

DSLRRKIT

PoE-UC20W V2.0

20W PoE to USB-C PD and USB-A Charger

User Manual

Product Overview

The PoE-UC20W V2.0 converts Power over Ethernet into USB power for compatible devices. It provides USB-C and USB-A outputs with up to 20W total power, USB-C PD 3.0 and PPS, and automatic MPS maintenance for low-power operation.



Left: RJ45 PoE IN. Right: V2.0 in front, previous V1.0 behind; USB-C and USB-A are on the USB OUT end. The adapter supplies USB power only and does not transmit Ethernet data.

Item	Specification
V2.0	64 × 28 × 20 mm; black aluminum housing with cooling fins
Previous version	93 × 43 × 30 mm; V2.0 is approximately 70% smaller by external bounding-box volume

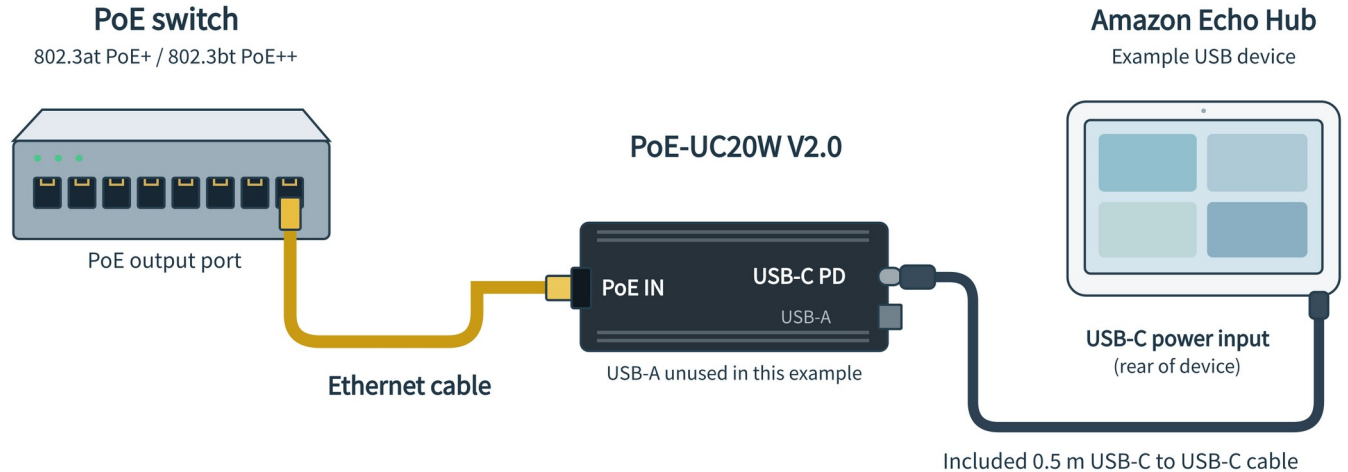
Typical Applications

Compatible smartphones, tablets, e-readers, wall-mounted tablets, smart displays, smart home controllers and other USB devices within the supported voltage, power and charging-protocol range. Amazon Echo Hub and iPad Pro are application examples.

Package Contents

- 1 × DSLRRKIT PoE-UC20W V2.0 adapter
- 1 × 0.5 m USB-C to USB-C cable

Connection Instructions



Connection schematic • USB power only; no Ethernet data passthrough

1. Connect PoE IN to a compatible PoE switch or injector using an Ethernet cable.
2. Connect the USB device to the USB-C or USB-A output with a suitable cable. For USB PD charging, use USB-C.
3. For full 20W capability, use an 802.3at PoE+ or 802.3bt PoE++ switch or injector with sufficient power budget.

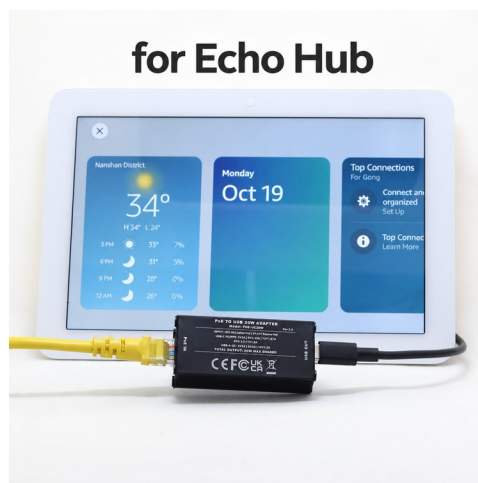
Special Instructions for Amazon Echo Hub

V2.0 resolves the previous version's Amazon Echo Hub compatibility issue and has been tested in actual use.

Important connection instructions for Amazon Echo Hub

Echo Hub includes a USB-A to USB-C power cable. Do not connect that original cable to this adapter's USB-A port.

Use the included 0.5 m USB-C to USB-C cable to connect this adapter's USB-C PD output to the Echo Hub's USB-C power input.



Application example: Echo Hub powered from the USB-C PD output using a USB-C to USB-C cable. The Ethernet cable supplies power to the adapter; Ethernet data is not forwarded to Echo Hub.

PoE Input Compatibility

PoE standard or type	Compatibility
IEEE 802.3at PoE+	Recommended for full 20W output.
IEEE 802.3bt PoE++	Recommended; backward compatible with 802.3at devices.
48-57V passive PoE	Compatible with a suitable passive PoE injector.
IEEE 802.3af PoE	Compatible with limited available power.

For full 20W output, use an 802.3at PoE+ or 802.3bt PoE++ switch or injector with sufficient power budget.

Note for 802.3af PoE switches or injectors

An 802.3af switch or injector may restart its PoE port if the USB load exceeds its available power. On the tested Ubiquiti US-8-60W, loads above approximately 13W triggered overload protection and a port restart. Use a PoE+ or PoE++ switch or injector for higher-power loads.

Automatic MPS Low Power Maintenance

The built-in Maintain Power Signature (MPS) circuit automatically generates maintenance pulses when power consumption becomes very low. This helps compatible PoE switches maintain power when a USB device enters standby or reduces its power draw after charging.

MPS helps maintain an established PoE power connection. Actual behavior depends on the PoE switch or injector.

Important Information

Heat Dissipation: During prolonged operation at full power, heat is dissipated mainly through the aluminum housing, which will become noticeably warm. Ensure adequate ventilation and do not cover the adapter.

Indoor use only. Use compatible PoE switches or injectors and USB devices. USB power output only; Ethernet data is not transmitted. Actual charging depends on the device, cable and available PoE input power.

USB Output Specifications

Output mode	Voltage range or profile	Maximum current
USB-C PD 3.0	5V	3A
USB-C PD 3.0	9V	2.22A
USB-C PD 3.0	12V	1.67A
USB-C PPS	3.3-5.9V	3A
USB-C PPS	3.3-11V	1.8A
USB-A QC	5V	3A
USB-A QC	9V	2A
USB-A QC	12V	1.5A

Maximum combined output: 20W. Both ports can be used at the same time, sharing the available power in 5V mode. For higher-voltage fast charging, use one compatible port only.

Supported charging protocols include PD 3.0, PPS, QC 4+/3.0/2.0, FCP, SCP, AFC, Apple 2.4A and BC1.2. USB PD and PPS use the USB-C port. Protocol availability depends on the connected device and cable.



Power-Z test photos. Left: USB-C PD 3.0 profiles and both PPS ranges. Right: detected QC 2.0/3.0 voltage modes.

Troubleshooting

Device does not power on

Confirm the PoE switch or injector is powered and the Ethernet cable is connected to PoE IN. Check the USB device's voltage and power requirements. For Echo Hub, use the USB-C PD port and included USB-C to USB-C cable.

PoE port repeatedly restarts

Check the PoE switch or injector's available power budget. Reduce the USB load or use 802.3at PoE+ or compatible 802.3bt PoE++. See the US-8-60W example on page 3.

Fast charging is unavailable

Confirm that the device and cable support an available protocol. Use USB-C for PD or PPS. Disconnect the second USB device if higher-voltage fast charging is required.

Power stops during standby

MPS operation depends on the PoE switch or injector and USB device. Check PoE switch or injector compatibility and USB cabling.

iPad Pro charging example



The test photo shows PD 3.0 charging at approximately 12.06V, 1.61A and 19.39W.