

Specifications

Specifications subject to change without notice.

Maximum Distance*	USB 1.1 (1.5 Mbps)	330 feet
	USB 2.0 (1.5 Mbps)	330 feet
	USB 1.1 (12 Mbps)	100 feet
	USB 2.0 (12 Mbps)	100 feet
Maximum USB Class	Full speed	
Unshielded Twisted Pair Cabling Specifications (24 gauge or lower solid copper)	Maximum capacitance: 20 pf/foot	
	Impedance: 100 ohms @ 1 MHz	
	Attenuation: 6.6 dB/1000 ft. @ 1 MHz	
	<i>Cat 5, Cat 5e, Cat 6, Cat 7 compatible</i>	
Send Unit Connectors	One USB type B connector to one RJ45	
Receive Unit Connectors	One USB type A connector to one RJ45	
Temperature	Operating: 32 to 131 F (0 to 55 C)	
	Storage: -4 to 185 F (-20 to 85 C)	
	Humidity: up to 95%	
Power	Powered through USB; <i>power status LEDs on both send and receive units</i>	
Enclosure	Metal	
Dimensions	2.5" x 3.0" x 1.0"	
Shipping Weight	1.0 lbs	
Ordering Information	<i>DIGI-USB-F</i> : kit includes send balun, receive balun, and one five foot USB cable	
Warranty	2 years	

* 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 5.

Contact Information



DigiCat
Series

Intelix
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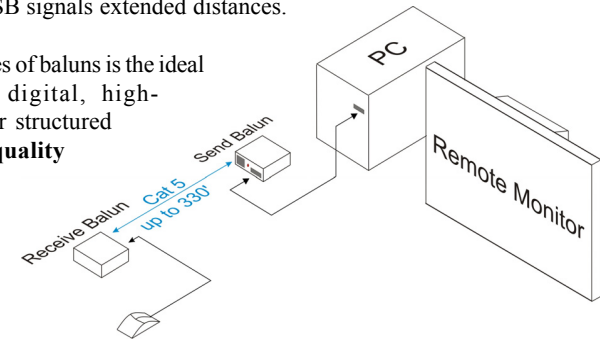
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Intelix DIGI-USB-F Full Speed USB over Cat 5 Balun Installation Manual

The Intelix DIGI-USB-F transmits a USB 1.1 or 2.0* signal up to 330 feet over standard unshielded twisted pair cabling, such as Cat 5. The DIGI-USB-F is ideal for sending 1.5 Mbps or 12 Mbps USB signals extended distances.

The Intelix **DigiCat** Series of baluns is the ideal solution for sending digital, high-performance signals over structured cabling. **When signal quality matters, choose Intelix.**



Installation

Caution: Do not attempt to disassemble or alter the balun housing. There are no user-serviceable parts inside the DIGI-USB-F. Modifying the unit will void your warranty.

To install a DIGI-USB-F balun kit, perform the following steps:

1. Turn off power and disconnect the source and destination equipment by following the device manufacturer's instructions.
2. Make certain that outlets and cross connects to which you will connect the DIGI-USB-F are configured properly and labeled appropriately to identify the circuit.

Caution: Do not connect the DIGI-USB-F to a telecommunication outlet wired to unrelated equipment. Making such a connection may damage the equipment and/or balun. Please ensure all wiring is "straight-through."

3. Verify the desired twisted pairs are not being used for other LAN or telephony equipment.
4. Connect the USB output from the source equipment to the DIGI-USB-F send balun. Connect the USB inputs from the destination equipment to the DIGI-USB-F receive balun. Verify the power LEDs on both baluns are illuminated.

Caution: Do not mount the balun over equipment ventilation openings. Covering the openings may cause the equipment to overheat.

5. Connect the two baluns with a structured cable with RJ45 connectors, such as Cat 5. Verify the cable's pinout conforms to EIA/TIA 568A or 568B pattern standards.
6. Power on the source and destination equipment and test for correct operation.

*speed dependant; please refer to Intelix DIGI-USB-F specifications

Troubleshooting

If your equipment malfunctions with DIGI-USB-F baluns in place, follow the troubleshooting procedures below:

1. Perform diagnostics on your equipment by following the manufacturer's instructions.
2. If connecting to a computer, shut down and restart the computer after connecting the source and destination devices through the DIGI-USB-F.
3. If connecting to a computer, verify the connecting equipment's drivers have been properly installed. Verify by connecting the equipment directly to the computer without the DIGI-USB-F inline.
4. Check all the connections and the structured cabling system. Verify the RJ45 crimp pattern conforms to either EIA/TIA 568A or 568B standards.
5. Check the pin configuration on the structured cable.
6. Verify your transmission rate does not exceed 12 Mbps.
7. The maximum operational distances over which the DIGI-USB-F balun kit can be transmitted is dependant on the equipment used and cable. Ensure that the maximum recommended operational distances have not been exceeded.
8. Check that only twisted pair patch cords are being used.
9. Replace the DIGI-USB-F balun kit with another DIGI-USB-F balun kit that is known to be working.
10. If you still cannot diagnose the problem, contact Intelix for support.

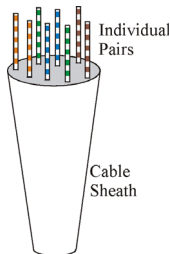


Frequently Asked Questions

How do I expose the individual pairs in Cat 5 cabling?

There is no single method when exposing the four individual pairs in twisted pair cabling, such as Cat 5 and Cat 6; however, it does help to have a cable stripping tool designed to strip the cable jacket/insulation.

Begin by stripping back the cable's outer jacket/insulation about an inch (or more depending on whether multiple baluns will be connected to the pairs of a single cable) so that the internal wires are exposed. Be careful not to cut the internal wires when stripping the insulation/jacket. Eight twisted wires and a string should now be visible; the string is unnecessary and may be removed. These eight wires, which when combined form four pairs, connect directly to the baluns. Typical protocol pairs similar colors; the important thing is to verify the same color-coded pairs are used on each end.

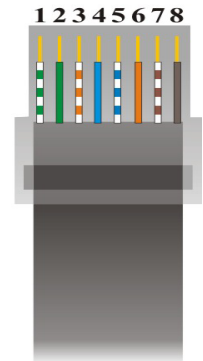


How do I crimp an unshielded RJ45 connector onto Cat 5?

Crimping an RJ45 connector onto Cat 5 is a fairly straight forward task, assuming you have the proper tools. Keep in mind that baluns require either the EIA/TIA 568A or 568B crimp pattern, which are the industry standards for networking.

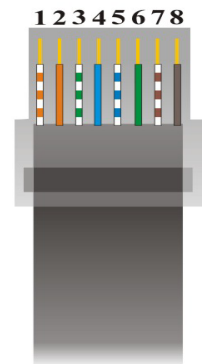
1. First, strip a portion of the insulation about 3/4" to expose the four twisted pairs.
2. Next, untwist the wires and fan them out so that they match either EIA/TIA 568A or 568B pattern.
3. Evenly trim the wires to about 1/2". Most RJ45 crimp tools feature a built-in wire trimmer.
4. Insert the trimmed wires into the RJ45 connector so that each wire is in its individual slot. Verify each wire is completely inserted.
5. Finally, insert the RJ45 connector into the crimp tool and squeeze firmly.
6. Repeat the above steps on the other end of the Cat 5 cable and verify pinout is identical on each end.

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



EIA/TIA 568A Crimp Pattern Standard

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