

INOGENI  
INOGENI U-BRIDGE 3 Multi  
Device USB Extender



# INOGENI U-BRIDGE 3 Multi Device USB Extender User Guide

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**INOGENI U-BRIDGE 3 Multi Device USB Extender**



## Specifications

- Main feature: U-BRIDGE 3 USB 3.2 Gen 1 extender
- Description: Enables superspeed USB 3.0 connection of up to 100m/330ft over a single CAT6A
- Range: Direct connect up to 100m (330ft) over CAT6A U/FTP
- USB speeds: USB 3.2 Gen1 / USB 3.1 Gen1 / USB 3.0: up to 5 Gbps, USB 2.0: up to 480 Mbps
- USB transfers support: Bulk, isochronous, interrupt, and control types. Built-in hardware acceleration for isochronous and bulk transfers

## Product Usage Instructions

### Introduction

The U-BRIDGE 3 extends a 5Gbps signal between a host and devices using USB 3.2 Gen 1 over CAT6A. It consists of PCHOST and DEVICE modules.

### Connectivity Diagram

Plug the power supply into any module to power up the system. Refer to the connectivity diagram in the manual for guidance.

## Device Interfaces

### PC HOST:

- +24VDC power input – Powers the DEVICE side via HDBaseT link
- HDBaseT link
- RS232 connection
- USB-C host connection
- USB-mini management connection

### DEVICE:

- +24VDC power input – Powers the DEVICE locally
- HDBaseT link
- RS232 connection
- USB-C device connection
- USB-A device connections (x2)

- USB-mini management connection

**LEDs Behavior**

The LEDs on the HDBaseT link indicate power and connection status as per the manual’s guidelines.

**FAQ**

- **Q: What are the LED indications on the HDBaseT link?**  
A: The green LED can be off, solid, or blinking, indicating different power and connection statuses. The orange LED can be off or solid, indicating power and HDBaseT connection detection.

**VERSION HISTORY**

Version	Date	Description
1.0	October 11, 2024	Preliminary user guide for device launch.
1.1	October 18, 2024	Updated package content.

**INTRODUCTION**

The U-BRIDGE 3 is a USB 3.2 Gen 1 extension over CAT6A that can extend a 5Gbps signal between a host and devices. This is a two-boxes solution, which are called PCHOST and DEVICE modules.

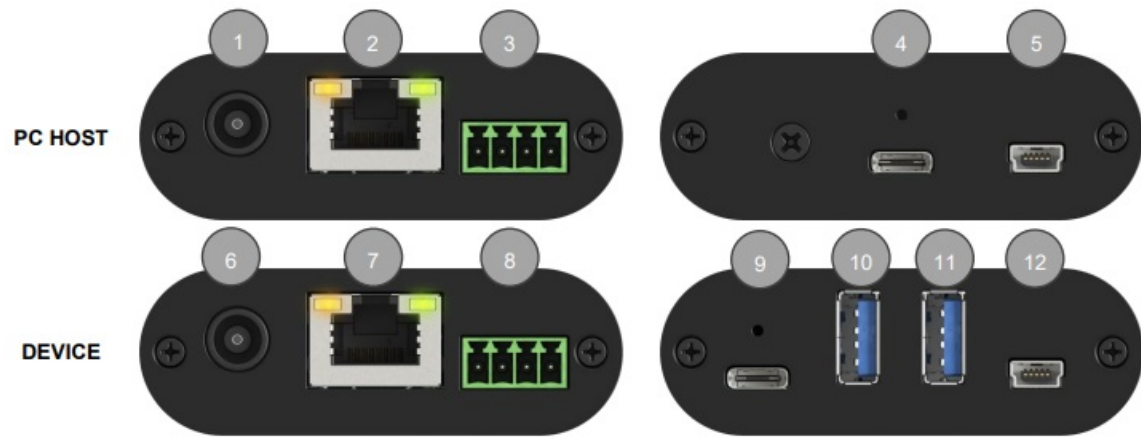
**CONNECTIVITY DIAGRAM**

Here is a simple U-BRIDGE 3 connectivity diagram. You can plug the power supply to any module to power up the whole system.



**DEVICE INTERFACES**

Here are the devices interfaces.



Items		
PC HOST	1	+24VDC power input. <b>If power supply is connected here, the DEVICE side will be powered using PoC through the HDBaseT link.</b>
	2	HDBaseT link.
	3	RS232 connection.
	4	USB-C host connection.
	5	USB-mini management connection.
DEVICE	6	+24VDC power input. <b>If power supply is connected here, the DEVICE will be powered locally.</b>
	7	HDBaseT link.
	8	RS232 connection.
	9	USB-C device connection.
	10	USB-A device connection.
	11	USB-A device connection.
	12	USB-mini management connection.

## LEDS BEHAVIOR

Here are the LEDs behavior on the HDBaseT link connection:

GREEN LED	
OFF	No power.
SOLID	System powered with USB connection detected.
BLINK	System powered with no USB connection detected.
ORANGE LED	
OFF	No HDBaseT connection detected.
SOLID	HDBaseT connection detected.

## SPECIFICATIONS

Here is the complete specification.

Main feature	
Description	The U-BRIDGE 3 USB 3.2 Gen 1 extender enables superspeed USB 3.0 connection of up to 100m/330ft. over a single CAT6A
Range	Direct connect up to 100m (330ft) over CAT6A U/FTP
USB speeds	USB 3.2 Gen1 / USB 3.1 Gen1 / USB 3.0: up to 5 Gbps USB 2.0: up to 480 Mbps
USB transfers support	Bulk, isochronous, interrupt and control types Built-in hardware acceleration for isochronous and bulk transfers

PC Host extender	
USB connector	1 x USB Type-C receptacle with mounting screw hole
Link connector	1 x RJ45
Dimensions (W x L x H)	7.0 cm x 9.7 cm x 2.3 cm 2.76" x 3.82" x 0.90"
Weight	170 g (0.37 lb)
Mounting	Bracket provided
Enclosure material	Black anodized aluminum case
RS232 connector	Passthrough serial connection By default, I/O pin is an input. +1.8V logic (maximum)

<b>Device extender</b>	
<b>USB connector</b>	2 x USB-A receptables 1 x USB-C receptacle with mounting screw hole
<b>Link connector</b>	1 x RJ45
<b>Available current</b>	Up to 1.8A shared between ports
<b>Dimensions (W x L x H)</b>	7.0 cm x 13.7 cm x 2.3 cm 2.76" x 5.39" x 0.90"
<b>Weight</b>	210 g (0.46 lb)
<b>Mounting</b>	Bracket provided
<b>Enclosure material</b>	Black anodized aluminum case
<b>RS232 connector</b>	Passthrough serial connection. By default, I/O pin is an output. GND or OPEN

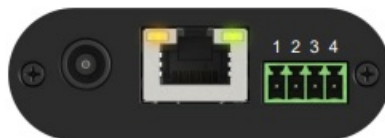
<b>Physical details</b>	
<b>Package dimensions</b>	24.5 cm x 25 cm x 7.9 cm 9.69" x 9.84" x 3.11"
<b>Power supply</b>	100-240V AC Input, 24V 1.5A DC output. Apply at either PC HOST or DEVICE modules
<b>Package weight</b>	1200 g (2.65 lbs)
<b>Package contents</b>	1x PC Host extender module 1x Device extender module 1x USB 3.0 Type-C to Type-C cable 1x Quick Start Guide 2x mounting brackets (power supply) 2x mounting clips 2x terminal blocks 4x black wooden screws 1x power supply 100-240V AC Input, 24V 1.5A DC output International power adapter with country-specific cord (North America, EU, UK, Australia/NZ, or Japan)
<b>Operating temperature</b>	0°C to 50°C 32°F to 122°F
<b>Storage temperature</b>	-20°C to 70°C -4°F to 158°F
<b>Operating humidity</b>	20% to 80% relative humidity, non-condensing
<b>Storage humidity</b>	10% to 90% relative humidity, non-condensing

Information	
<b>UPC code</b>	051497429522
<b>Origin</b>	Canada
<b>Warranty</b>	5 years

## SERIAL CONNECTION

Here is the serial connection of the U-BRIDGE 3. A serial port from a DUT can be extended when using our device.

**This is the pinout of the serial connection:**



- Pin 1: Receive
- Pin 2: GND
- Pin 3: Transmit
- Pin 4: I/O

The direction of the I/O pin can be configured through the Maestro software.

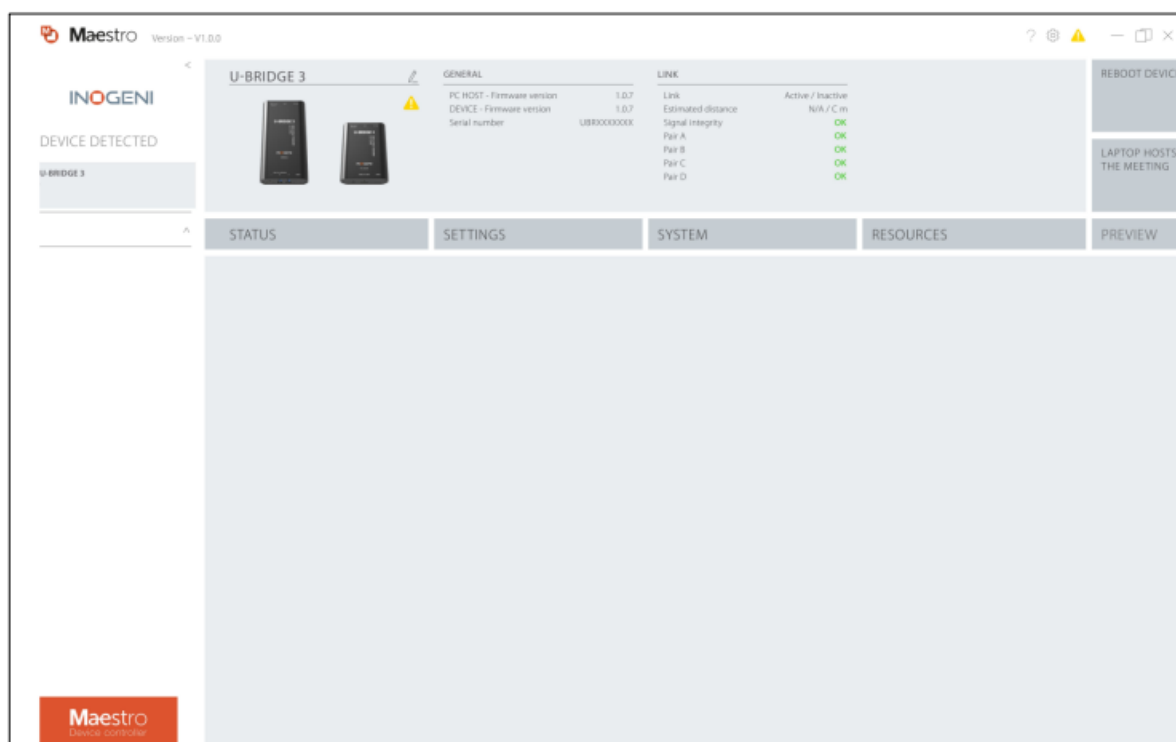
**NOTE:** By default, the PC HOST I/O pin is an input and DEVICE I/O pin is an output.

### INOGENI MAESTRO APPLICATION

You can use our INOGENI Maestro application to monitor firmware information, link status and upgrade your units.

**NOTE:** You can use our Maestro software when the kit (PCHOST / CAT6A cable / DEVICE) is connected to your computer using the USB-C connection on PCHOST module. You can also use the USB-mini connector to upgrade the modules.

This is a preview of the upcoming Maestro application. More detailed configurations will be added to an updated version of the user guide.



### MECHANICAL SPECIFICATION

You can find the mechanical specifications of the device. All dimensions are in mm [in].

### PCHOST MODULE

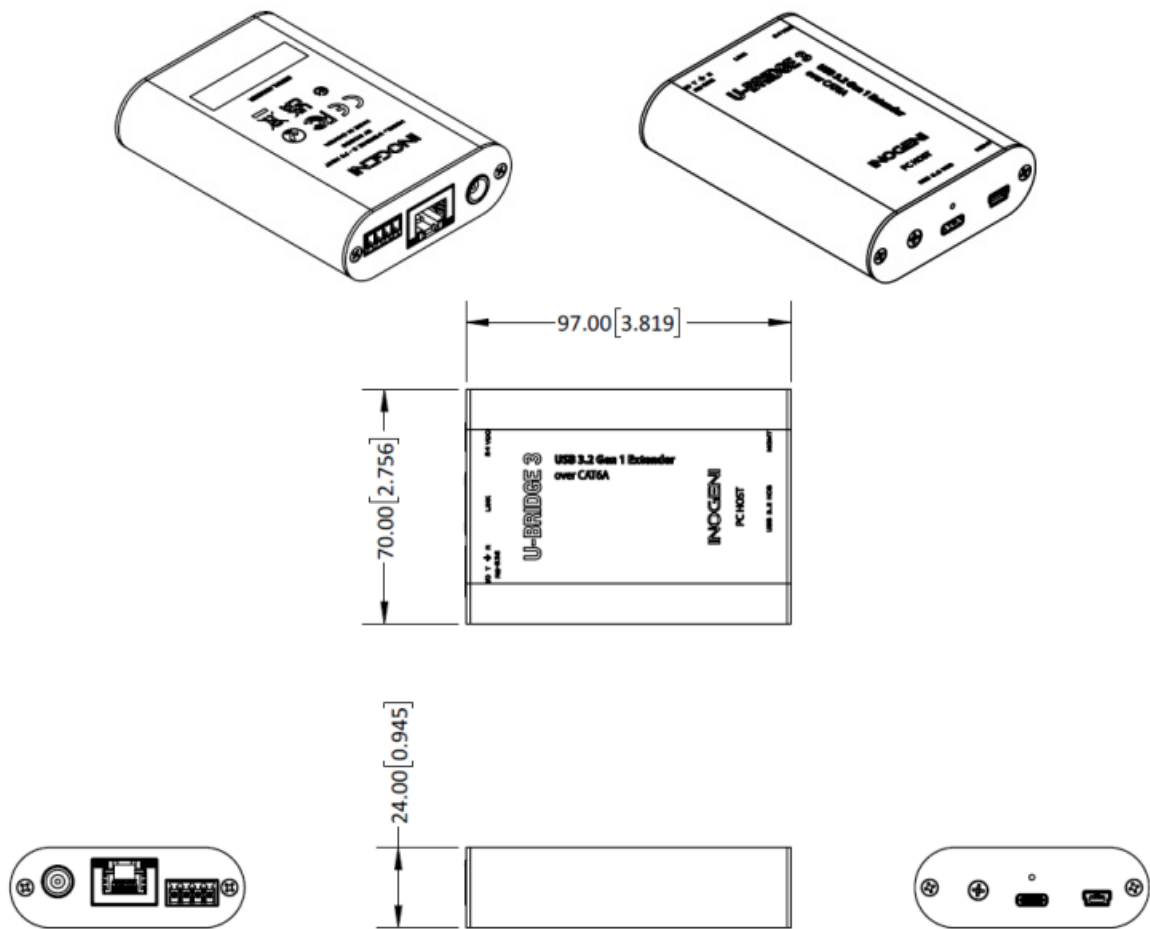


Figure 1: PC HOST module dimensions

## DEVICE MODULE

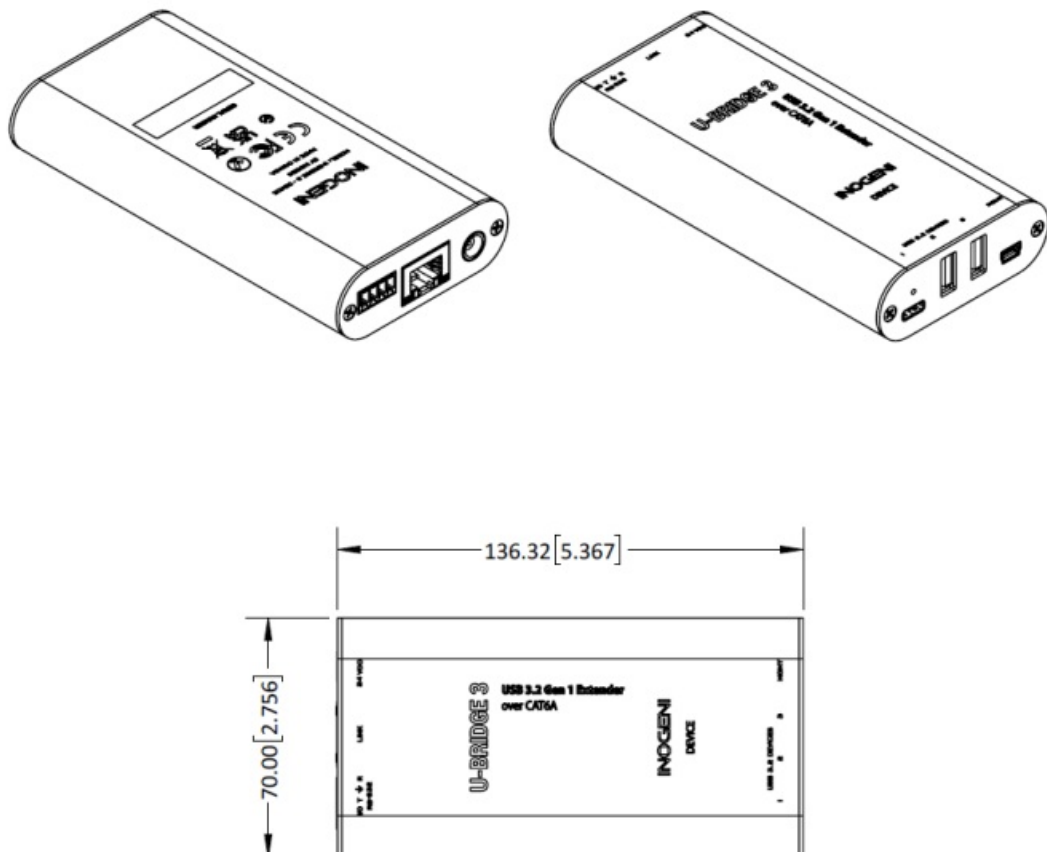
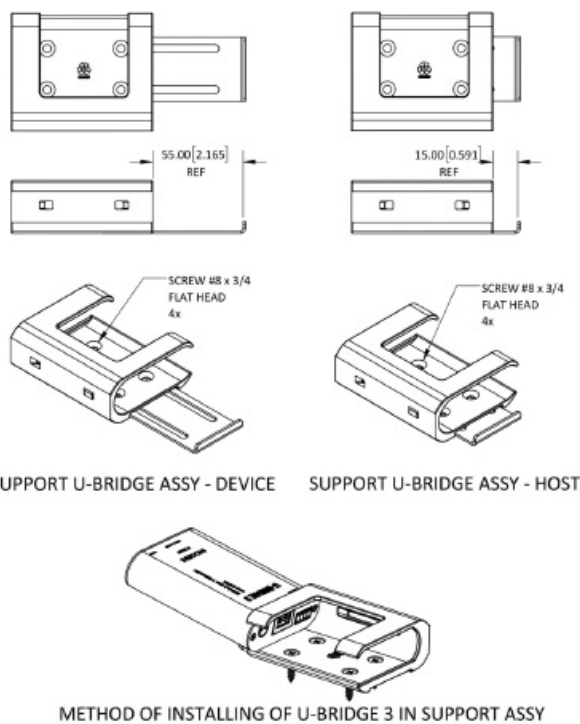
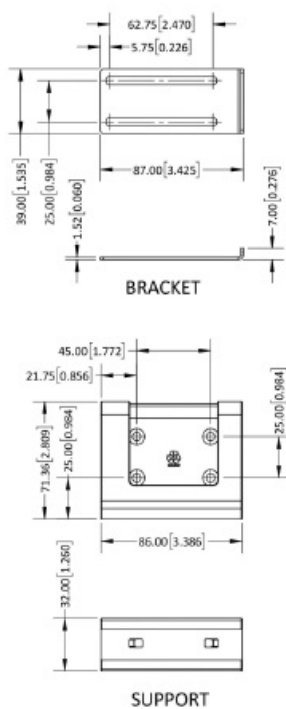






Figure 2: DEVICE module dimensions

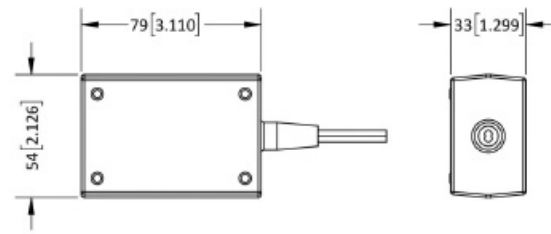
## INO – CLIP



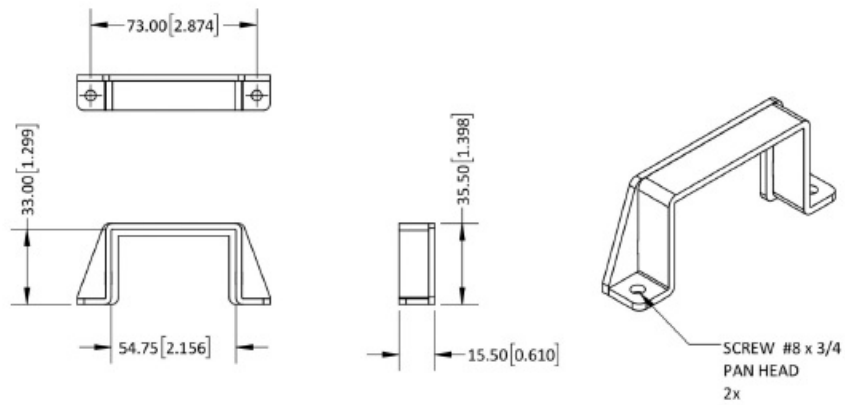
METHOD OF INSTALLING OF U-BRIDGE 3 IN SUPPORT ASSY

Figure 3: Bracket dimensions

## POWER SUPPLY



POWER SUPPLY



MOUNTING BRACKET for POWER SUPPLY

**Figure 4: Power supply bracket dimensions**

## TROUBLESHOOTING SECTION

Here is the troubleshooting section for the device.

Problem	Resolution
<b>Green LED is blinking slow Or orange LED is OFF</b>	PC HOST side is not connected to a PC or HDBaseT cable is not working properly.
<b>Green LED is blinking slow Or orange LED is ON</b>	PC HOST side is not connected to a PC.
<b>Green LED is blinking fast</b>	There is a firmware problem, connect the USB-C PC HOST port and mini-USB management port to a PC running Maestro for firmware upgrade.
<b>Green LED is OFF Orange LED is OFF</b>	PC HOST side: No power from the USB-C port of the host PC. DEVICE side: No power to the 24VDC port on either HOST side (via PoC) or DEVICE side (direct), or HDBaseT cable is not connect or not working properly if using PoC.
<b>Unstable USB 3.0 connection</b>	HDBaseT cable is too long or not working properly. USB cables are too long or not working properly.
<b>USB 3.0 ports are shutting down</b>	Too much power drawn on USB ports, the maximum current consumption is 1.8A total for the 3 ports.
<b>Using a USB-C to USB-A adapter, my USB 3.0 devices are detected in USB2.0 mode only on my computer.</b>	Most of passive USB-C to USB-A adapters support USB3.0 on one side of the USB-C connection. Flip by 180 degrees the USB-C connection next to the adapter to see if this resolves the issue.

## SUPPORT

Engineered by video professionals, for video professionals, it is your most compatible USB 3.0 device. INOGENI expertise at your fingertips:

- Expert Technical Support team at [support@inogeni.com](mailto:support@inogeni.com) for immediate help or if you have any technical questions about our products.
- Extensive Knowledge Base to learn from other customers' experiences.

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- notice. 1045 Avenue Wilfrid-Pelletier
- Suite 101
- Québec, QC, Canada, G1W0C6 [418-651-3383](tel:418-651-3383)

## CERTIFICATIONS



## 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.

### IC Statement

This Class A digital apparatus complies with Canadian CAN ICES-3(A)/NMB-3(A).



### CE Statement

We, INOGENI Inc., declare under our sole responsibility that the Toggle Rooms, to which this declaration relates, is in conformity with European Standards EN 55032, EN 55035, and RoHS Directive 2011/65/EU + 2015/863/EU.



### UKCA Statement

This device is compliant with the Electromagnetic Compatibility Regulations 2016 No. 1091 as part of the requirements leading to the UKCA marking.



### WEEE Statement




The European Union has established regulations for the collection and recycling of all waste electrical and electronic equipment (WEEE). Implementation of WEEE regulations may vary slightly by individual EU member states. Please check with your local and state government guidelines for safe disposal and recycling or contact your national WEEE recycling agency for more information.



### RCM Statement

This device is compliant with Regulator Compliance Mark (RCM) certification.

## Documents / Resources

	<p><a href="#">INoGeni U-BRIDGE 3 Multi Device USB Extender</a> [pdf] User Guide</p> <p>U-BRIDGE 3 Multi Device USB Extender, U-BRIDGE 3, Multi Device USB Extender, Device USB Extender, USB Extender, Extender</p>
	<p><a href="#">INoGeni U-BRIDGE 3 Multi Device USB Extender</a> [pdf] User Guide</p> <p>U-BRIDGE 3 Multi Device USB Extender, U-BRIDGE 3, Multi Device USB Extender, Device USB Extender, USB Extender, Extender</p>
	<p><a href="#">INoGeni U-BRIDGE 3 Multi Device USB Extender</a> [pdf] User Guide</p> <p>U-BRIDGE 3, U-BRIDGE 3 Multi Device USB Extender, Multi Device USB Extender, Device USB Extender, USB Extender, Extender</p>

References

- [Software tools - Support | INoGeni](#)
- [User Manual](#)

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