
Off	Off	Extended cable
Off	On	Force signal output
On	Off	Normal cable
On	On	No function
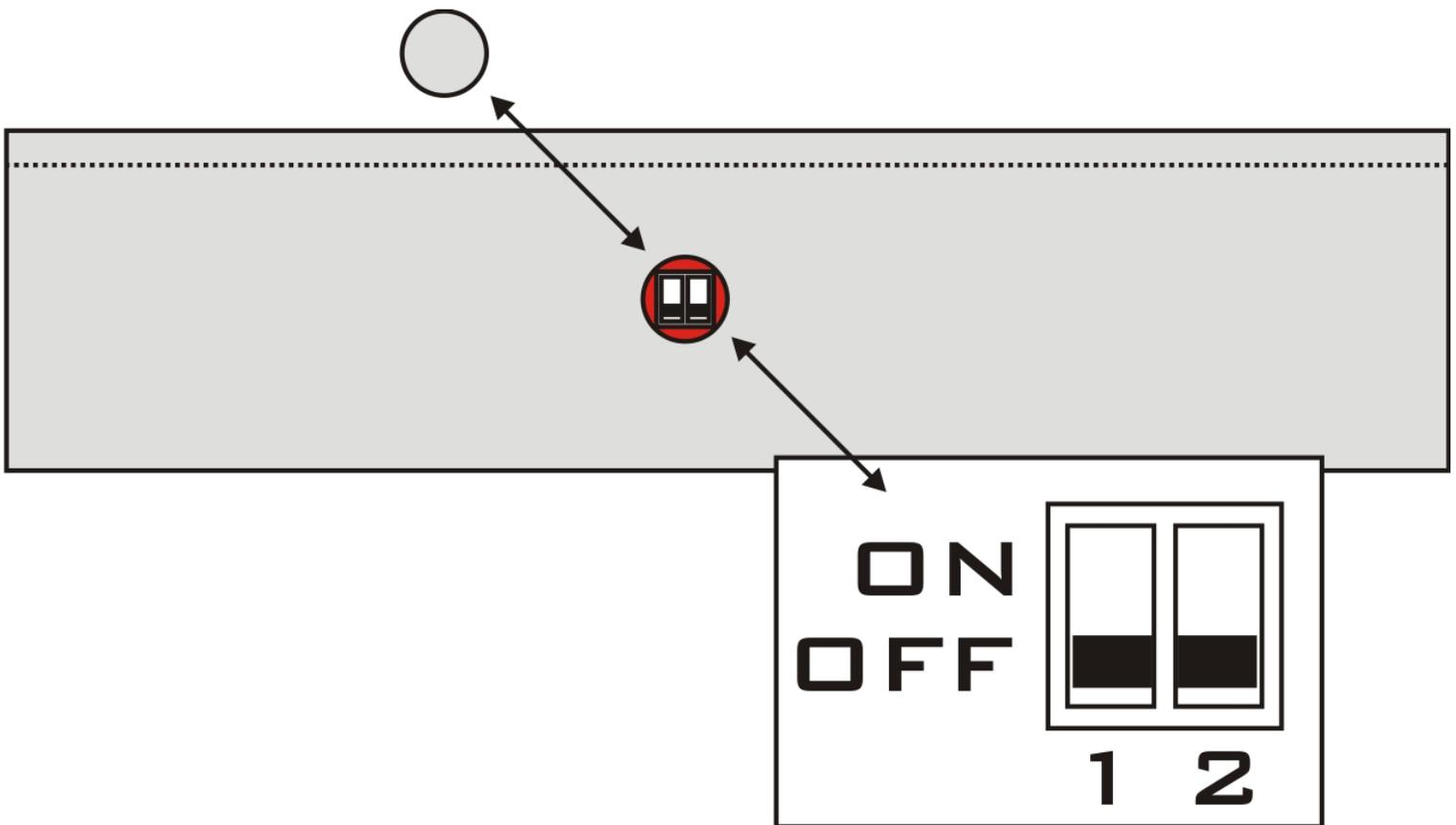
Troubleshooting

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 supplies are connected to both the send and receive baluns. 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 1080p to 1080i, 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 1080p to 1080i, 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, 1080p
Max Distance (Cat 5e)	1080p: 100' 1080i/720p: 200'
Max Distance (Cat 6 – low skew recommended)	1080p: 150' 1080i/720p: 300'
Supported IR Carrier Frequencies	36-40 kHz
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 (1) 1/8" mini (3.5 mm) female IR connector
Output Unit Connectors	(2) RJ45s to (1) Type A HDMI connector (1) 1/8" mini (3.5 mm) female IR connector
Cabling	Two individual runs of Cat 5e or Cat 6
Power	External 5 VDC
Power Connector	Powered on both ends
Dimensions	4.38" x 2.50" x 1.00"
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-HD-IR2
Ordering Information	*DIGI-HD-IR2* package includes one send unit, one receive unit, one IR emitter, one IR receiver, and two power supplies

The Intelix DIGI-HD-IR2 conforms to HDMI and HDCP specifications. Intelix does not guarantee operation with devices that do not conform to these specifications. The Intelix DIGI-HD-IR2 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.

Thank you for your purchase.