Distributed Speakerphone

User Manual

V3.0.0

Preface

Overview

The manual describes the instructions for quick configuration and operation of the distributed speakerphone.

Symbols and Meanings

The following signs might appear in the manual, with the following defined meanings.

Symbol	Description
Danger	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
Warning	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
Caution	Indicates a potential risk which, if not avoided, could result in property damage, data loss, lower performance, or unpredictable result.
Prevent Static	Indicates a static-sensitive device.
Electric Shock	Indicate a potential high voltage hazard.
Laser Radiation	Indicate intense laser radiation.
Tips	Provide methods to help you solve a problem or save your time.
Notes	Provide additional information as the emphasis and supplement to the text.

Revision History

Version	Revision Content	Issuance Date
V1.0.0	First release.	January 2024
V2.0.0	Update operating temperature parameter.	August 2024

Version	Revision Content	Issuance Date
V3.0.0	Update the pickup radius, operating temperature, and other parameters.	August 2024

Safety Instructions

The following is about the correct product usage intended to guard against dangers and prevent property loss. Before usage, please carefully read through this document and strictly follow its instructions. Please keep the manual properly after reading for easy access.

Usage requirements

- Do not place and install the device in direct sunlight or near heating devices.
- Do not install the device in a humid, dusty place, or a place with smoke from burning coal.
- Install the device horizontally, or install it in a stable place to prevent the product from falling.
- Do not have liquids splashing or dripping to the device, and make sure that no articles fully filled with liquids are placed on the device, to prevent liquids from flowing into the device.
- Install the device in a ventilated place, and do not block the air vent of the device.
- Always use this device according to its rated input/output range.
- Do not dismantle this device at will.
- Transport, use, and store the device within the allowed temperature range and humidity range.

Power supply requirements

- Use the battery as required! Otherwise, the battery might catch fire, explode, or burn!
- Always replace the battery with exactly the same type!
- Use the electrical wire (power cable) assembly recommended for the device in your region, and use it within specifications!
- Always use the standard power adapter specifically designed for the device. Otherwise any personal injury or device damages caused shall be borne the users themselves.
- Use SELV (safety extra low voltage) power supply to supply power of rated voltage according to GB8898 (IEC60065) or GB4943.1 (IEC60950-1, conforming to Limited Power Source). The power supply requirements are as specified on the device labels.

- If a power adapter is to be used for charging, a CCC-certified power adapter that conforms to the standards shall be purchased and used.
- Please connect devices of Type I structure to a grid power supply output socket that has protective grounding connections.
- The appliance coupler is a disconnecting component. Keep the coupler at an angle that is easy for operation during usage.

Contents

Chapter 1 Product Overview

1.1 Brief Introduction

This product is a wired high-performance distributed speakerphone with amplification. It supports 360° omni-directional pickup with a pickup radius of 8 m and up to 4-stage cascading. It can be used with the Hitry video conference hard terminal, conference board, PC client, Tencent Conference, and other software. It brings new high-fidelity sound experience for users by using the 3A intelligent algorithm.

1.2 Features

- AI-based noise reduction, AI-based echo cancellation, and AI-based de-reverberation
- Omni-directional 8-speakerphone array
- Full duplex technology
- USB plug and play
- Support 4-stage PoE cascading

Chapter 2 Product Structure

The distributed speakerphone is cylindrical in appearance, with 8 array speakerphones distributed on the sides and an answer/hang-up button, volume adjustment buttons, and a mute button at the top. The touch buttons enable control of the speakerphone at any time to achieve real-time synchronization of the speakerphone with the conference status. The structure is as shown in Figure 2-1 and Figure 2-2.

Figure 2-1 Top view
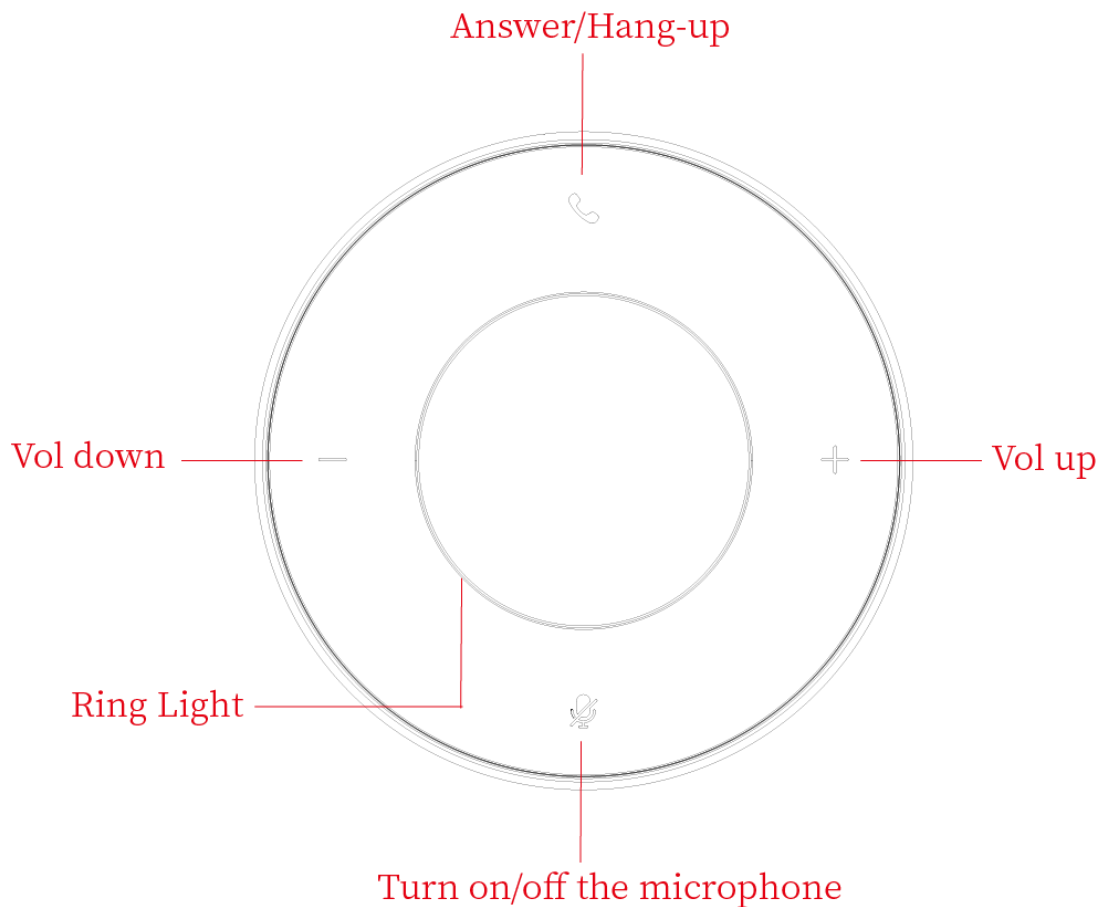
Figure 2-2 Bottom view
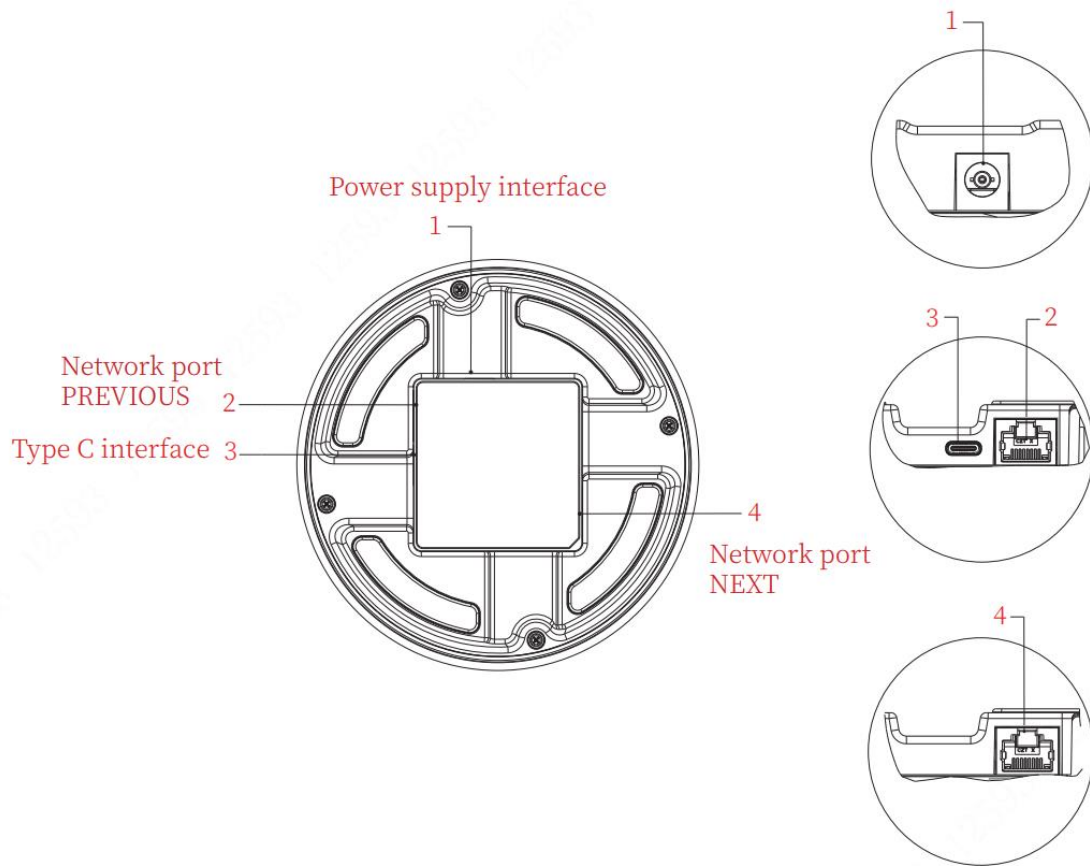
Table 2-1 Interface description

Interface No.	Name	Meaning
1	Power supply interface	Connects the power adapter for power supply to the device
2	Network interface PREVIOUS	Cascades the previous device
3	Type C interface	Performs data transfer and power supply through USB-type C
4	Network interface NEXT	Cascades the next device

📖 Notes

The power adapter and Type C interface connect only the first device.

Chapter 3 Product List

Before connecting the device, verify items in the package against Table 3-1.

Table 3-1 List of Items

No.	Name	Quantity	Meaning
1	Distributed Speakerphone	1 set	Speakerphone device
2	Standard external cable - (USB 2.0, AM to CM) - black - 5 M	1 piece	Connects the speakerphone to the conference TV terminal/PC/conference **board** for data transfer and power supply.
3	Standard external cable - (Cat. 6 network cable, RJ45 to RJ45, shielded, flat) - black – 3M	1 piece	Used for speakerphone device cascading.
4	Wall-inserted power adapter (53 V 1 A)	1 piece	Used for device power supply.
5	Product QR code	1 piece	Product operation instructions
6	Warranty card with certificate of conformity	1 piece	Warranty card with certificate of conformity
7	Stored general harmful substance content table	1 piece	Stored general harmful substance content table

Chapter 4 System Operation

This product supports USB cable and network port cascading as well as multiple usage scenarios. It can be connected to the conference TV terminal, PC, and conference board as a speakerphone or as a speaker to play music or perform an audio call.
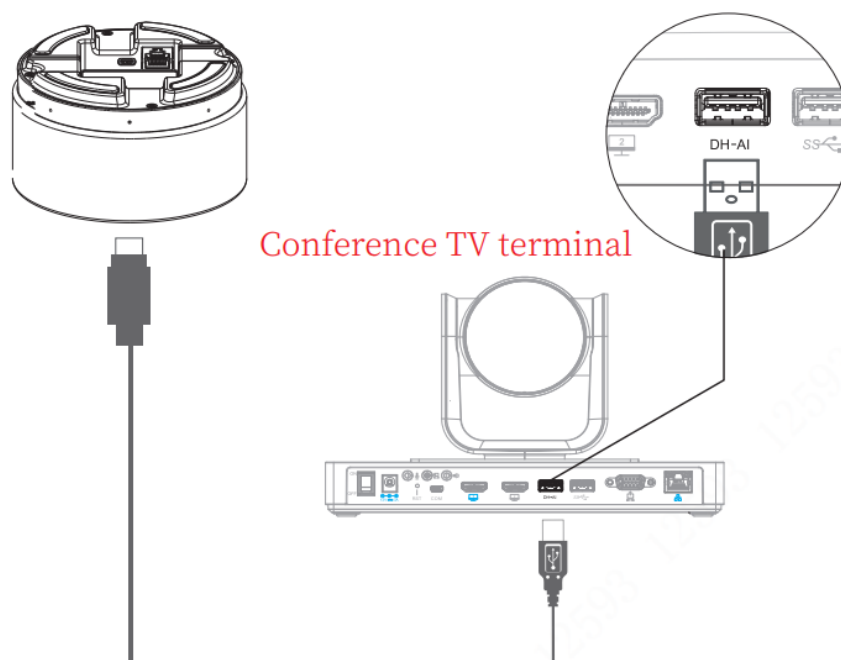
4.1 Connection Method

4.1.1 Connection to the Conference TV Terminal

Use a USB cable to connect the USB-type C interface of the speakerphone to the USB or DH-AI interface of the conference TV terminal. The speakerphone can be set to an audio device of the conference TV terminal. Figure 4-1 shows the connection method.

Figure 4-1 Connection to the Conference TV Terminal
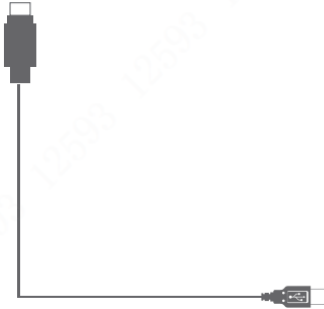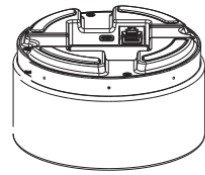

4.1.2 Connection to the PC/Conference Board

Use a USB cable to connect the USB-type C interface of the speakerphone to the USB interface of the PC. Set the speakerphone as the default audio device of the PC. Figure

4-2 shows the connection method.

Figure 4-2 Connection to the PC/conference board

Distributed speakerphone

PC

Conference board

4.1.3 Cascading Illustration

The speakerphone supports up to 4-stage cascading. The master cascading device needs to be connected to the power adapter and the USB cable. One end of the USB cable is connected to the USB-type C interface of the speakerphone and the other end is connected to the USB interface of the conference TV terminal/PC/conference board. The slave cascading device is connected using the network cable. Figure 4-3 shows the connection method.

Figure 4-3 Cascading diagram
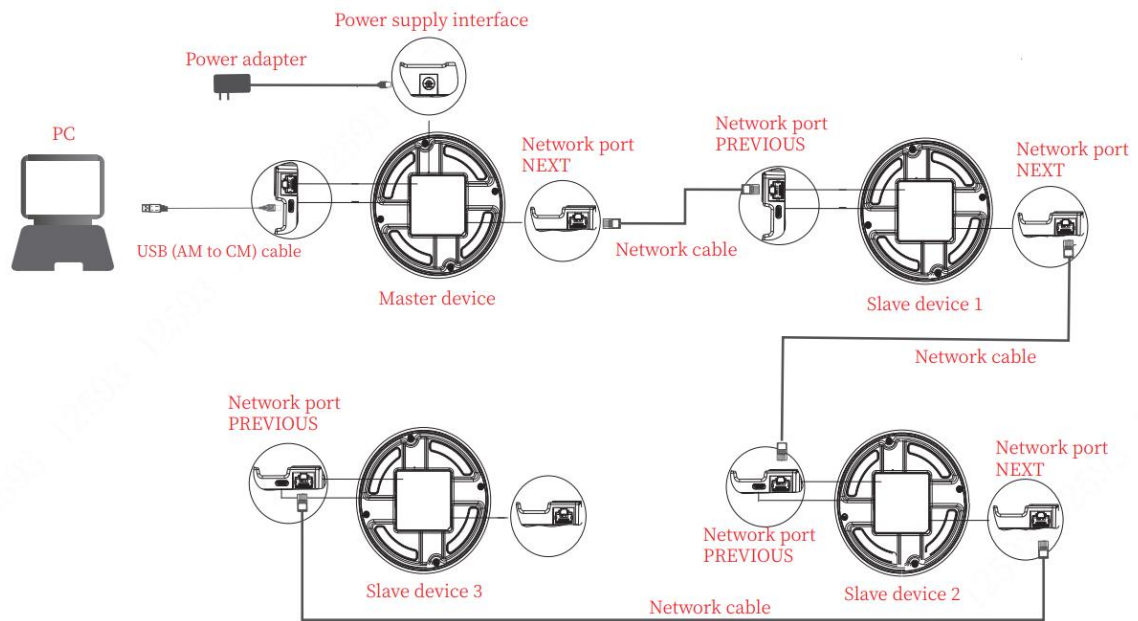
4.2 Volume Adjustment

- Press the + or - button to adjust the volume;

- By default, the volume at startup is the volume when the product is last turned off.

4.3 Turning On/Off the Speakerphone

Short press the **Mute** button to mute the speakerphone or cancel the mute.

- When the speakerphone is on, the button is green;

- When the speakerphone is off, the button is red.

4.4 Ring Light

Connect the power adapter to the ring light, and the ring light will turn on.

- When the speakerphone is open, it is green;

- When the speakerphone is closed, it is red.

4.5 Answering or Ending a Call

- The answer/hang-up button can only be used in the conference.
- Short press the **Answer/Hang-up** button ☎ to answer or end a call.

4.6 OTA Software Upgrade Tool

The downloading path of the supporting software upgrade tool is as follows:

https://www.hitrolink.com/?show=66

Annex 1 Technical Parameters

Parameter Category	Parameter	Meaning
Speakerphone	Pickup mode	360° omni-directional pickup
	Speakerphone quantity	8-speakerphone array
	Pickup distance	8m pickup radius
	Sampling frequency	48 kHz
Speaker	Speaker quantity	1 piece
	Speaker power	2 W (rated power)
	Frequency range	100 Hz to 20 kHz
Cascading function	Cascading mode	PoE network cable cascading
	Cascading quantity	Maximum 4-stage
Other parameters	Other interfaces	1 × PoE IN 1 × PoE OUT
	USB interface	1 × USB 2.0 Type-C
	Power supply mode	1 × power supply interface (DC 53 V) or USB power supply
	Installation method	Desktop
	Supported operating system	Windows 7 or higher, Android, Mac, and Linux
	Usage scenario	Used with the Hitry 1080P/4K hardware terminal Used with the PC cloud conference software such as Hitry Cloud Conference and Tencent Conference
	Applicable conference	Small, medium, and large conference rooms

	room area	
	Environment	Operating temperature: 0 to 40 °C
	Product dimensions (mm)	126 mm × 66 mm (diameter × height)

Annex 2 Legal Statement

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new versions of this document.

- Our company has the right of final interpretation to this document in case any information in this document is inaccurate, non-exhaustive, or has typo mistakes.

- This document is a reference for multiple models. The specific operations for each model will not be listed separately Please operate as per the actual model available.

- Any loss caused by failure to follow the instructions in this document during operations shall be borne by the users.

- If the PDF provided with the product cannot be opened, please update your reading tool to the latest version, or use another popular reading tool.

Annex 3 Cybersecurity Recommendations

Necessary measures for protecting the basic network security of devices:

1. **Timely update firmware and client software**
   - According to industry standards and practices, the firmware of devices should be updated to the latest version to ensure the devices have the latest features and security. When the devices are connected to the internet, it is recommended to enable the automatic detection of online firmware updates to stay informed about the latest firmware releases by the manufacturers.
   - It is also recommended to download and use the latest version of client software.