DOREMiDi
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USB MIDI Network Box PoE
UR-1 PoE

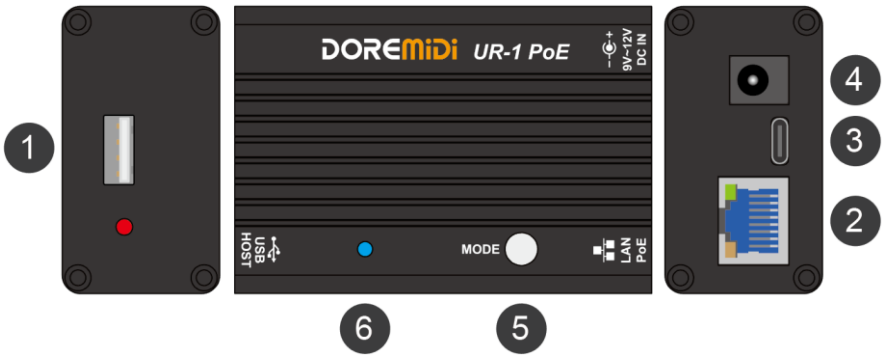


Instructions

1. Introduction

The UR-1 PoE (USB MIDI Network Box PoE) is an RTP-MIDI gateway designed by DOREMiDi. UR-1 PoE has PoE(Power over Ethernet) function and can be powered by a gateway with PoE function. Within a local area network (LAN), the UR-1 PoE enables USB MIDI devices to connect to the LAN via RTP-MIDI, facilitating low-latency, highly stable MIDI communication with computers and other RTP-MIDI devices. The UR-1 PoE uses a high-speed USB host port and is compatible with a variety of USB MIDI devices.

2. Appearance



Name	Description
Model	UR-1 PoE
Size (L x W x H)	83 x 55 x 30mm
Weight	110g
❶USB HOST	Standard high-speed USB 2.0 host interface. Connects to USB MIDI devices (To Host) via a USB-A connector. Features an indicator light that illuminates upon successful connection.
❷LAN PoE	Ethernet interface, including an Ethernet RTP-MIDI interface with PoE(Power over Ethernet) functionality. Features network communication indicator lights. PoE is compatible with the IEEE 802.3af standard.
❸USB-C	USB-C device port. It allows connection to a computer to configure the product's IP address and supports power supply to the product.
❹DC IN 5V~9V	DC power supply port. Power supply voltage 9V~12VDC, uses a DC 5.5*2.1mm plug, tip is positive and sleeve is negative.
❺MODE	The mode switch button can be pressed and held for 3 seconds to switch between initiator and listener modes, and pressed and held for 10 seconds to restore factory settings (the red and blue lights flash alternately).
❻LED	Mode switch button. Press and hold for 3 seconds to switch between initiator/listener modes, press and hold for 10 seconds to restore factory settings (red and blue lights flash alternately).

3. Product Parameters

Name	Description
Listener Mode	Support up to 5 RTP-MIDI Initiators connected at the same time.
Initiator Mode	Support up to 3 DOREMiDi RTP-MIDI listeners connected at the same time.
Power Consumption	About 0.3W, 30mA (@9VDC), 25mA (@12VDC), 50mA (@5VDC), When the USB HOST is not connected to the device.
IP Address	By default, the IP address is automatically obtained, and the IP address is assigned through a router with DHCP function. It can also be set as a static IP address.

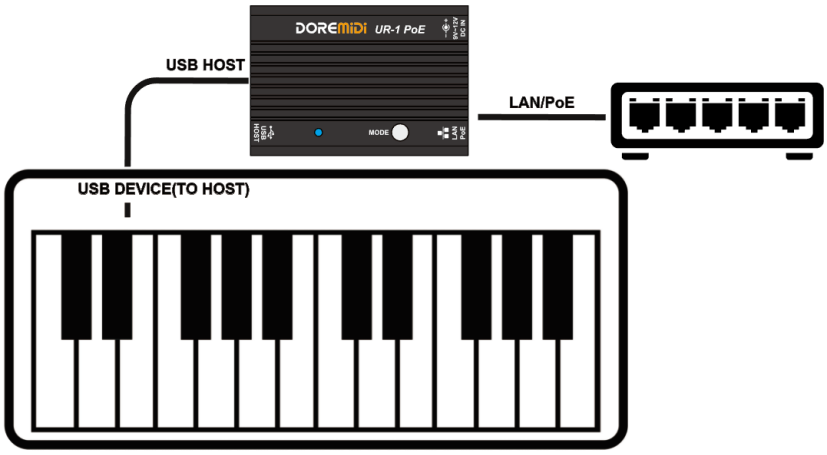
(Note: The listener mode can be connected to a initiator with RTP-MIDI function such as a computer, and the initiator mode can be actively connected to the DOREMiDi RTP-MIDI listener.)

4. Steps for usage

1. Power supply: UR-1 PoE supports multiple power supply methods.

Methods	Description
Powered via USB-C	Connects to a computer via USB-C and supplies power, supports 5V only.
Powered via DC port	Supports 9~12V DC adapter power supply, tip is positive and sleeve is negative.
Powered via PoE	Powers the product via the network port, please ensure your router/switch has PoE capability.

2. Connect a USB MIDI device: Connect a USB MIDI instrument through the "USB HOST" interface. After the connection is successful, the "USB HOST" indicator will light up.
3. Connect to the local area network: Use the RJ45 network cable to connect the "LAN PoE" interface of the UR-1 PoE to a network router or network switch.



4. Configure master mode/slave mode/factory reset/firmware upgrade mode:

Mode	Description	Operation
Listener	● Computers, mobile phones and other initiators can discover and connect to UR-1 PoE. ● Supports up to 5 initiators to connect.	Press and hold the MODE button for 3 seconds, the LED turns blue. The LED flashes when not connected, and stays on after successful connection.
Initiator	● In this mode, UR-1 PoE will automatically search for DOREMiDi's RTP-MIDI listensers in the LAN and actively connect. ● Supports connecting up to 3 RTP-MIDI DOREMiDi listeners.	Press and hold the MODE button for 3 seconds, the LED turns red. The LED flashes when not connected, and the LED stays on after successful connection.
Factory reset	After restoring the factory settings, the product will use the method of automatically obtaining an IP address. A router with DHCP function can assign an IP address to the product.	Press and hold the MODE button for more than 10 seconds, the red and blue lights flash alternately.
Firmware Upgrade	Used to upgrade the firmware of the product. Please pay attention to the DOREMiDi official website for new firmware.	Press and hold the MODE button, connect the product USB to the computer, then release the MODE button, the red and blue lights flash alternately.

(Note: ①To configure the MIDI network, please refer to "DOREMiDi Network MIDI Configuration Manual.pdf", which can be downloaded from www.doremidi.cn. ②When an RTP-MIDI device (such as a computer) in the local area network sends a SysEx message to the UR-1 PoE device, the maximum data size of each packet must not exceed 10K bytes.)

5. Configure the IP address

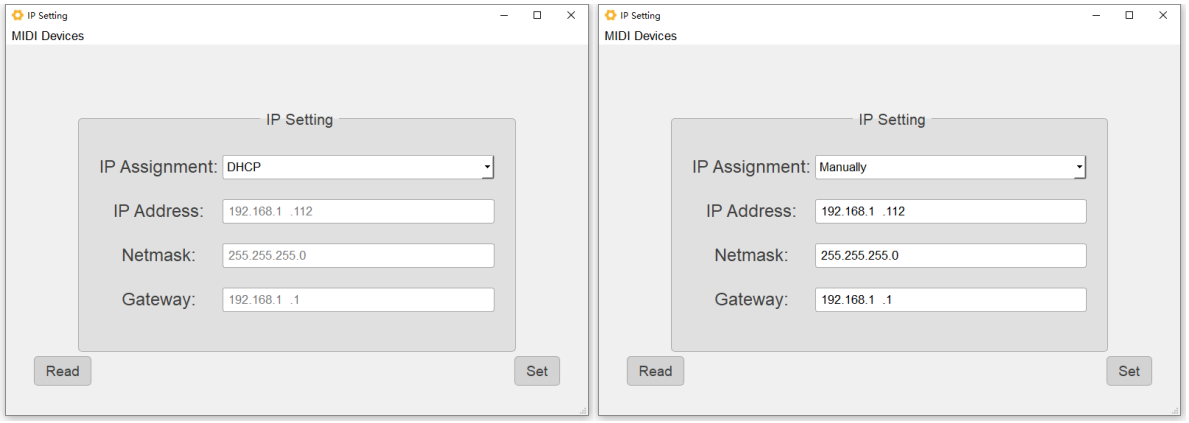
The factory default setting of UR-1 PoE is to automatically obtain an IP address (i.e. DHCP). This function allows a router with DHCP function to automatically assign an IP address. Users can set UR-1 PoE to a static IP address through DOREMiDi's "IP Tool" software. The following are the configuration steps:

Software environment requirements: Windows 7 or later versions of Windows, MacOS.

Windows: https://www.doremidi.club/download/Product/IP_Tool/IP_Tool.exe

MacOS: https://www.doremidi.club/download/Product/IP_Tool/IP_Tool.dmg

(Note: If the download link is not available, please download from the DOREMiDi official website: www.doremidi.cn)



- Connect the product to the computer, open the "IP_Tool" software, and click "MIDI Device" to connect the product.
- Read: Read the IP information of the product.
- Set: Set the configured IP information to the product.
- DHCP: When configured as DHCP, the product is assigned IP information by a router/switch with DHCP function.
- Manually: When configured as Manually, you can manually configure the IP address/ Netmask / Gateway.

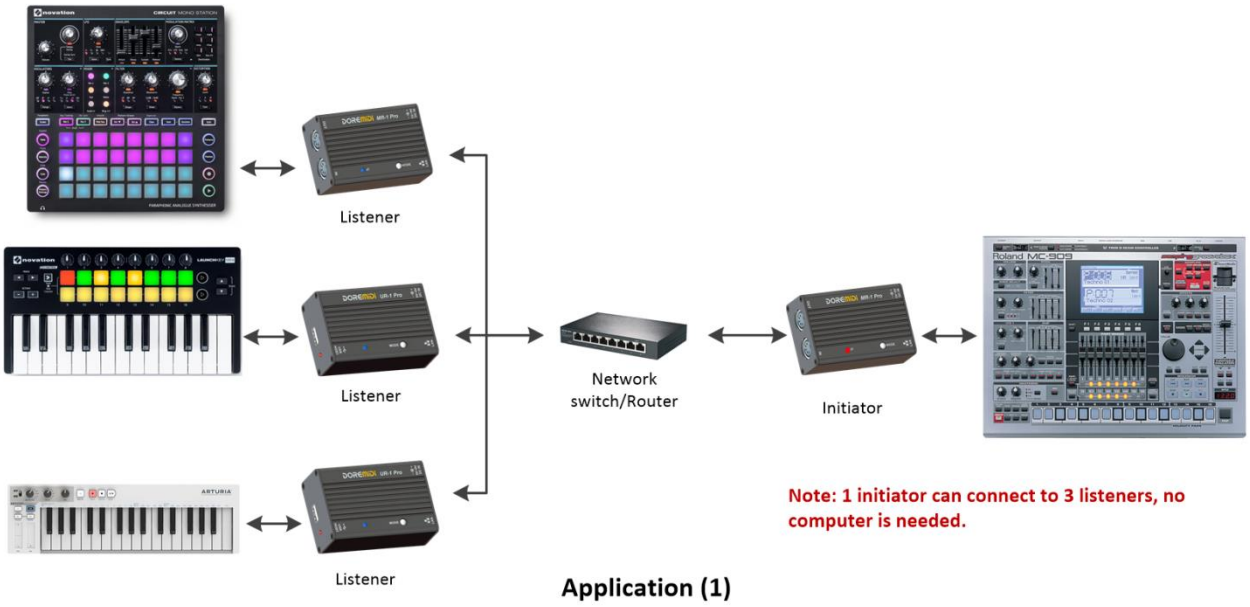
Note: ①In a network of multiple RTP MIDI devices, it is necessary to ensure that the IP addresses of the devices cannot be duplicated, and the network segments of the IP addresses must be the same. for example: "IP-1 : 192 : 168 : 1 : 112", "IP-2 : 192 : 168 : 1 : 113". The two IP addresses are different, but the network segment "192 : 168 : 1" must be the same.

②If you forget the IP address set by the product, you can press and hold the product button for more than 10 seconds until the red light and blue light flash alternately, indicating that the factory settings have been successfully restored. After the factory settings, the product will automatically obtain an IP address and use the DHCP function A router can assign an IP address to the product.



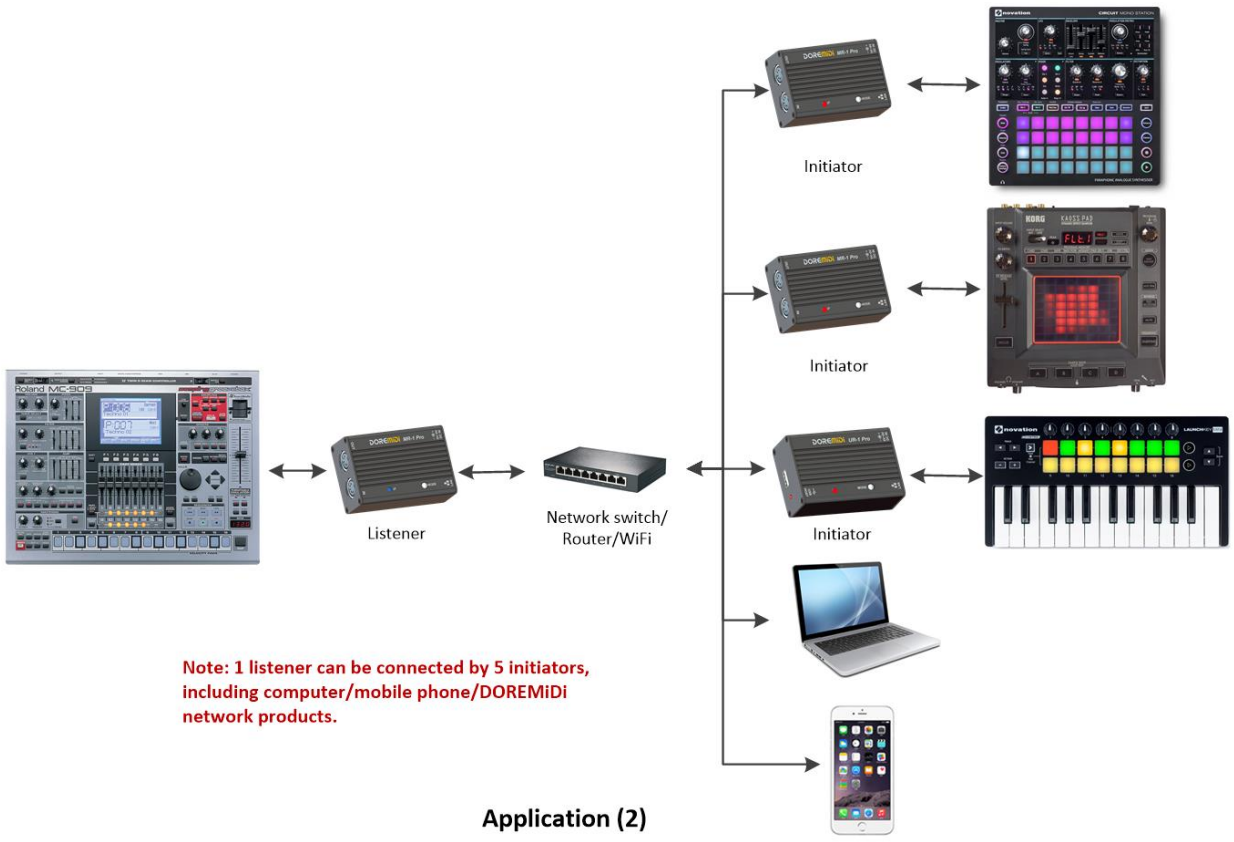
6. Introduction of typical application cases

1. Application 1: Before the computer is not needed, MR-1/UR-1 (Pro/PoE) can connect and communicate through the network, set one product of them as the “Initiator”, and the initiator can connect up to 3 listeners. As shown in the picture:



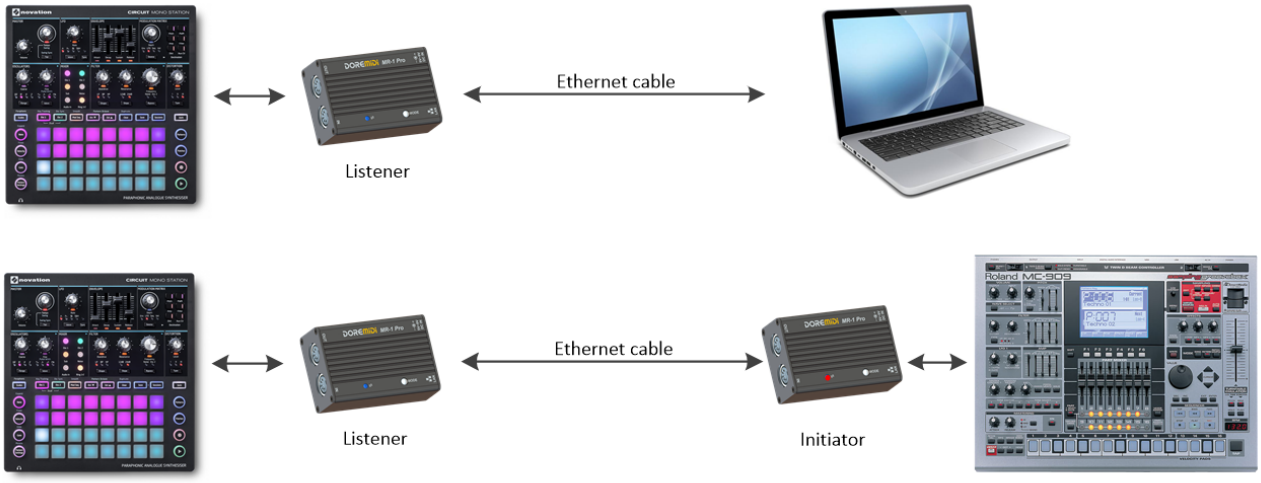
Application (1)

2. Application 2: One listener can communicate with multiple initiators at the same time, and can support up to 5 initiators, as shown in the figure:



Application (2)

3. Application 3: After configuring the MR-1/UR-1 (Pro/PoE) as a static IP, you can connect the MIDI device to the computer via an Ethernet cable, or connect two MIDI devices. It is suitable for applications that need to extend MIDI communication. The communication distance of the Ethernet cable can reach more than 100 meters, which is stable and has no delay.



Note: Longer communication distance via Ethernet cable, more suitable for stage applications

Application (3)

7. Precautions

1. This product contains a circuit board.
2. Rain or immersion in water may cause the product to malfunction.
3. Do not heat, press, or damage internal components.
4. Non-professional maintenance personnel are not allowed to disassemble the product.
5. The working voltage of the product is USB-5V or DC 9~12V, using a voltage lower or exceeding this voltage may cause the product to fail to work or be damaged.

8. Q&A

Question: Can the USB HOST interface provide power to USB MIDI instruments?
Answer: You can supply power, but pay attention to whether the power input of the "DC IN" can meet the working requirements of the musical instrument.

Question: The USB HOST interface does not work.
Answer: Please follow the steps below:

- Ensure that the "DC IN" power supply is normal.
- Confirm that the instrument can work normally and that the instrument's USB interface is equipped with MIDI functions (for example, it can recognize MIDI devices when connected to a computer).
- Try to power the UR-1 PoE through “DC IN” first, and then connect to the instrument through “USB HOST”, and see if the indicator light of “USB HOST” lights up.
- If the “USB HOST” indicator still doesn't light up, or MIDI messages cannot be transmitted after it’s on, please contact customer service to solve it.
- If the USB interface of your instrument requires a USB driver to be used on the computer, please contact customer service to update the UR-1 PoE firmware.

Question: In the slave mode, the computer does not find the UR-1 PoE.
Answer: Please make sure that the computer and UR-1 PoE are in the same local area network.
If it is not resolved, please refer to "**DOREMiDi Network MIDI Configuration Manual.pdf**" at *www.doremidi.cn*.

Question: In the main mode, the UR-1 PoE cannot connect to RTP MIDI devices.
Answer: Please make sure that it is the RTP MIDI device of DOREMiDi; in addition, please make sure that the RTP MIDI device and UR-1 PoE are in the same local area network.

Question: iPhone cannot be connected, but other devices can be connected.
Answer: Please turn off the private address switch in the mobile network settings.

If the problem is not resolved, please contact customer service.

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