

# Intelix DIGI-VGASD-T4R

## Installation Manual

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### **Introduction**

The Intelix DIGI-VGASD-T4R distribution system distributes a single VGA video and stereo audio source to four remote destinations over inexpensive twisted pair cable. In addition, the system extends RS232 or IR control signals over the same cable.

The DIGI-VGASD-T4R features 1600x1200 VGA video performance, high-fidelity 20Hz to 20kHz audio performance, and IR or bi-directional RS232 extension up to 350 feet. The send balun features local monitor support and the receive balun features dual outputs and built-in video equalization ensuring skew-free video performance. The DIGI-VGASD-T4R includes one 1x4 distribution amplifier send balun, one modular receive balun, and two power supplies. The system is linkable for additional remote destinations.



# Installation

To install the Intelix DIGI-VGASD-T4R baluns, perform the following steps:

1. Identify the pin configuration of the baluns and RJ45 connectors on the twisted pair cabling. To eliminate crosstalk, the pin configuration must follow the EIA/TIA 568B standard. Please ensure that wiring is straight-through.
2. Power-off the connecting audio, video, and control equipment.
3. Connect the DIGI-VGASD-T4 send balun to the VGA output of the video source, the audio output of the audio source, and an IR or RS232 control source. If required, connect a local monitor. Do **not** connect the 5V power supply.

**Note the DIGI-VGASD-T4R does not support IR and RS232 simultaneously. If both signals are connected, IR will take precedence over RS232.**

4. Connect the DIGI-VGASD-R receive balun to the VGA input of the video destination, the audio input of the audio destination, and an IR or RS232 control destination. If required, connect a second video destination. Do **not** connect the 5V power supply.
5. Repeat step 4 for each subsequent compatible Intelix receive balun.

Compatible Intelix receive baluns include:

DIGI-VGASD-WP-R	wallplate receive balun
DIGI-VGASD-R	modular receive balun

6. Complete the connection between the send and receive baluns using one twisted pair cable per run. Ensure there are no split pairs or taps.

7. If necessary, connect multiple DIGI-VGASD-T4 send baluns together to achieve greater than four destinations.

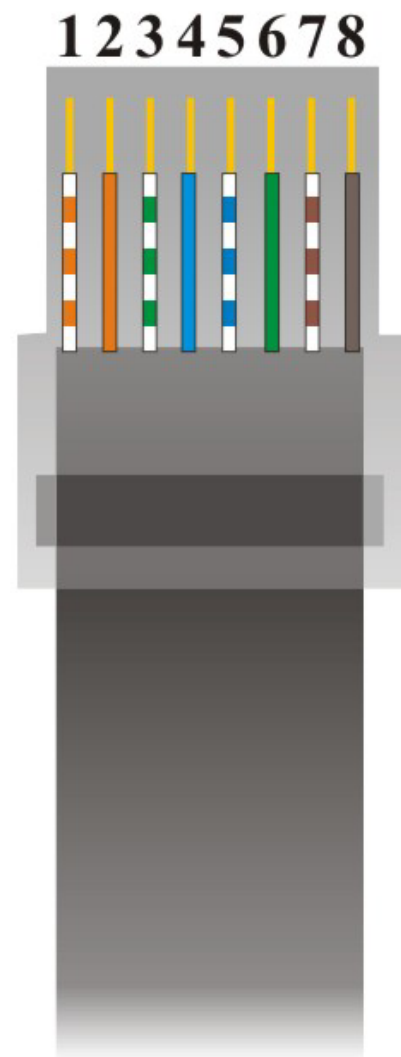
When connecting multiple send baluns (daisy-chaining units), connect the VGA output from one device to the VGA input from a second device. Intelix recommends completing the connection with a 3' or less VGA cable.

8. Connect the 5V power supply to the send balun.
9. Connect the 5V power supply to the receive balun(s).
10. Power-on the connecting audio, video, and control equipment.
11. Verify picture quality. If necessary, adjust the signal using the blue, green, and red dials on the DIGI-VGASD-R receive balun.
12. Repeat step 12 for each subsequent receive balun.

**Warning!** Do *not* use any IR receiver (eye) or IR emitter other than those sold exclusively for the DIGI-VGASD series of products to prevent damage to the balun. Using 12V-based IR components may permanently damage the IR circuitry of the product and void the warranty.

**Required IR Emitter: Intelix *DIGI-VGASD-IREMT***  
**Required IR Receiver: Intelix *DIGI-VGASD-IREYE***

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



## **EIA/TIA 568B Crimp Pattern Standard**

## RS232 Routing

The DIGI-VGASD-T4 supports bi-directional RS232 communications between the transmitter and receiver(s). By default, RS232 messages received through the RS232 control port are sent to all connected receivers; however, the transmitter also allows RS232 messages to be routed to specific receivers.

### Routing Messages To A Specific Receiver

When sending an RS232 message to specific receiver, a special serial command sequence must be used. The example below outlines this procedure, in this case for the receiver attached to port three.

1. Verify you are using the following settings when communicating with the DIGI-VGASD-T4:

RS232 Settings	
Bits per second	9600
Data bits	8
Parity	None
Stop bits	1
Flow control	Xon/Xoff

A straight-through serial cable should be used when connecting to the RS232 port. Note that these settings are only required when communicating to the DIGI-VGASD-T4 transmitter. Communications that are passed through this device may use whatever RS232 settings are required for the application.

2. To route RS232 commands to port 3, send the following command:

```
<CR> //M3<CR>
```

- If the message is correctly received by the unit, you will see the *RS232 Status* LED on the front of the unit blink quickly for approximately 2 seconds.
  - If the lights do not blink, check your communication settings.
  - To choose a different output port, replace the 3 with the desired port number.
  - <CR> represents a carriage return: If you are using HyperTerminal, this is the equivalent of hitting the Enter key. If you're programming this in hex, the hex value is 0x0D.
3. Any commands sent to the DIGI-VGASD-T4 from this point forward will only go to the receiver connected to output 3.
  4. To go back to the default state where commands are copied to all the receiver, send the following command:

<b>&lt;CR&gt; //M0&lt;CR&gt;</b>
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- The DIGI-VGASD-T4 transmitter will go back to the default state every time the power is disconnected from the unit.

# Troubleshooting

Symptom	Causes	Possible Solutions
No signal	No continuity in video link	Verify cable continuity between pairs of baluns. Verify the max distance has not been exceeded. Verify the audio, video, and control cables between the equipment and hardware are connected and pass signal.
No signal	Power off	Check power supplies of video equipment. Verify the LEDs on both the send and receive units are illuminated.
No signal	Improper connection or swapped pairs	Check that baluns are connected to correct video inputs and outputs. Verify both ends of the twisted pair cable conform to the EIA 568B crimp pattern.
Unusual colors Rolling signal Horizontal video bars	Improper grounding or cable type	Verify the source and destination devices are grounded. Different electrical circuits may cause a voltage differential on the building's electrical ground plain. The video display or source device may need to be grounded.
No control	Simultaneous RS232 and IR	Verify only IR <i>or</i> RS232 are being used.
Background pattern	EMI interference	Identify possible radiating frequency sources (i.e.; wireless LANs, switching power supplies) and isolate them. Replace any unshielded twisted pair cable with shielded twisted pair cable.

## Technical Specifications

<b>Video Bandwidth</b>	300 MHz
<b>Max Resolution</b>	1600 x 1200
<b>Max Distance</b>	350 feet
<b>Audio Frequency Response</b>	20 Hz to 20 kHz
<b>Enclosure</b>	Metal
<b>Control</b>	IR or RS232; IR takes precedence when both are connected
<b>Max Distance of AV Cables</b>	6 feet
<b>Skew Adjustment</b>	Front panel color (R,G,B) trim-pots on the DIGI-VGASD-R receive unit
<b>Status</b>	Front panel power LED
<b>Power</b>	5 VDC @ 1.6A
<b>Send Unit Dimensions</b>	8.88" x 4.75" x 1.19"
<b>Receive Unit Dimensions</b>	5.25 x 3.38" x 1.00"
<b>Temperature</b>	Operating: 0° to 55°C Storage: -20° to 85°C Humidity: up to 95%
<b>Shipping Weight</b>	7.0 lbs.
<b>Warranty</b>	2 years
<b>Compliance</b>	CE, RoHS
<b>Included Accessories</b>	One send balun (DIGI-VGASD-T4), one receive balun (DIGI-VGASD-R), and two (2) 5VDC power supplies
<b>Ordering Information</b>	DIGI-VGASD-T4R

**\*Distances, picture and audio 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 5.**

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