



USB 3.0 Spectra™ 3001-15

1-Port USB 3.0 15m Active Extension Cable

User Guide



USB™
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USB®

Thank you for purchasing the Icron USB 3.0 Spectra™ 3001-15.

Please read this guide thoroughly.

This document applies to Part Number 00-00351.

FCC Radio Frequency Interference Statement Warning

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

CE Statement

We, Icron Technologies Corporation, declare under our sole responsibility that the Spectra 3001-15, to which this declaration relates, is in conformity with European Standard EN 55022, EN 55024, EN 61000-3-2, and EN 61000-3-3.

IC Statement

This Class B digital apparatus complies with Canadian ICES-003.

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Introduction

This guide provides product information for the USB 3.0 Spectra™ 3001-15 1-port 15m active copper extension cable, installation instructions, troubleshooting guidelines, and instructions for contacting Icron Technologies regarding technical support and warranty information.

The instructions in this guide assume a general knowledge of computer installation procedures, familiarity with cabling requirements, and some understanding of USB devices.



NOTE: Notes provide additional information that could be useful.



CAUTION: Cautions provide important information about an operational requirement.

USB 3.0 Spectra 3001-15 Product Contents

Your Spectra 3001-15 package includes:

- 15 meter USB 3.0 Spectra 3001-15 Active Copper Cable
- Cable Tie
- Quick Start Guide and Warranty Information

Features

The Spectra 3001-15 incorporates Icron's patented ExtremeUSB® technology, enabling users to extend beyond the standard 3m cable limit for USB 3.0 peripheral devices. With the Spectra 3001-15, USB 3.0 devices can be extended up to 15m from the computer.

The Spectra 3001-15 includes the ExtremeUSB suite of features:

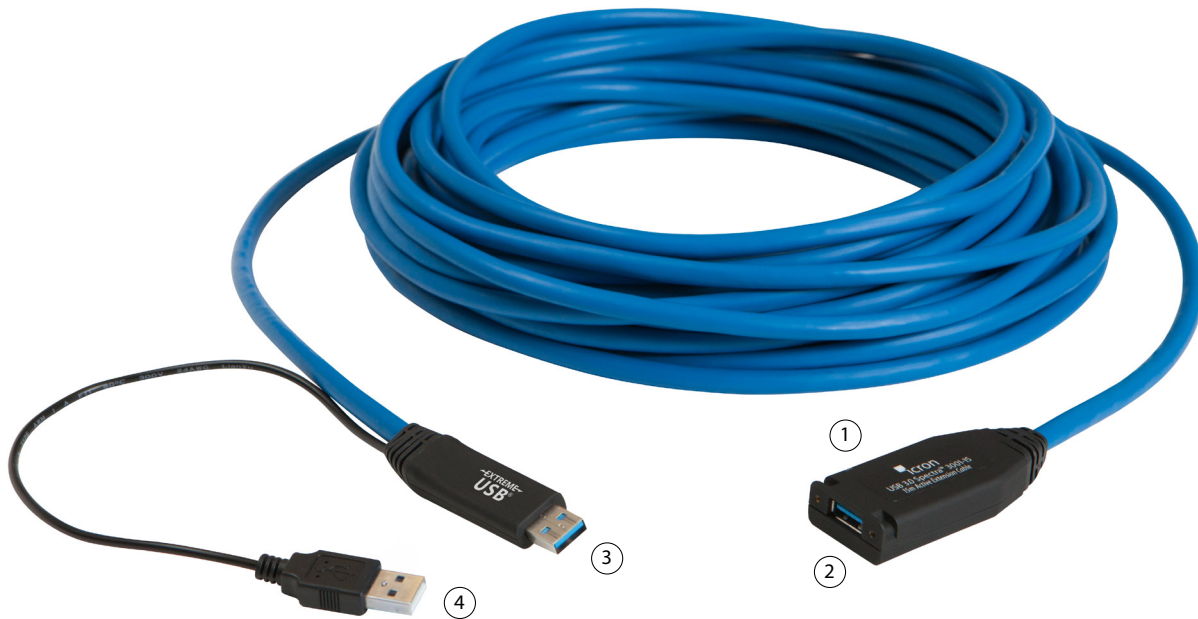
- Transparent USB extension
- True plug and play; no software drivers required
- Works with all major operating systems: Windows®, Mac OS X®, and Linux®

The Spectra 3001-15 is a single-port USB 3.0 SuperSpeed active copper extension cable that is designed to work with AIA USB3 Vision™ compliant devices such as machine vision cameras.



CAUTION: The Spectra 3001-15 supports only USB 3.0 devices. USB 2.0 and 1.1 devices will not function using this extender.

USB 3.0 Spectra 3001-15 Parts Diagram



ITEM	TYPE	DESCRIPTION
1	LED Light is GREEN	Active cable is powered on.
	LED Light is RED	Active cable is not powered properly or not detected by host.
2	USB 3.0 Type A Locking Receptacle	Connects to USB 3.0 device. Port can accept USB 3.0 standard connector and locking-type connector as per AIA USB3 Vision standards.
3	USB 3.0 Host Connector	Connects to USB 3.0 port on host computer.
4	USB Power Connector	An additional power supply that can be connected to the host computer. It is recommended to plug this power connector into the host computer especially for USB devices that draw more than 2.5W of power.

Installation Guide

Example Application



Requirements

To complete installation of the Spectra 3001-15, you will also require the following items that are not included with the product:

- USB 3.0 compatible computer (host computer) with a USB 3.0 compliant operating system
- USB 3.0 compatible device (e.g. camera or storage drive)
- Optional: cable to connect the USB 3.0 device to the Spectra 3001-15 (if required, e.g. USB 3.0 camera)

! CAUTION: The Spectra 3001-15 cable is not backward compatible with USB 2.0/1.1 devices. Per USB-IF specification, USB 3.0 devices must attempt enumeration on USB 3.0 first. If your USB 3.0 device enumerates on USB 2.0 first, then your device is out of spec and will not operate with this cable.

! CAUTION: The Spectra 3001-15 will not operate on a USB 2.0 port; please ensure you connect it to a USB 3.0 port.

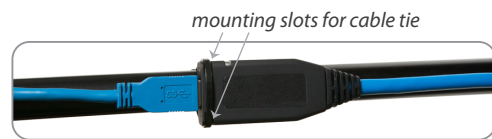
Connection Instructions

Before you get started, ensure that all the drivers required for your USB 3.0 device(s) are installed.

1. Plug the Spectra 3001-15's USB 3.0 host connector into a USB 3.0 port on your computer.
2. It is recommended to plug the Spectra 3001-15's USB power connector into any USB port on your computer. This step is essential if your USB 3.0 device is not self-powered or draws more than 2.5W of power.
3. Attach your USB 3.0 device into the Spectra 3001-15's USB 3.0 receptacle. AIA USB3 Vision locking USB connectors are supported if needed.



Conveniently secure your configuration by wrapping the included cable tie around the USB 3.0 receptacle's two mounting slots.



Most USB 3.0 self-powered devices and flash drives require less than 2.5W of power, while many of the USB 3.0 cameras need more than 2.5W of power. When more than 2.5W of power is required, both connectors of the Spectra 3001-15 should be plugged into the host computer.

! CAUTION: The Spectra 3001-15 is a rugged and robust cable. However, it can be subject to damages if the Spectra 3001-15 is bent beyond the bend radius of 28mm (1.10"). For optimal performance, use the Spectra 3001-15 according to the product specifications (see page 10 of this guide).

Compatibility

The Spectra 3001-15 complies with USB 3.0 specifications governing the design of USB devices. However, Icron Technologies Corporation does not guarantee that all USB 3.0 devices are compatible with the Spectra 3001-15, as there are a number of different configurations that may impact the operation of USB 3.0 devices over extended distances.

! CAUTION: The Spectra 3001-15 supports only USB 3.0 devices. USB 2.0 and 1.1 devices will not function using this extender.

Troubleshooting

The following table provides troubleshooting tips. The topics are arranged in the order in which they should be executed in most situations. If you are unable to resolve the problem after following these instructions, please contact [Technical Support](#) for further assistance.

PROBLEM	CAUSE	SOLUTION
<p>The LED light on the cable is red</p>	<ul style="list-style-type: none"> • The USB 3.0 device draws more than 2.5W of power and the USB power connector is not plugged in. • The Spectra 3001-15 is not recognized by the host computer. • The host computer is not providing enough power. • The Spectra 3001-15 is malfunctioning. 	<ol style="list-style-type: none"> 1. Disconnect the Spectra 3001-15 from your host computer. 2. Plug in the USB power connector first, and then plug into the host connector. 3. If this problem persists, move the USB power connector to another USB port on the host computer. 4. Contact Technical Support for assistance.
<p>The LED light on the cable is green but the USB 3.0 device does not operate correctly, or is detected as an "Unknown Device" in the operating system.</p>	<ul style="list-style-type: none"> • The USB 3.0 device enumerates on USB 2.0 prior to USB 3.0. • The USB 3.0 device is malfunctioning. • The computer does not recognize the USB 3.0 device. • The application software for the device is not operating. • The Spectra 3001-15 is malfunctioning. 	<ol style="list-style-type: none"> 1. Disconnect the Spectra 3001-15 from the computer. 2. Connect the USB device directly into the USB 3.0 port on your computer. 3. If your USB device does not operate properly, consult the user documentation for this device. 4. Update your system BIOS, chipset, or USB Host controller drivers from your System/Mother board manufacturer's website. 5. If your USB device operates properly when directly connected to the computer, connect another USB 3.0 device (of a different type) to the Spectra 3001-15. Connect the Spectra 3001-15 to your computer. 6. If your second USB 3.0 device does not operate, the Spectra 3001-15 may be malfunctioning. Contact Technical Support for assistance. 7. If your second USB 3.0 device does operate properly, your first device may not be compatible with the Spectra 3001-15.

Contacting Technical Support

If you are experiencing problems not referenced in the Troubleshooting section, you may contact **Icron Technical Support** at icron.com/support.

Warranty Information

Limited Hardware Warranty

Icron Technologies Corporation warrants that any hardware products accompanying this documentation shall be free from significant defects in material and workmanship for a period of **two years from the date of purchase**. Icron Technologies Corporation's hardware warranty extends to Licensee, its customers, and end users.

The Warranty does not include repair of failures caused by: misuse, neglect, accident, modification, operation outside a normal operating environment, failure caused by service of the device by non-authorized servicers, or failure caused by a product for which Icron Technologies Corporation is not responsible.

Hardware Remedies

Icron Technologies Corporation's entire liability and the Licensee's exclusive remedy for any breach of warranty, shall be, at Icron Technologies Corporation's option, either (a) return of the price paid or (b) repair or replacement of hardware, which will be warranted for the remainder of the original warranty period or 30 days, whichever is longer. These remedies are void if failure of the hardware has resulted from accident, abuse, or misapplication.

Limitation of Liability

The hardware warranty set forth in this agreement replaces all other warranties. Icron Technologies Corporation expressly disclaims all other merchantability and fitness for a particular purpose and noninfringement of third-party rights with respect to the hardware.

Icron Technologies Corporation dealer, agent, or employee is authorized to make any modification extension, or addition to this warranty. Under no circumstances will Icron Technologies Corporation, its suppliers or licensors be liable for any costs of procurement or substitute products or services, lost profits, loss of information or data, or any other special, indirect, consequential, or incidental damages arising in any way out of the sale of, use of, or inability to use Icron Technologies Corporation product or service, even if Icron Technologies Corporation, its suppliers or licensors have been advised of the possibility of such damages. In no case shall Icron Technologies Corporation, its suppliers and licensors' liability exceed the actual money paid for the products at issue.

Since some jurisdictions do not allow the limitation of implied warranties of liability for incidental, consequential, special or indirect damages, the above limitation may not always apply. The above limitation will not apply in case of personal injury where and to the extent that applicable law requires such liability.

Obtaining Warranty Service

To obtain warranty service, you must first contact Icron Technologies Corporation within the warranty period for a Return Material Authorization (RMA) number. Icron Technologies Corporation will not accept returns without an authorized RMA number. Be sure you have the serial numbers of the local extender and remote extender before calling. Package the product appropriately for safe shipment and mark the RMA number on the outside of the package. The package must be sent prepaid to Icron Technologies Corporation. We recommend that you insure it or send it by a method that provides for tracking of the package. The repaired or replaced item will be shipped to you, at Icron Technologies Corporation's expense, not later than thirty days after Icron Technologies Corporation receives the defective product.

Address the returning product to:

RMA Coordinator
Icron Technologies Corporation
4664 Lougheed Highway, Suite 221
Burnaby, BC Canada
V5C 5T5

Contacting Sales

Email: sales@icron.com

Tel: +1 604 638 3920

Contacting Technical Support

icron.com/support

Tel: +1 604 638 3920

Specifications

RANGE	
Active Copper Cable	15m (49.21 ft)
SPEEDS	
USB 3.0	Up to 5Gbps (Not backward compatible with USB 2.0/1.1)
PHYSICAL	
USB Connector on Device Side	1 x USB 3.0 Type A Locking Receptacle
USB Connectors on Host Side	1 x USB 3.0 Host Connector and 1 x USB 3.0 Power Connector (recommended for devices drawing more than 2.5W)
Cable Diameter	6.9mm (0.27")
Jacket Material	PVC
Minimum Bend Radius	28mm (1.10")
Mounting Slots on Device Side	Slots for Cable Tie
POWER	
Power Source	Bus Power
Available Power to Device	5V, 900mA*
ENVIRONMENTAL	
Operating Temperature Range	0°C to 45°C (32°F to 113°F)
Storage Temperature Range	-20°C to 70°C (-4°F to 170°F)
Operating Humidity	20% to 80% relative humidity, non-condensing
Storage Humidity	10% to 90% relative humidity, non-condensing
COMPLIANCE	
EMC	FCC (Class B), CE (Class B)
Environmental	RoHS2 (CE)
Flammability	VW-1 (UL 1581)
Machine Vision	Works with AIA USB3 Vision compliant devices
SUPPORT	
Warranty	2 years

*When both connectors are plugged into the host computer.



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