

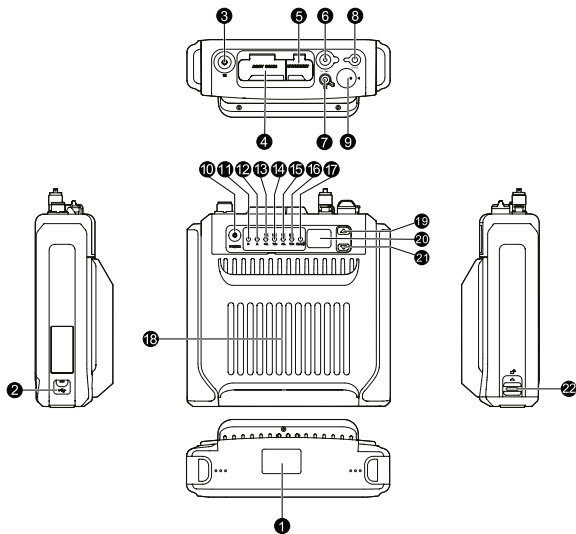


快速操作手册

QUICK REFERENCE GUIDE

HR650 数字中转台
HR65X DIGITAL REPEATER





序号	部件名称	序号	部件名称
1	底部扣件	12	模拟模式指示灯
2	USB接口	13	时隙A发射状态指示灯
3	发射/双工天线接口 (UHF母头)	14	时隙A接收状态指示灯
4	附件接口	15	时隙B发射状态指示灯
5	以太网接口	16	时隙B接收状态指示灯
6	电源输入接口	17	告警状态指示灯
7	接收天线接口 (SMA母头)	18	风扇
8	GNSS天线接口 (SMA母头)	19	音量/信道+键
9	航空头接口	20	LED数码管
10	开/关机键	21	音量/信道-键
11	数字模式指示灯	22	电池锁扣

注意事项

为确保本产品具备最佳的工作性能和可靠性，请务必仔细阅读以下信息。

运行环境

本产品必须在“环境温度 $-30^{\circ}\text{C}\sim+60^{\circ}\text{C}$ 、相对湿度不超过95%且干燥通风”的环境下使用。

电压检查

使用前，请检查输入电压是否在本产品的工作电压范围之内（直流供电电压：12V $\sim$ 16.8V）。

安装产品

安装要求

本产品可以放置于工作台上，或通过支架安装在墙上。



备注

您可以参阅《安全信息手册》了解更多中转台的安装注意事项。

安装前准备

通用工具：电钻、螺丝批、扳手

专用工具：防静电手套



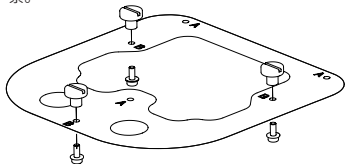
备注

HR650分高功率版本和低功率版本，低功率版本没有风扇，其他硬件相同。

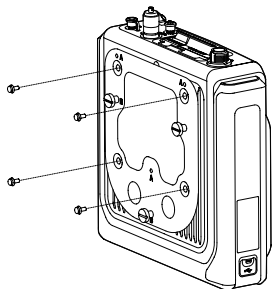
安装步骤

安装主机固定背板

1. 使用3颗M3螺钉在B组孔位置将挂钉和固定背板锁紧。



2. 使用4颗M4螺钉将主机固定背板固定在主机背面。



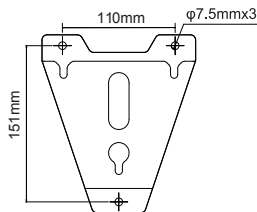
将主机安装在墙上



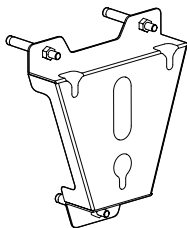
备注

钻孔前，请确认墙的承受力可以支撑本产品。

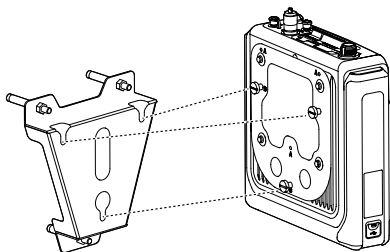
1. 按照挂墙支架螺钉孔位置在墙面上钻3个孔($\Phi=8\text{mm}$, $h=60\text{mm}$)。



2. 使用3颗M6膨胀螺栓将挂墙支架固定到墙面上。



3. 将主机背面的3颗挂钉挂在挂墙支架的葫芦孔。



基本操作

开机与关机

- 自动开机：连接电源后，本产品自动开机。
- 手动开关机：连接电源后，长按【开/关机】键进行开机或关机。

信道切换

待机状态下，按【音量&信道+】键或【音量&信道-】键可以切换信道，LED数码管将显示当前信道。

音量调节

长按【音量&信道+】键5秒切换信道模式为音量模式，然后按【音量&信道+】键或【音量&信道-】键调节音量。

当未操作时间达到5秒，或在5秒内再次长按【音量&信道+】键，返回至信道模式。

PTT发射

当主机连接了扬声器话筒时，您可以通过按下扬声器话筒上的【PTT】键启动发射功能，与其他终端建立通信。此时本产品显示屏面板上的LED指示灯会指示产品的状态，请参考“产品状态指示”。

当前信道为数字信道或混合信道（“PTT发射信道类型”为“数字”）时，如果当前信道没有设定“发射联系人”，则按下【PTT】键后无反应。



备注

扬声器话筒需用户自行购买我司指定型号的产品。“PTT发射信道类型”和“发射联系人”由经销商通过与频软件配置。

状态指示

主机状态指示

指示灯名称	指示灯状态	产品状态
数字模式指示灯	蓝色	本产品在数字模式下工作
模拟模式指示灯	橙色	本产品在模拟模式下工作
告警状态指示灯	红色	工作异常, 并且LED数码管显示告警符号
时隙A发射状态指示灯	红色	● 模拟模式: 正在发射 ● 数字模式: 时隙A正在发射
时隙A接收状态指示灯	绿色	● 模拟模式: 正在接收 ● 数字模式: 时隙A正在接收
时隙B发射状态指示灯	红色	数字模式下时隙B正在发射
时隙B接收状态指示灯	绿色	数字模式下时隙B正在接收

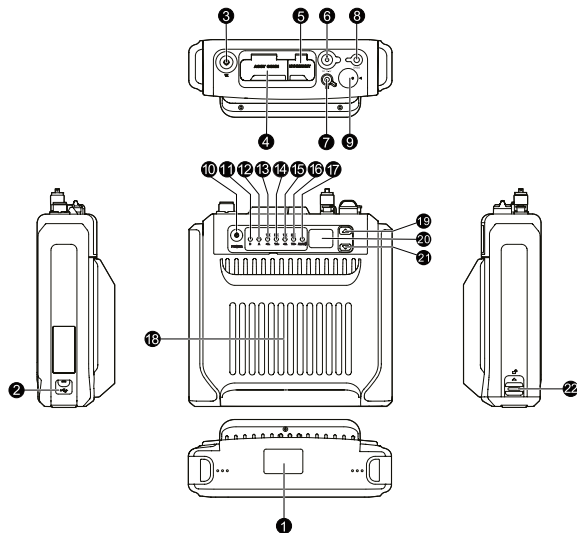
LED数码管显示

数码管符号	产品状态	数码管符号	产品状态
E3	外部电源 低压告警	EE	中转台禁用 告警
E4	发射失锁 告警	Eb	前向功率告警
E5	接收失锁 告警	EH	外部电源过压 告警
E6	高温告警	H3	网络IP冲突 告警
E7	驻波比告警	H5	IP地址无效 告警
E8	租赁到期 告警	N	显示当前信道 号, 例如: 1、 2、3……
E9	从机未注册 告警	bP	备份告警

如需了解更多功能和操作详情, 请访问我们的网站:
<https://www.hytera.com/cn/download-center.html>
或扫描二维码, 在线查看或下载配套的说明书。



Product Layout



No.	Part Name	No.	Part Name
1	Bottom cover	12	Analog mode indicator
2	USB port	13	Timeslot A TX indicator
3	TX/Duplexer antenna connector (UHF female)	14	Timeslot A RX indicator
4	Accessory connector	15	Timeslot B TX indicator
5	Ethernet port	16	Timeslot B RX indicator
6	Power inlet	17	Alarm indicator
7	RX antenna connector (SMA female)	18	Fan
8	GNSS antenna connector (SMA female)	19	Volume/Channel up key
9	Aviation port	20	Seven-segment LED
10	On-Off key	21	Volume/Channel down key
11	Digital mode indicator	22	Battery latch

Precaution

Before installation and use, read the following instructions carefully.

- Install the repeater in a dry and well-ventilated place.
- Use the repeater in an environment where the temperature is between -30°C and $+60^{\circ}\text{C}$ and the relative humidity is equal to or lower than 95%.
- Ensure that the operating voltage is 12–16.8 V DC.



NOTE

For more information, refer to the *Safety Information Booklet*.



NOTE

Except that the low-power HR65X features no fan but the high-power HR65X features one, the other hardware of the two types is the same.

Installation

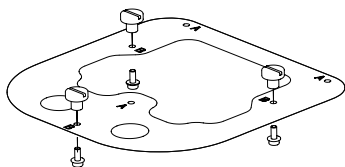
You can place the repeater on the desk, or install the repeater on the wall.

Tools

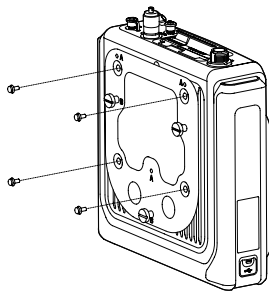
- Electric drill
- Screwdriver
- Wrench
- Anti-static gloves

Procedure

1. Install the three pegs onto the fixing plate with three M3 screws at holes marked with "B".



2. Fix the fixing plate to the back of the repeater with four M4 screws.



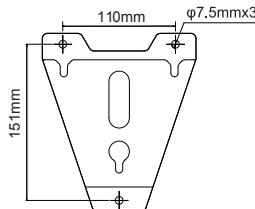
3. Install the repeater on the wall.



NOTE

Before installation, make sure the weight of the repeater is within the load bearing capacity of the wall.

- a. Hold the bracket horizontally to a proper position on the wall, and then mark the locations of the three holes ($\Phi = 8 \text{ mm}$, $h = 60 \text{ mm}$) as anchor points.



- b. Drill three holes at the anchor points with an electric drill.
- c. Fix the bracket onto the wall with three M6 expansion bolts.
- d. Dock the three holes on the bracket with the three pegs on the back of the repeater.

Basic Operation

Turning On or Off the Repeater

- Automatically Turn On
When connected to external power supply, the repeater automatically turns on.
- Manually Turn On or Off
When connected to external power supply, long press the **On-Off** key to turn on or off the repeater.

Switching the Channel

In the standby mode, press the **Volume/Channel Up** key or the **Volume/Channel Down** key.

The seven-segment LED displays the current channel number.

Adjusting the Volume

1. To switch the **Volume/Channel Up** key to the volume mode, press the key for five seconds.



NOTE

If you do not have any operation or you long press the **Volume/Channel Up** key within five seconds, the key will switch to the channel mode.

2. Press the **Volume/Channel Up** key to increase or the **Volume/Channel Down** key to decrease the volume.

(Optional) Transmitting

1. Connect the remote speaker microphone (RSM) to the repeater.
2. Press the push-to-talk (PTT) key on the RSM.
You can learn about the repeater status from LED indicators. For details, see **Status Indication**.



NOTE

- The RSM is optional.
- Use the RSM specified by Hytera.
- **PTT TX Channel Type** and **TX Contact Name** are configured by the dealer.
- The repeater gives no indication or response if it detects no TX contact name on the current channel (digital or hybrid) after **PTT** is pressed.

Status Indication

LED Indicator

Indicator	Status	Description
Digital mode indicator	Glows blue	The repeater is in the digital mode.
Analog mode indicator	Glows orange	The repeater is in the analog mode.
Alarm indicator	Glows red	An exception occurs (The seven-segment LED displays the corresponding alarm code).
Timeslot A TX indicator	Glows red	- Analog mode: transmitting - Digital mode: Timeslot A is transmitting.
Timeslot A RX indicator	Glows green	- Analog mode: receiving - Digital mode: Timeslot A is receiving.
Timeslot B TX indicator	Glows red	Timeslot B is transmitting in the digital mode.
Timeslot B RX indicator	Glows green	Timeslot B is receiving in the digital mode.

Seven-Segment LED

Alarm Code

Alarm Code	Description	Alarm Code	Description
E3	External power under-voltage alarm	EE	Repeater disabled alarm
E4	TX unlocked alarm	Eb	Low forward power alarm
E5	RX unlocked alarm	EH	External power over-voltage alarm
E6	Over-temperature alarm	H3	Network IP conflict alarm
E7	Voltage standing wave ratio (VSWR) alarm	H5	Invalid network IP alarm
E8	Off-lease alarm	bP	Backup alarm
E9	Slave unregistered alarm	/	/

Channel Code

Channel Code	Description
N	Indicates the current channel number, for example, 1, 2, 3, or more.

For details, please visit our website at: <https://www.hytera.com/en/download-center.html>, or scan the QR code to download the relevant user manual.





是海能达通信股份有限公司的注册商标或商标

©2022 海能达通信股份有限公司。版权所有

地址：深圳市南山区高新区北区北环路9108号海能达大厦

邮编：518057

服务热线：400-830-7020

[https:// www.hytera.com](https://www.hytera.com)



is the trademark or registered trademark of Hytera Communications Corporation Limited.

©2022 Hytera Communications Corporation Limited. All Rights Reserved.

Address: Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road, Nanshan District, Shenzhen, People's Republic of China

Postcode: 518057

[https:// www.hytera.com](https://www.hytera.com)



5202010081257A