

Intelix AVO-USB

Installation Manual



Introduction

The Intelix AVO-USB extender set transmits low and full speed USB signals over twisted pair cabling. The set extends low speed USB 1.0 and 2.0 signals up to 330 feet, and full speed USB 1.0 and 2.0 signals up to 100 feet. Convenient connector dongles allow direct connection to the host and client devices, facilitating a clean, low-profile installation.

The Intelix AVO-USB is plug-and-play and does not require driver software.

Pre-Installation

The AVO-USB features shielded RJ45 connectors, which are provided as an option in harsh electrical environments, such as installations with large motors or cable runs near sources of interference. In such environments, shielded twisted pair cable (STP) may provide additional noise immunity. When using STP, ensure the shield on both ends of the cable run is terminated to a shielded RJ45 connector.

Caution: 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.

Installation

1. Power off the source and destination devices which will be connected to the extenders.
2. Verify the modular outlets and cross connects to which you will connect the AVO-USB are configured properly and labeled appropriately to identify the circuit.

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.

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

Caution: 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).

4. Connect the send extender (AVO-USB-H) to the USB port of the host device, typically a computer.
5. Connect one end of the twisted pair cable to the send extender. The RJ45 pinout in the twisted pair cabling should conform to the EIA/TIA 568A or 568B standard.
6. Connect the receive extender (AVO-USB-C) to the client device, typically a keyboard or mouse.
7. Connect the other end of the twisted pair cable to the receive extender. The RJ45 pinout in the twisted pair cabling should conform to the EIA/TIA 568A or 568B standard.

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

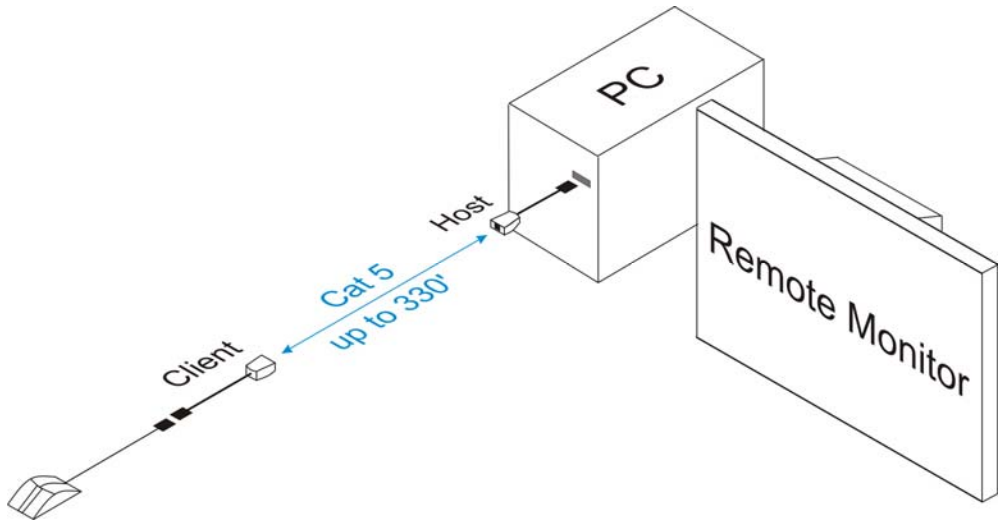
8. Power on the source and destination equipment.

Note: The AVO-USB supports speeds up to 12 Mbps. Distance is dependent on transmission speeds. Please refer to the technical specifications for maximum distances.

Troubleshooting

If your equipment malfunctions with the AVO-USB extenders in place, follow the troubleshooting procedures below:

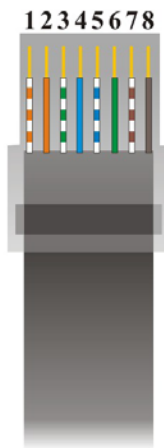
1. Perform diagnostics on your equipment by following the manufacturer's instructions.
2. If connecting to a computer, shut down and restart the computer after connecting the source and destination devices through the AVO-USB.
3. If connecting to a computer, verify the connecting equipment's drivers have been properly installed. Verify by connecting the equipment directly to the computer without the AVO-USB inline.
4. Check all 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 AVO-USB can be transmitted is dependent on the equipment and cabling. 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 AVO-USB with another AVO-USB set that is known to be working.
10. If the above steps fail, please contact Intelix for support.
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Technical Specifications

USB Maximum Distance	Full speed (12 mbps): 100' Low speed (1.5 Mbps): 330'
Anti-Static Protection	Contact Discharge: 2000V Air Discharge: 4000V IEC61000-4-2 1995
Power	Powered through the USB output of the host device
Vbus Power	5V
Low Power Device Extension (memory sticks, etc.)	<100 mA draw: 200 feet
High Power Device Extension (unpowered hubs, etc.)	<500 mA draw: 30 feet
Self Powered Device Extension (powered hubs, etc.)	0 mA draw: 330 feet
Connectors	AVO-USB-H (Host): USB-A male to RJ45 AVO-USB-C (Client): USB-A female to RJ45
Diagnostic	Green power/status LED
Recommended Cable	Cat 5, Cat 5e, Cat 6, Cat 6e
Operating Temperature Range	-41 to 95 degrees F -5 to 35 degrees C
Operating Humidity Range	5 to 90% non-condensing
Dimensions	2.5" x 0.75" x 1.38"
Enclosure	ABS plastic
Regulatory	CE, RoHS
Warranty	2 years

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



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.

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EIA/TIA 568B Crimp Pattern Standard

