USB to IP
Adapter for Peripheral Devices
## Version Information

<table>
<thead>
<tr>
<th>Version</th>
<th>Release Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4/18</td>
<td>Initial release</td>
</tr>
</tbody>
</table>
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Thank you for purchasing this Atlona product. We hope you enjoy it and will take an extra few moments to register your new purchase.

Registration only takes a few minutes and protects this product against theft or loss. In addition, you will receive notifications of product updates and firmware. Atlona product registration is voluntary and failure to register will not affect the product warranty.

To register your product, go to http://www.atlona.com/registration

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Operating Notes


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• repair or facilitate the repair of defective products within a reasonable period of time, restore products to their proper operating condition and return defective products free of any charge for necessary parts, labor and shipping.

OR

• replace and return, free of charge, any defective products with direct replacement or with similar products deemed by Atlona to perform substantially the same function as the original products.

OR

• refund the pro-rated value based on the remaining term of the warranty period, not to exceed MSRP, in cases where products are beyond repair and/or no direct or substantially similar replacement products exist.

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Atoma, Inc. ("Atoma") Limited Product Warranty

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- Equipment enclosures, cables, power supplies, batteries, LCD displays, and any accessories used in conjunction with the product(s).
- Products purchased from unauthorized distributors, dealers, resellers, auction websites and similar unauthorized channels of distribution.

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1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this product near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
8. Do not install or place this product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of a polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the product.
11. Only use attachments/accessories specified by Atlona.
12. To reduce the risk of electric shock and/or damage to this product, never handle or touch this unit or power cord if your hands are wet or damp. Do not expose this product to rain or moisture.
13. Unplug this product during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the product has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the product, the product has been exposed to rain or moisture, does not operate normally, or has been dropped.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT OPEN ENCLOSURE OR EXPOSE TO RAIN OR MOISTURE. NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the product.

The information bubble is intended to alert the user to helpful or optional operational instructions in the literature accompanying the product.

FCC Statement

FCC Compliance and Advisory Statement: This hardware 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. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed or used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: 1) reorient or relocate the receiving antenna; 2) increase the separation between the equipment and the receiver; 3) connect the equipment to an outlet on a circuit different from that to which the receiver is connected; 4) consult the dealer or an experienced radio/TV technician for help. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Where shielded interface cables have been provided with the product or specified additional components or accessories elsewhere defined to be used with the installation of the product, they must be used in order to ensure compliance with FCC regulations.
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Introduction

The Atlona OmniStream™ 324 (AT-OMNI-324) works in tandem with the OmniStream 311 (AT-OMNI-311) for extending USB from peripheral devices to a PC over Gigabit Ethernet. The OmniStream 324 features a four-port USB hub for peripherals, while the OmniStream 311 interfaces with a PC or other host device. The OmniStream USB over IP system is compatible with USB 2.0 data rates of up to 480 Mbps. It can be used with high-bandwidth devices including cameras, speakerphones, microphones, and DSPs, plus standard USB HID class devices such as a keyboard, mouse, or touch display. Up to seven OmniStream 324 units can be simultaneously paired to an OmniStream 311. Additionally, USB routing over the network can be managed using Atlona Management System (AMS) 2.0.

OmniStream USB products can be used in a wide variety of system design scenarios for soft codec conferencing and remote keyboard / mouse control. They are ideal for integrating USB audio and video devices as part of a fully IP-based meeting room system, in conjunction with OmniStream AV over IP devices and the Velocity Control System.

Features

- Extend USB over Gigabit Ethernet using CAT5e/6 cable.
- Four-port USB hub.
- Supports high bandwidth devices such as webcams and speakers, as well as standard HID-class peripherals.
- Compatible with USB 2.0 data rates up to 480 Mbps.
- Ideal for meeting room applications to extend USB from touch displays, cameras, speakerphones, DSPs, and more.
- Design flexible and scalable AV systems in combination with OmniStream AV encoders and decoders.
- Up to seven OmniStream 324 units can be paired with an OmniStream 311 over a network.
- USB signal routing configured and managed by AMS (Atlona Management System) 2.0.
- Ready for integration with Atlona Velocity™ Control System to manage USB signal routing.
- Front panel LED indicators for power, network and USB host connectivity, and USB signal presence over IP.
- Low-profile, 1 inch (25 mm) high enclosure.
- Includes installation guide, surface-mounting brackets, and external universal power supply.

Package Contents

1 x AT-OMNI-324
2 x Mounting brackets
1 x 24 V DC power supply
1 x Installation Guide
Panel Description

1 USB Device Ports
Connect up to four USB devices using these ports.

2 PWR
This LED indicator glows solid green when the unit is powered.

3 HOST
This LED indicator glows green when a USB host device is connected to the AT-OMNI-311 (not included). Refer to LED Indicators (page 12) for more information.

4 LINK
This LED indicator is solid green when a solid connection between this unit and the transmitter has been established. Refer to LED Indicators (page 12) for more information.

5 SIGNAL
This LED indicator monitors data transmission between this unit and the receiver. The LED will blink intermittently whether or not a USB device is connected. Refer to LED Indicators (page 12) for more information.

6 DC 24V
Connect the included power supply to this power receptacle.

7 UTILITY
This port is for factory programming.

8 PAIRING
Press this button to begin the pairing process.

9 LAN
Connect an Ethernet cable from this port to the Local Area Network (LAN).
Installation

Connection Instructions

1. Place the AT-OMNI-324 near the location of the USB devices to be connected. Connect up to four USB devices to the USB ports on the AT-OMNI-324.

   The AT-OMNI-324 can be connected to a AT-OMNI-311 (not included) in one of two ways:

   **Over a Network**
   a. Connect an Ethernet cable, up to 330 feet (100 meters), from the LAN port on the AT-OMNI-324 to the network switch. Note that multiple AT-OMNI-324 units can be connected to the network.
   b. Connect an Ethernet cable, up to 330 feet (100 meters), from the transmitter (AT-OMNI-311; not included) to a switch on the same network.

   **NOTE:** When connecting a transmitter and receiver, over a network, the cable distance between hops must not exceed 330 feet (100 meters) for copper connections (fiber extenders can be used to create longer runs). For example, connecting up to five network switches, using copper cabling, can be used to extend USB up to 1980 feet (600 meters).

   **Direct Connection**
   a. Connect an Ethernet cable, up to 330 feet (100 meters), from the LAN port of the AT-OMNI-324 directly to the AT-OMNI-311 (not included).

2. Connect the included power supply to the DC 24V power receptacle.
3. Connect the power supply to an available electrical outlet.
4. Refer to Pairing (page 13) for instructions on pairing.
Connection Diagrams

Connection over a Local Area Network (LAN)

Direct Connection
Basic Operation

LED Indicators

The PWR, LINK, HOST, and SIGNAL LED indicators on the OmniStream 324 provide basic information on the current status of the unit.

<table>
<thead>
<tr>
<th>LED</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR</td>
<td>Solid green</td>
</tr>
<tr>
<td></td>
<td>Unit is powered.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
</tr>
<tr>
<td></td>
<td>Unit is not powered.</td>
</tr>
<tr>
<td></td>
<td>• Verify that the included power supply is connected to the AT-OMNI-324 and the power supply are connected to a live electrical outlet.</td>
</tr>
<tr>
<td>LINK</td>
<td>Solid green</td>
</tr>
<tr>
<td></td>
<td>The link integrity between the receiver and the transmitter is good.</td>
</tr>
<tr>
<td></td>
<td>Blinking green (slow)</td>
</tr>
<tr>
<td></td>
<td>The receiver is attempting to establish a link to the transmitter.</td>
</tr>
<tr>
<td></td>
<td>Blinking green (fast)</td>
</tr>
<tr>
<td></td>
<td>The receiver is in Pairing Mode.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
</tr>
<tr>
<td></td>
<td>There is no link between the receiver and the transmitter.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Direct Mode:</strong></td>
</tr>
<tr>
<td></td>
<td>Verify that an Ethernet cable is connected between the LAN port on the receiver and the transmitter.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Network Mode:</strong></td>
</tr>
<tr>
<td></td>
<td>Verify that an Ethernet cable is connected between the LAN port on the receiver and the network switch.</td>
</tr>
<tr>
<td></td>
<td>• Check that the Ethernet cable is not physically damaged.</td>
</tr>
<tr>
<td></td>
<td>• Make sure that the Ethernet cable does not exceed 330 feet (100 meters).</td>
</tr>
<tr>
<td>HOST</td>
<td>Solid green</td>
</tr>
<tr>
<td></td>
<td>The transmitter is properly enumerated on the host computer.</td>
</tr>
<tr>
<td></td>
<td>Blinking green</td>
</tr>
<tr>
<td></td>
<td>The transmitter is in a suspended state.</td>
</tr>
<tr>
<td>SIGNAL</td>
<td>Blinking green</td>
</tr>
<tr>
<td></td>
<td>This LED indicator will blink intermittently when data is being transmitted between the receiver and the transmitter.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
</tr>
<tr>
<td></td>
<td>The receiver is in Suspend Mode.</td>
</tr>
</tbody>
</table>
Pairing

Pairing an OmniStream 324 to an OmniStream 311 (not included) is managed using the Atlona Management System (AMS). AMS is free and can be downloaded from https://atlona.com/AMS. The pairing process can also be performed using the Server Appliance for Atalona Management System (AT-AMS-HW).

Using AMS

1. Launch a web browser and enter the IP address of AMS, in the address bar.
2. Enter the required login credentials.
3. Click the **Login** button.
4. The AMS Dashboard will be displayed.
5. Click the **≡** icon, in the upper-left corner of the AMS Dashboard.
6. Click **Devices** > **Unassigned** from the fly-out menu.

All available OmniStream 324 devices will be displayed under the **Unassigned** category. When a device is unassigned, it means that the device has not yet been assigned to a site, building, and/or room. Refer to the AMS User Manual for more information on these topics.
Basic Operation

7. Click the AT-OMNI-324 from the Unassigned list.

8. The DEVICE INFO page for the AT-OMNI-324 will be displayed. Click the PAIRING tab.
9. Click the Pairing drop-down list and select the desired OmniStream 311. In this example, only a single OmniStream 311 is connected to the network. Therefore, this is the only available option. Up to seven OmniStream 324 units can be paired to an OmniStream 311.

10. Click the SAVE button at the bottom of the page.

11. The pairing process is complete. Repeat steps 7 through 10 for each OmniStream 324 on the network.

   To unpair an OmniStream 324 from an OmniStream 311, select None from the drop-down list and then click the SAVE button.
Manual Pairing

The OmniStream 311 and OmniStream 324 can also be paired manually. This applies when the OmniStream 311 and OmniStream 324 are connected, either through a network switch (on the same broadcast domain) or directly to one another using category cable. This instructions below cover manual pairing for both the OmniStream 311 and OmniStream 324.

1. Make sure both the OmniStream 311 and OmniStream 324 are connected, either directly or through a network switch, and that all USB connections have been made.

OmniStream 311

2. Press and hold the **PAIRING** button, for no more than 10 seconds, on the OmniStream 311 using the end of a paperclip or other pointed object.

   ! IMPORTANT: Pressing the **PAIRING** button for more than 10 seconds will cancel the pairing mode.

3. Release the **PAIRING** button. The **LINK** LED indicator will begin flashing. Pairing mode is now active on the OmniStream 311.

   ! NOTE: To cancel pairing mode, press and hold the **PAIRING** button for more than 10 seconds.

OmniStream 324

4. Press and hold the **PAIRING** button on the OmniStream 324, for **no more** than 10 seconds, using the end of a paperclip or other pointed object.

   ! IMPORTANT: Pressing the **PAIRING** button for **more** than 10 seconds will cancel the pairing mode. The **PAIRING** button on the OmniStream 324 must be pressed within 10 minutes of activating pairing mode on the OmniStream 311. If not, then the pairing process will automatically be cancelled.

5. Release the **PAIRING** button. The **LINK** LED indicator will begin flashing. Pairing mode is now active on the OmniStream 324.

The OmniStream 311 and OmniStream 324 will begin the linking process. During the linking process, the **LINK** LED indicator on both unit may flash more slowly. This is normal behavior.

Once both **LINK** LED indicators are solid green, the pairing process will be complete.

Unpairing an Extender

To unpair one extender from the other, press and hold the **PAIRING** button, on either of the connected units, for **more** than 10 seconds, then release.
Basic Operation

Using Velocity™

The following section provides instructions on pairing AT-OMNI-311 units with AT-OMNI-324 units using the Atlona Velocity Control Software. Familiarity with the Velocity software is assumed. Refer to the Atlona Velocity User Manual for more information, if necessary.

1. Launch a web browser and enter the IP address of Velocity, in the address bar.
2. Enter the required login credentials.
3. Click the Login button.
4. The Velocity Dashboard will be displayed.
5. Click the icon, in the upper-left corner, to display the fly-out menu.

6. Click Sites in the menu bar to expand the list of buildings and rooms.
7. Click the desired room from the list.

In the example on the right, a set of units have been set up in a room called Omni 311 324 within Building 1.

Refer to the Velocity User Manual for instructions on creating rooms and adding devices to rooms.
8. The **Modify Room** screen will be displayed. Click the **Room Control Options** icon, in the upper-right corner of the **Technology** bar.

![Room Control Options icon]

9. The **Room Control Options** screen will be displayed. In order to allow units to be paired or unpaired, two macros will need be created: one for pairing and one for unpairing.

![Room Control Options screen]

10. Click the **Macros** icon to display the **Room Macros** screen.
Basic Operation

Creating the Unpair Macro

1. In the **Room Macros** screen, click the + icon, in the upper-right corner of the screen.

2. Enter the name of the macro in both the **Name** and **Macro Commands** text field. The name of the macro should be descriptive of what option is being performed.

3. Click the + icon to display the macro configuration dialog.

4. Click the **Device** drop-down list and select one of the device from this list. Since the “Unpair” macro will disconnect the two units from one another, either the AT-OMNI-311 or AT-OMNI-324 can be selected from this drop-down list. In this example, the AT-OMNI-324 is selected.

5. Click the **Command** drop-down list and select **Remove All Pairings**.

6. Repeat steps 3 through 5: when repeating theses steps, select the AT-OMNI-311 from the **Device** drop-down list.

7. Click the **Save** icon in the top-right portion of the **Room Macros** bar.
Creating the Pair Macro

1. In the **Room Macros** screen, click the + icon, in the upper-right corner of the screen.

![Room Macros screenshot](image)

2. Enter the name of the macro in both the **Name** and **Macro Commands** text field. In this example, “Pair” will be used.

3. Click the + icon to display the macro configuration dialog.

4. Click the **Device** drop-down list and select the AT-OMNI-324.

5. Click the **Command** drop-down list and select **Pair (Auto)**.

6. Click the second **Device** drop-down list and select the unit to be paired. Since the AT-OMNI-324 was already selected, select the AT-OMNI-311 from the drop-down list.

![Pair Macro configuration](image)

7. Repeat steps 2 through 5: For the first **Device** drop-down list, select the AT-OMNI-324, and for the second **Device** drop-down list, select the AT-OMNI-311. When this macro is completed, it should appear similar to the following:

![Pair Macro configuration](image)

8. Click the **Save** icon, in the top-right portion of the **Room Macros** bar.
Basic Operation

Pairing and Unpairing Units

**IMPORTANT:** Before pairing units, make sure to unpair (remove) any existing pairings using the “unpair” macro that was created on page 19.

1. Click the ► icon for the “Unpair” macro. This will remove any possible “out-of-the-box” (factory) pairing that may exist.

2. Click the ► icon for the “Pair” macro to pair the two units.

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**Example: Pairing two AT-OMNI-324 to a single AT-OMNI-311**

The following illustration depicts an example of how to pair two AT-OMNI-324 units to a single AT-OMNI-311. Refer to the instructions on the following page for how to configure this setup. Note that arbitrary IP addresses have been assigned for reference.
Basic Operation

1. In the **Room Macros** screen, click the + icon, in the upper-right corner of the screen.

2. Enter “Unpair” for both the **Name** and **Macro Commands** text field.

3. Click the + icon to display the macro configuration dialog.

4. Click the **Device** drop-down list and select one of the devices from this list. Since the “Unpair” macro will be disconnecting a total of three units from one another, the “Unpair” macro will contain a total of three commands. In this example, the AT-OMNI-324 is arbitrarily selected.

5. Click the **Command** drop-down list and select **Remove All Pairings**.

6. Repeat steps 3 through 5, selecting the second AT-OMNI-324 and then the AT-OMNI-311 from the **Device** drop-down list. When completed, the “Unpair” macro should appear as follows:
9. Click the **Save** icon in the top-right portion of the **Room Macros** bar.

10. Create a “pairing” macro by clicking the **+** icon, in the upper-right corner of the screen.

    Note that since there are two AT-OMNI-324 units, creating the “Pair” macro can be achieved using two different methods:

    a. Create two separate macros: one to pair the AT-OMNI-311 and the AT-OMNI-324 with the camera, and another one to pair the AT-OMNI-311 with the AT-OMNI-324 with the speakerphone. This method provides more control, providing the option of which AT-OMNI-324 is paired with the AT-OMNI-311.

    b. Create a single macro which pairs both AT-OMNI-324 units to the AT-OMNI-311. This method is more convenient, but does not provide the option of which AT-OMNI-324 is paired with the AT-OMNI-311.

    For this example, two separate pairing macros will be created:

9. Enter “Pair to camera” in both the **Name** and **Macro Commands** text field. This macro will be used to pair the computer with the camera.

10. Click the **+** icon to display the macro configuration dialog.

11. Click the **Device** drop-down list and select the AT-OMNI-324 that is connected to the camera. In this example, the AT-OMNI-324 with the IP address of 192.168.11.124 will be selected.

12. Click the **Command** drop-down list and select **Pair (Auto)**.

13. Click the second **Device** drop-down list and select the AT-OMNI-311.

14. Repeat steps 10 through 13: select the AT-OMNI-311 in the first **Device** drop-down list, and then the AT-OMNI-324 with the camera, from the second **Device** drop-down list. The “Pair to camera” macro should now appear as follows:
9. Click the **Save** icon in the top-right portion of the **Room Macros** bar.

10. Click the **+** icon, in the upper-right corner of the screen to create the final macro. This macro will be used to pair the computer with the speakerphone.

11. Enter “Pair to speaker” in both the **Name** and **Macro Commands** text field.

12. Click the **+** icon to display the macro configuration dialog.

13. Click the **Device** drop-down list and select the AT-OMNI-324 that is connected to the speakerphone. The AT-OMNI-324 with the IP address of 192.168.11.123 will be selected.

14. Click the **Command** drop-down list and select **Pair (Auto)**.

15. Click the second **Device** drop-down list and select the AT-OMNI-311.

16. Repeat steps 18 through 21: select the AT-OMNI-311 in the first **Device** drop-down list, and then the AT-OMNI-324 with the speakerphone, from the second **Device** drop-down list. The “Pair to speaker” macro should now appear as follows:

17. Click the **Save** icon in the top-right portion of the **Room Macros** bar.
The AMS Interface

Device Info tab

The Device Info tab provides general information about the OmniStream 324. The OmniStream 311 has an identical interface.

**Alias**
Enter a name for the unit in this field. This is optional. By default, this field will be assigned the model number plus the MAC address of the unit.

**Model**
The model number of the unit.

**IP Address**
Displays the IP address of the unit.

**MAC Address**
Displays the MAC address of the unit.
The AMS Interface

Network tab

The **Network** tab provides the ability to enable or disable DHCP mode. When DHCP mode is disabled, the IP address, subnet mask, and gateway must be provided.

**DHCP Mode**
Click this drop-down list to select the desired network mode. Select DHCP to let the DHCP server (if present) assign the encoder the IP settings; Subnet and Gateway fields will automatically be populated. When **Static** mode is selected, the information for the **IP Address**, **Subnet**, and **Gateway** fields must be entered.

**IP Address**
Displays the IP address used by the channel. This field can only be changed if **Static** mode is selected.

**Subnet**
Displays the subnet mask for the channel. This field can only be changed if **Static** mode is selected.

**Gateway**
Displays the gateway (router) address for the channel. This field can only be changed if **Static** mode is selected.

**MAC Address**
The MAC address of the Ethernet channel.
The AMS Interface

**Pairing tab**

The **Pairing** tab provides the ability to pair the OmniStream 324 with a OmniStream 311 device. Up to seven OmniStream 324 units can be paired to an OmniStream 311.

**Pairing 1**

Click this drop-down list to pair the OmniStream 324 with the desired OmniStream 311. To unpair an OmniStream 324 and an OmniStream 311, select the **None** option. Refer to **Pairing (page 13)** for more information.
Appendix

Mounting Instructions

The AT-OMNI-324 includes two mounting brackets, which can be used to attach the units to any flat surface.

1. Remove the two enclosure screws, on both sides of the unit, using a small Phillips-head screwdriver.

2. Position one of the mounting brackets, as shown below, aligning the holes on the side of the enclosure with one set of holes on the mounting bracket.

3. Attach the mounting brackets using the enclosure screws from Step 1.

4. Mount the unit using the oval-shaped holes, on each mounting bracket. If using a drywall surface, a #6 drywall screw is recommended.

NOTE: The unit can also be mounted under a table or other flat surface.
## Supported Cameras

The table below provides a list of webcams that have been tested and verified for use with the AT-OMNI-311 at USB 2.0 speeds.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlona</td>
<td>AT-HDVS-CAM</td>
</tr>
<tr>
<td>Creative</td>
<td>Live! Connect HD</td>
</tr>
<tr>
<td></td>
<td>Live! Cam inPerson HD</td>
</tr>
<tr>
<td></td>
<td>Live! Ultra</td>
</tr>
<tr>
<td></td>
<td>Live! Cam Socialize</td>
</tr>
<tr>
<td>Logitech</td>
<td>9000</td>
</tr>
<tr>
<td></td>
<td>9000 Pro</td>
</tr>
<tr>
<td></td>
<td>C200</td>
</tr>
<tr>
<td></td>
<td>C910</td>
</tr>
<tr>
<td></td>
<td>C920</td>
</tr>
<tr>
<td></td>
<td>Meetup*</td>
</tr>
<tr>
<td></td>
<td>Orbit MP</td>
</tr>
<tr>
<td></td>
<td>QuickCam Ultra Vision SE</td>
</tr>
<tr>
<td></td>
<td>Vision Pro</td>
</tr>
<tr>
<td>Microsoft</td>
<td>1080p HomeCinema</td>
</tr>
<tr>
<td></td>
<td>VX 500</td>
</tr>
<tr>
<td></td>
<td>Lifecam Cinema 720p</td>
</tr>
<tr>
<td></td>
<td>Lifecam HD-5000</td>
</tr>
<tr>
<td></td>
<td>Lifecam VX-2000</td>
</tr>
<tr>
<td>Philips</td>
<td>SPC900NC</td>
</tr>
</tbody>
</table>

*Although this is a USB 3.0 device, the test procedure was performed using a AT-OMNI-324 at USB 2.0 speeds.*
## Specifications

<table>
<thead>
<tr>
<th>Connectors, Controls, and Indicators</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USB</strong></td>
<td>4 - Type A, 4-pin female</td>
<td></td>
</tr>
<tr>
<td><strong>LAN</strong></td>
<td>1 - RJ45, shielded</td>
<td></td>
</tr>
<tr>
<td><strong>UTILITY</strong></td>
<td>1 - 3.5 mm mini-stereo</td>
<td></td>
</tr>
<tr>
<td><strong>PAIRING</strong></td>
<td>1 - Push button, tact-type, recessed</td>
<td></td>
</tr>
<tr>
<td><strong>PWR indicator</strong></td>
<td>1 - LED, green</td>
<td></td>
</tr>
<tr>
<td><strong>LINK indicator</strong></td>
<td>1 - LED, green</td>
<td></td>
</tr>
<tr>
<td><strong>HOST indicator</strong></td>
<td>1 - LED, green</td>
<td></td>
</tr>
<tr>
<td><strong>SIGNAL indicator</strong></td>
<td>1 - LED, green</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distance</th>
<th>Feet</th>
<th>Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per hop of Ethernet cable</td>
<td>330</td>
<td>100</td>
</tr>
</tbody>
</table>

### USB

<table>
<thead>
<tr>
<th>Signal</th>
<th>2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Data Rate</td>
<td>480 Mbps</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Fahrenheit</th>
<th>Celsius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating</td>
<td>32 to 122</td>
<td>0 to 50</td>
</tr>
<tr>
<td>Storage</td>
<td>-20 to 70</td>
<td>-4 to 158</td>
</tr>
</tbody>
</table>

### Humidity

<table>
<thead>
<tr>
<th>Operating (RH)</th>
<th>20% to 80% (non-condensing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage (RH)</td>
<td>10% to 90% (non-condensing)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Inches</th>
<th>Millimeters</th>
</tr>
</thead>
<tbody>
<tr>
<td>H x W x D</td>
<td>1.04 x 3.92 x 3.01</td>
<td>26.40 x 99.50 x 76.45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weight</th>
<th>Pounds</th>
<th>Kilograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device</td>
<td>0.50</td>
<td>0.23</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Certifications</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Device</td>
<td>CE, FCC, RoHS</td>
</tr>
</tbody>
</table>
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