

ATEN UCE33100

ATEN UCE33100 4-Port USB 3.2 Gen 1 Cat 6A Extender Instruction Manual

Model: UCE33100

1. INTRODUCTION

The ATEN UCE33100 is a two-part USB 3.2 Gen 1 Cat 6A Extender designed to extend USB 3.2 data signals up to 100 meters (328 feet) over a single Cat 6A cable. This extender supports data transfer rates of up to 5Gbps and is backward compatible with USB 2.0 and 1.1 devices. It features four USB Type-A ports on the remote unit for connecting multiple USB peripherals. The UCE33100 also includes bidirectional RS-232 pass-through and FSYNC GPIO ports for integration with control systems and industrial camera applications. Its plug-and-play design ensures easy installation without the need for additional drivers or software.

2. PACKAGE CONTENTS

Please check the package contents to ensure all items are present and in good condition. If any items are missing or damaged, contact your dealer.

- 1x UCE33100 Local Unit (UCE33100L)
- 1x UCE33100 Remote Unit (UCE33100R)
- 1x Power Adapter (24V)
- 1x USB 3.2 Type-B to Type-A Cable
- 1x Mounting Kit
- 1x User Instructions (this manual)

3. PRODUCT OVERVIEW

The ATEN UCE33100 consists of two main components: the Local Unit (UCE33100L) and the Remote Unit (UCE33100R).

3.1 Local Unit (UCE33100L)

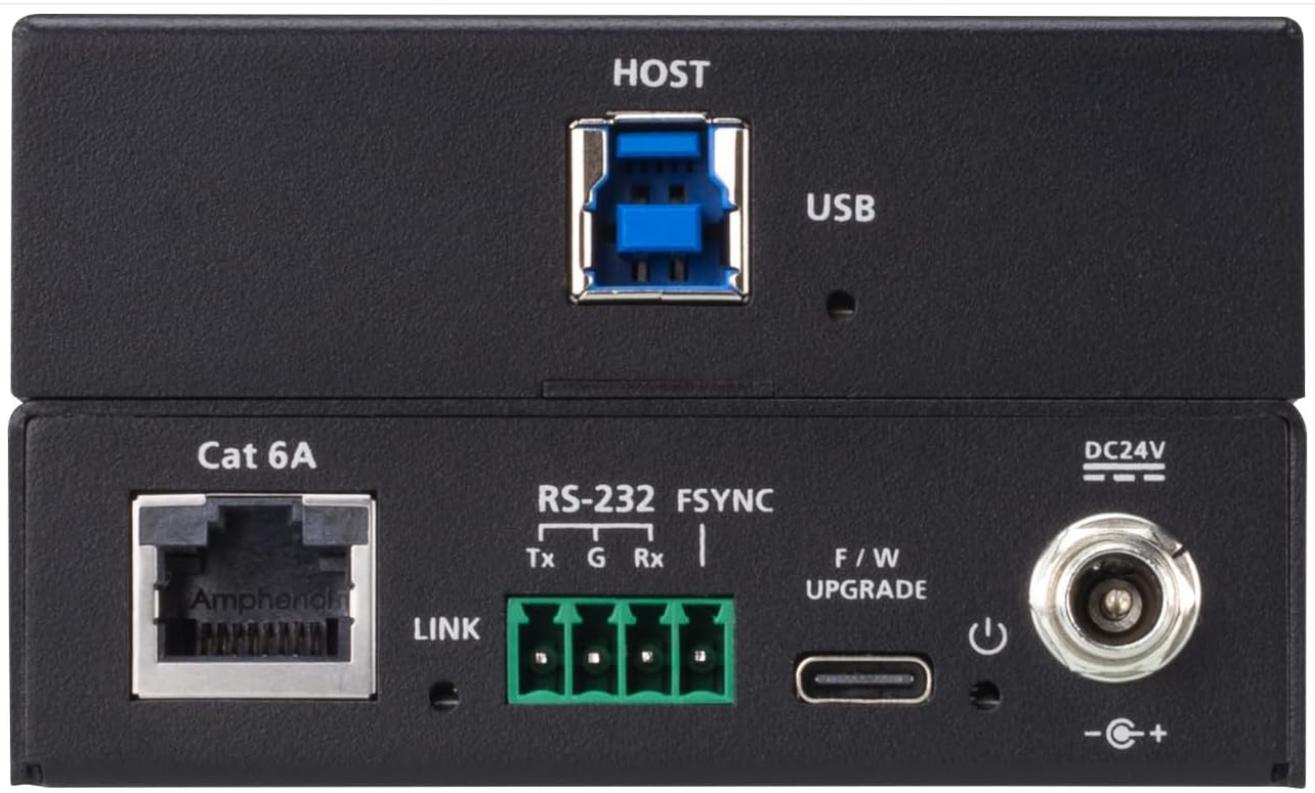


Image 1: ATEN UCE33100 Local Unit (UCE33100L)

This image displays the rear panel of the UCE33100 Local Unit. Key ports visible include the USB Host port (blue, rectangular), a Cat 6A Ethernet port for connection to the remote unit, RS-232 and FSYNC terminals for control and synchronization, a F/W UPGRADE port (USB-C), and a DC24V power input. A LINK indicator LED is also present.

- **HOST USB Port:** Connects to the host computer.
- **Cat 6A Port:** Connects to the Remote Unit via a Cat 6A Ethernet cable.
- **RS-232 Terminals:** For serial communication pass-through.
- **FSYNC Terminals:** For frame synchronization GPIO pass-through.
- **F/W UPGRADE Port:** USB-C port for firmware updates.
- **DC24V Power Input:** Connects to the included power adapter.
- **LINK LED:** Indicates connection status to the Remote Unit.

3.2 Remote Unit (UCE33100R)



Image 2: ATEN UCE33100 Remote Unit (UCE33100R)

This image displays the front panel of the UCE33100 Remote Unit. It features four blue USB Type-A ports for connecting peripheral devices, labeled 1 through 4. The Cat 6A Ethernet port, RS-232, FSYNC terminals, F/W UPGRADE port, and DC24V power input are also visible, similar to the local unit.

- **USB Type-A Ports (x4):** Connects to USB peripheral devices (e.g., flash drives, keyboards, mice, webcams).
- **Cat 6A Port:** Connects to the Local Unit via a Cat 6A Ethernet cable.
- **RS-232 Terminals:** For serial communication pass-through.
- **FSYNC Terminals:** For frame synchronization GPIO pass-through.
- **F/W UPGRADE Port:** USB-C port for firmware updates.
- **DC24V Power Input:** Connects to the included power adapter.
- **LINK LED:** Indicates connection status to the Local Unit.

4. SETUP AND INSTALLATION

Follow these steps to set up your ATEN UCE33100 extender system.

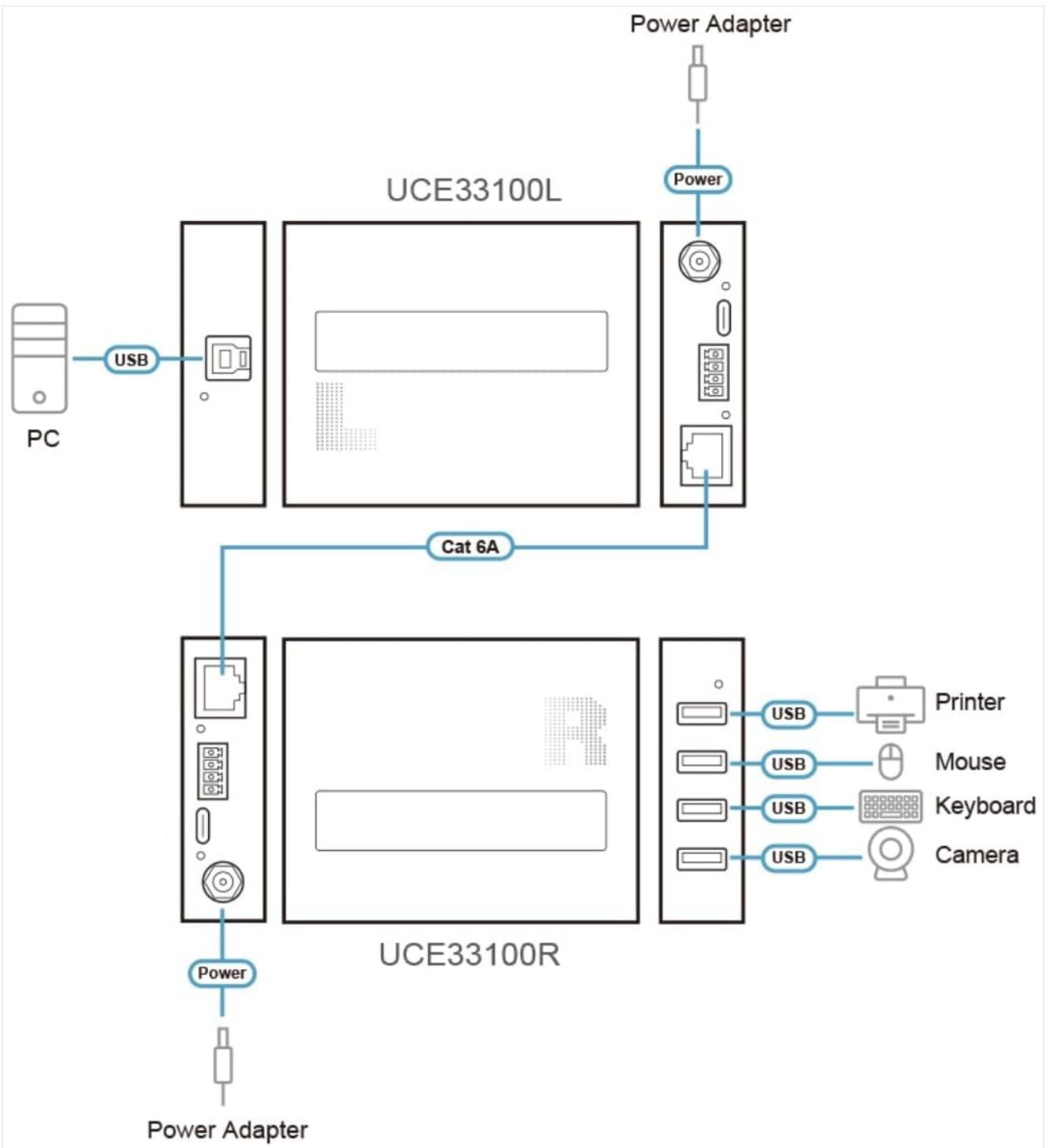


Image 3: ATEN UCE33100 Connection Diagram

This diagram illustrates the typical setup for the UCE33100. A PC connects to the UCE33100L (Local Unit) via a USB cable. The UCE33100L then connects to the UCE33100R (Remote Unit) using a Cat 6A cable. Finally, USB peripherals such as a printer, mouse, keyboard, and camera connect to the USB ports on the UCE33100R. Both units require power from their respective power adapters.

1. **Power Off Devices:** Ensure all devices, including the host computer and USB peripherals, are powered off before beginning installation.
2. **Connect Local Unit:** Connect the USB 3.2 Type-B to Type-A cable from your host computer's USB port to the **HOST USB Port** on the UCE33100L (Local Unit).
3. **Connect Remote Unit:** Connect your USB peripheral devices (e.g., keyboard, mouse, webcam, flash drive) to the **USB Type-A Ports** on the UCE33100R (Remote Unit).
4. **Interconnect Units:** Connect the **Cat 6A Port** on the UCE33100L to the **Cat 6A Port** on the UCE33100R using a single Cat 6A Ethernet cable. Ensure the cable length does not exceed 100 meters.
5. **Apply Power:**

- a. Connect the included 24V power adapter to the **DC24V Power Input** on either the UCE33100L or UCE33100R. The two-way 24V power cable function eliminates the need for a second power adapter if one unit is powered.
 - b. Plug the power adapter into an appropriate power outlet.
6. **Power On:** Power on your host computer and connected USB peripheral devices. The UCE33100 is plug-and-play and should be recognized automatically by the operating system.
 7. **Optional RS-232/FSYNC:** If using RS-232 or FSYNC functionalities, connect the appropriate cables to the respective terminals on both the Local and Remote Units as required by your application.

Important: Use only Cat 6A Ethernet cable for optimal performance and to achieve the maximum extension distance. Lower category cables may result in reduced performance or shorter distances.

5. OPERATION

Once the ATEN UCE33100 extender system is set up, operation is straightforward.

- **USB Device Recognition:** Connected USB devices on the Remote Unit will function as if they were directly connected to the host computer. The operating system will detect and install necessary drivers for the USB devices automatically.
- **Data Transfer:** The extender supports USB 3.2 Gen 1 data transfer rates up to 5Gbps. Performance may vary based on the connected USB devices and cable quality.
- **RS-232 Pass-through:** If configured, RS-232 serial data will pass transparently between the host system and the remote RS-232 device.
- **FSYNC GPIO Pass-through:** If configured, FSYNC signals will pass transparently for industrial camera synchronization.
- **LINK LED Indicator:** Observe the LINK LED on both units. A solid light indicates a successful connection between the Local and Remote Units.

The UCE33100 is designed for continuous operation. No specific user interaction is required after initial setup for standard USB extension.

6. MAINTENANCE

The ATEN UCE33100 is a low-maintenance device.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the units. Do not use liquid or aerosol cleaners.
- **Environment:** Ensure the units are placed in a well-ventilated area, away from direct sunlight, heat sources, and excessive moisture.
- **Firmware Updates:** Periodically check the ATEN website for any available firmware updates for the UCE33100. Firmware updates can be applied via the F/W UPGRADE USB-C port. Refer to the ATEN website for specific instructions on firmware update procedures.

7. TROUBLESHOOTING

If you encounter issues with your UCE33100, refer to the following troubleshooting tips:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
No power to units.	Power adapter not connected or faulty.	Ensure the 24V power adapter is securely connected to either the Local or Remote Unit and plugged into a working power outlet. Verify the power outlet is active.
USB devices not detected.	No link between units. Faulty Cat 6A cable. USB cable issue. Device driver issue on host. Power issue to remote unit/USB devices.	Check the LINK LED on both units. If off, check Cat 6A cable connection. Replace the Cat 6A cable with a known good one. Ensure USB cables connecting peripherals to the Remote Unit are secure and functional. Verify USB device drivers are installed correctly on the host computer. Ensure the power adapter is connected and providing power. Some high-power USB devices may require external power.
Slow USB data transfer.	Cable quality or length. USB 2.0/1.1 device connected. Host computer USB port limitation.	Ensure a high-quality Cat 6A cable is used and its length is within 100m. USB 2.0/1.1 devices will operate at their native speeds, not USB 3.2 speeds. Ensure the host computer's USB port is a USB 3.2 Gen 1 (or higher) port.
RS-232 or FSYNC not working.	Incorrect wiring or configuration.	Verify the RS-232 and FSYNC terminal connections on both units are correct according to your application's requirements. Consult the documentation for your RS-232/FSYNC devices.

8. SPECIFICATIONS

Feature	Detail
Model	UCE33100
USB Standard	USB 3.2 Gen 1 (backward compatible with USB 2.0/1.1)
Data Transfer Rate	Up to 5Gbps
Extension Distance	Up to 100m (328 ft) over Cat 6A cable
Local Unit Ports (UCE33100L)	1x USB 3.2 Type-B (Host), 1x Cat 6A, RS-232, FSYNC, 1x USB-C (F/W UPGRADE), 1x DC24V Power Input
Remote Unit Ports (UCE33100R)	4x USB 3.2 Type-A (Device), 1x Cat 6A, RS-232, FSYNC, 1x USB-C (F/W UPGRADE), 1x DC24V Power Input
Power Supply	24V DC (via included power adapter, two-way power over cable)
Operating System Support	Plug-and-Play, driverless for all major operating systems.

Feature	Detail
Product Dimensions (each unit)	4.23 x 3.35 x 1 inches (10.74 x 8.51 x 2.54 cm)
Item Weight (each unit)	9.2 ounces (260.8 grams)

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official ATEN website or contact your local ATEN dealer. Keep your purchase receipt as proof of purchase.

[Visit ATEN's Official Website](#)