

## DIGI-HD60C Installation Guide



The Intelix DIGI-HD60C extends HDMI, IR, and RS232 over a single twisted pair cable. The DIGI-HD60C supports a 1080p video signal up to 60m, as well as 3D and 4K x 2K signals up to 40m.

Built-in surge protection and diagnostic LEDs ensure hassle-free and robust installations. Flexible power design allows the units to be powered at either the TX or RX end, and only one power supply is required. The power supply (PS-24D-25) and IR accessories (DIGIB-EMT and DIGIB-EYE) are sold separately.

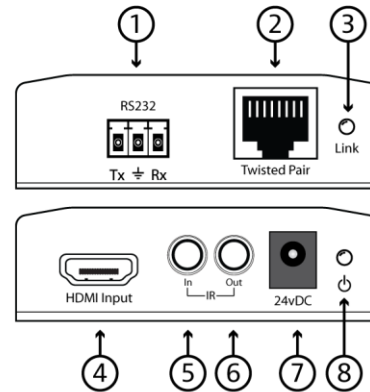
**The DIGI-HD60C-S and DIGI-HD60-R are designed for use only with Intelix branded HDBaseT products. The power circuit may not be compatible with other HDBaseT devices and may damage them.**

### Instructions

1. Turn off power and disconnect the audio/video equipment by following the manufacturer's instructions.
2. Connect twisted pair cable between the transmitter (DIGI-HD60C-S) and the receiver (DIGI-HD60C-R). Ensure T568B straight-thru wiring.
3. Connect any IR or RS232 cables.
4. Connect HDMI cables between the display and the receiver (DIGI-HD60C-R).
5. Connect HDMI cables between the source and the transmitter (DIGI-HD60C-S).
6. Connect the power supply (PS-24D-25) to either the transmitter or the receiver.
7. Power on attached audio/video devices.

### DIGI-HD60C-S

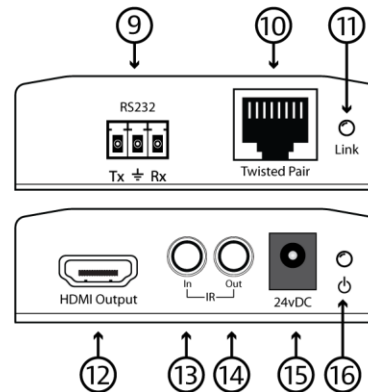
Connector Detail



1. RS232 - Allows extension of serial communication
2. Twisted Pair - Connect between extenders with Cat6 type cable up to 60m (200')
3. Link LED - Indicates a successful link has been established with the other extender (On = Good).
4. HDMI Input - Connect source to this port
5. IR Input - Connect to DIGIB-EYE
6. IR Output - Connect to DIGIB-EMT
7. 24vDC Input - Connect PS-24D-25 (only TX or RX needs to be connected, not both)
8. Power LED - Indicates unit is powered on.

### DIGI-HD60C-R

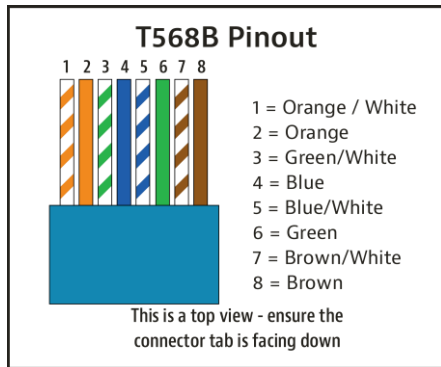
Connector Detail



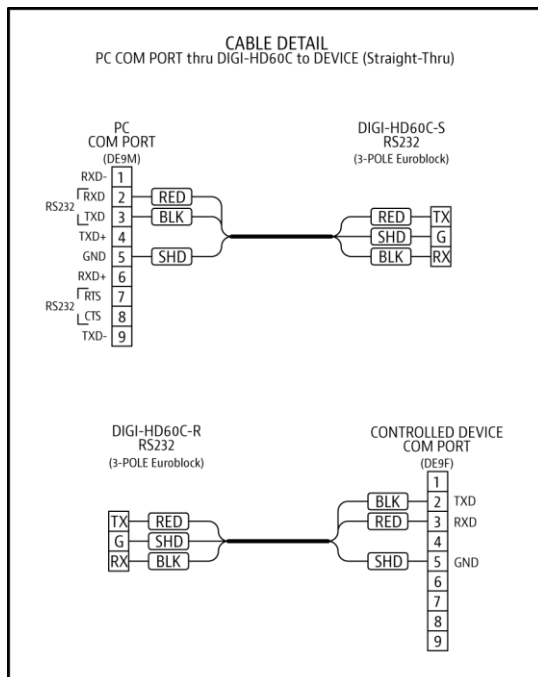
9. RS232 - Allows extension of serial communication
10. Twisted Pair - Connect between extenders with Cat6 type cable up to 60m (200')
11. Link LED - Indicates a successful link has been established with the other extender (On = Good).
12. HDMI Input - Connect source to this port
13. IR Input - Connect to DIGIB-EYE
14. IR Output - Connect to DIGIB-EMT
15. 24vDC Input - Connect PS-24D-25 (only TX or RX needs to be connected, not both)
16. Power LED - Indicates unit is powered on.

## Cabling

**Twisted Pair Wiring** - Use T568B wiring for Cat5e/6 connection between send and receive units. If using shielded cable, be sure to use shielded connectors, and terminate the cable drain wire to the connector shell.



**RS232 Wiring** – The DIGI-HD60C units include terminal blocks that can be used for RS232 pass-through connection. You should consult the owner’s manual of the devices you are connecting for more information on pin out. Be sure to connect the DIGI-HD60C RX pins to the TX pins of the connected device, and connect the DIGI-HD60C TX pins to the RX pins of the connected device. Connect the GROUND connection on the DIGI-HD60C to the GROUND connection of the connected device. For your benefit, we will illustrate how to properly pin out a straight-through cable, using the DIGI-HD60C set to extend the signal.



## IR Extension

You can use the IR TX and RX ports on the DIGI-HD60C to extend the signal from your remote controls. This will allow you to control the source, or the display, depending upon how you connect the devices. The DIGI-HD60C supports bi-directional communication, so you may send IR commands from the RX to the TX and from the TX to the RX simultaneously. Be sure to use Intelix DIGIB-EYE and DIGIB-EMT products, as 3<sup>rd</sup> party products are not supported. The IR system is 5v, and you cannot connect these ports directly to most IR distribution systems. If this is necessary, please contact the Intelix Applications Department for assistance.

**IR RX** – Connect the DIGIB-EYE to this port. The DIGIB-EYE is an IR receiver (target). Point your IR remote at this device, and the IR signal will be transmitted to the TX port of the other extender.

**IR TX** – Connect the DIGIB-EMT to this port. The DIGIB-EMT is an IR emitter. Attach the DIGIB-EMT head over the IR window of the device you wish to control. The DIGIB-EMT will emit IR commands received by the DIGIB-EYE from the other extender.

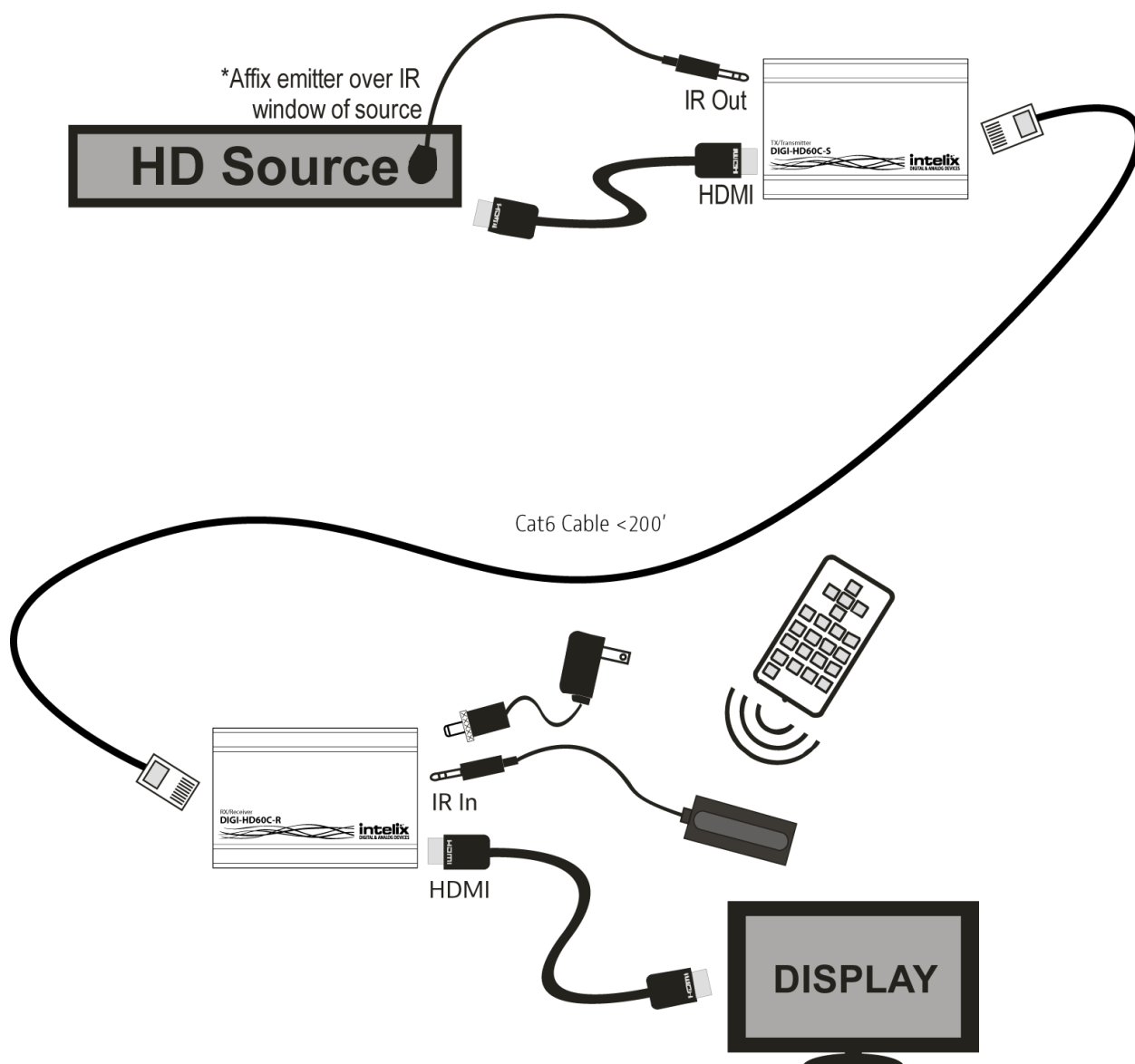
Troubleshooting	
Symptom	Possible Solutions
No signal Link LED is off	Verify that both ends of the twisted pair cables use T568B crimp pattern. Verify HDMI cables and source and destination HDMI ports are operational.
Link LED is blinking	Reterminate Twisted Pair cable Replace Twisted Pair cable Reduce Twisted Pair cable length
No signal	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	Power off the destination device and power it back on to force renegotiation. Unplug and re-plug the HDMI cable from receive to force renegotiation.

### Important notice:

- Do not attempt to disassemble or alter the extender housing. There are no user-serviceable parts inside the unit. Doing so will void your warranty.
- To minimize the possibility of equipment damage from electrostatic discharge (ESD), all source and destination equipment must be powered off during installation.
- Do not connect the extender 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).

## DIGI-HD60C Quick Start

### Example Diagram



Technical Specifications	
<b>I/O Connections</b>	
HDMI	One (1) HDMI Type A Receptacle Connector
Twisted Pair	One (1) 8P8C port (Shielded RJ45)
IR Input	One (1) 3.5mm TRS Jack
IR Output	One (1) 3.5mm TS Jack
RS232	One (1) 3-Pole Euroblock connector
24V DC Power	One (1) 5.5 mm Outside Diameter, 2.1 mm Inside Diameter Barrel (Locking)
<b>Supported Audio and Video</b>	
Maximum Video Compatibility at 60 m	Deep Color 36/30/24 Bit at 1080p
Maximum Video Compatibility at 35 m	Deep Color 48 Bit at 1080p, 3D, and 4k x 2k
Video Compliance	HDMI, HDCP, and CEC (Consumer Electronics Control)
Embedded Audio	Up to PCM 8 channel, Dolby Digital TrueHD, and DTS-HD Master Audio
Input DDC Signal	5.0 volts p-p (TTL)
Input Video Signal	0.5 to 1.0 volts p-p
<b>HDBaseT Signal Characteristics</b>	
Maximum Distance	60 m
Cable Requirements	Category 5e, 6, or 6A with TIA/EIA-568B crimp pattern
Bandwidth	10.2 Gbps
Gain	0 dB – 10 dB at 100 MHz
Resolution Range	800x600 – 1920x1200
Signal to Noise Ratio (SNR)	> 70 dB at 100 MHz over 100 m
Return Loss	< -30 dB at 5 KHz
Total Harmonic Distortion (THD)	< 0.005% at 1 KHz
Min-Max Signal Level	< 0.3 V – 1.45 Vp-p
Differential Phase Error	±10° at 135 MHz over 100 m
<b>Chassis and Environmental</b>	
Enclosure	Painted steel
Dimensions	110mm x 76mm x 24mm (4.33 in. x 2.99 in. x 0.95 in.)
Shipping Weight	0.5 kg (1.1 lbs.)
Operating Temperature (Environment)	0° to +40° C (+32° to +104° F)
Operating Temperature (Chassis)	31° C (88° F) (S); 38° C (100° F) (R)
Operating Humidity (Environment)	20% to 90%, Non-condensing
Storage Temperature (Environment)	-10° to +60° C (+14° to +140° F)
Storage Humidity (Environment)	20% to 90%, Non-condensing
<b>Power, ESD, and Regulatory</b>	
Maximum Power Consumption	8 watts (S), 22 watts (R)
Power Supply (Not Included)	24vDC / 1.5 Amp
ESD Protection	15kV
Regulatory	CE, RoHS
<b>Other</b>	
Standard Warranty	2 Years
Diagnostic Indicators	Link and power LEDs
DIGI-HD60-R Compatible Transmitters	DIGI-HD60-S, FLX-BO4A, DIGI-44B, DIGI-88B, ASW-WP
DIGI-HD60-S Compatible Receivers	DIGI-HD60-R, FLX-BI4A
Included Items	Installation Guide
<b>Accessories</b>	
Power Supply	PS-24D-25
IR Emitter	DIGIB-EMT
IR Eye	DIGIB-EYE
Universal Mounting Bracket	DIGI-PMK1

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 unless noted otherwise.