

# Integrated Terminal Series

## AMS-R20-C Integrated Terminal

User Manual  
(V1.0)



## Foreword




The objective of this section is to ensure that users can effectively utilize the product by following the instructions in this manual, thereby preventing potential hazards or damage to property during operation. Prior to using this product, we strongly advise reading this product manual attentively and storing it securely for future reference.

### Overview

This manual offers comprehensive guidance on operating and utilizing the AMS-R20-C Integrated Smart Terminal.

### Symbol conventions

对于文档中出现的符号，说明如下所示。

Symbol	Function
 说明	Explanatory text, this type of text serves to supplement and elucidate the main content. It provides additional information and clarification to enhance understanding.
 注意	Cautionary text, this text serves as a reminder to users about critical operations or potential risks of harm and property damage. Failure to take precautions could result in accidents, equipment damage, or business interruption. Exercise care to prevent any such occurrences.
 危险	Dangerous text, this text indicates a potential high-risk situation. Failure to take precautions could lead to significant danger, potentially resulting in harm or loss of life. Extreme caution is advised to avoid such risks.

### Revision History

Version	Revision Notes	Editor	Date
V1.0	Initial Release	Chester Huang	2023/5/5

## Important Notes

This manual provides a comprehensive overview of the device's features, general principles, and methods for installation and operation. It is essential for users to thoroughly read this manual before proceeding with installation and use.

### Usage Guidelines

To prevent damage to this product or any connected devices, it should only be used within the specified range. Please adhere to the following guidelines:

- 1) Avoid Exposure to Rain or Moisture, do not expose the device to rain or moisture.
- 2) Electrical Safety: To prevent the risk of electric shock, do not open the casing. Installation and maintenance should only be performed by qualified technicians.
- 3) Operating Conditions:  
Use the product within the specified temperature, humidity, and power supply specifications.
- 4) Cleaning Instructions:  
When cleaning the device lens, use a dry, soft cloth. For stubborn stains, use a mild, neutral cleaner and gently wipe. Avoid using strong or corrosive cleaners to prevent scratches on the lens, which may affect image quality.

### Electrical Safety

Installation and use of this product must strictly adhere to local electrical safety standards.

### Handle with Care during Transport

During transportation, storage, and installation, precautions should be taken to avoid heavy pressure, severe vibrations, or immersion that may cause damage to the product.

### No Unauthorized Disassembly

Users should refrain from disassembling the product, as there are no user-serviceable parts. Damages resulting from user disassembly are not covered under warranty.

### Magnetic Field Interference

At specific frequencies, electromagnetic fields may impact the device's image. This product is classified as Class A. In a residential environment, it may cause radio interference, and users should take appropriate measures.

## FCC STATEMENT:

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.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### **FCC Radiation Exposure Statement:**

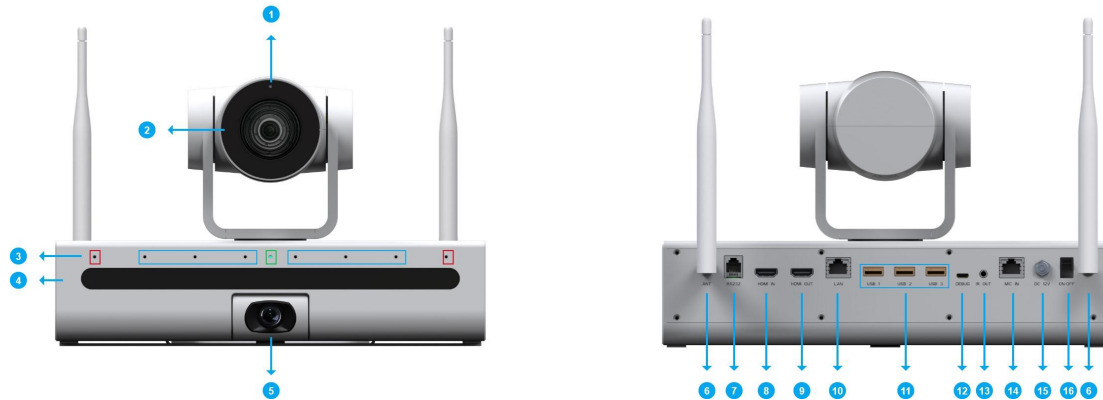
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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# 1. Quick Installation Guide

## 1.1 Panel



No.	Description	Remark
1	Light Sensor	1 x Light sensor
2	Zoom camera	1 x zoom camera, 30X zoom lens, 2.4MP sensor surrounded by 8 IR LED
3	MENS MIC	Red frame: 2 x Light sensor Green frame: 1 x three-colour indicator Blue frame: 6 x MEMS array microphone
4	IR LED	30 x IR LED
5	Fixed-focus camera	1 x 2.4MP Sensor, rotatable camera module
6	Wireless	2 x Wireless Antenna, enhance WIFI signal.
7	RS232	1x RJ12 port, for serial communication.
8	HDMI IN	1 x Female HDMI port to connect with HDMI source. HDMI 1.4, resolution up to 4K@30Hz, supports CEC
9	HDMI OUT	1 x Female HDMI port to connect with HDMI display. HDMI OUT 1 supports HDMI 1.4 and CEC, resolution up to 4K@30Hz

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10	LAN	1 x RJ45 Port, for connecting with Ethernet, 10/100/1000 Base-T and PoE++ (PoE power receiving)
11	USB	3 x USB-A, USB2.0, for connecting with USB devices such as mouse, keyboard and microphone.
12	OTG	1 x Micro-USB, USB 2.0, for device debugging
13	IR	1 x 3.5 mm port, for connecting with IR emitter.
14	MIC	1 x RJ45 Port, for connecting with extend speakerphone
15	DC 12V	1 x power port, DC12V, connector with lock
16	OFF/ON	Power Switch

### 1.2 Use of Device

1. Check the hardware packaging list to confirm that the packaging is complete and the accessories are complete.
2. Connect each interface cable to the corresponding device.
3. After the correct connection, turn on the power of the host, press the power button, wait for about 10 seconds, and then turn it on. After powering on, the terminal startup screen will be displayed on the TV screen. (Note: Please switch the signal source input of the TV screen to HDMI input mode).

### 1.3 Video Out

HDMI output: Connect the device and monitor correctly through HDMI video cable, select the correct input source on the monitor, and the terminal system interface will appear. In default mode, the output content of HDMI OUT is system UI, it can also be switched to HDMI IN.

### 1.4 MIC In

MIC IN is mainly used to connect cascade microphones and cascade speakers, just use ordinary CATx cables.

## 1.5 System Interface

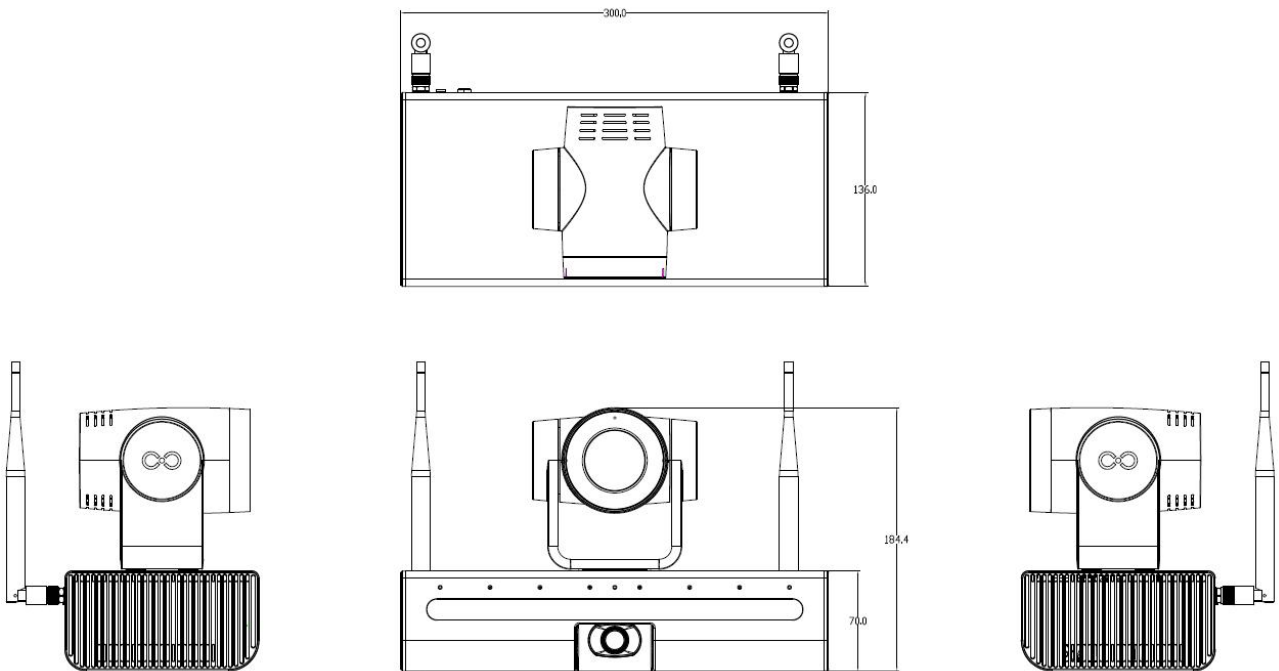
AMS-R20-C comes with Android 13, which is the native version of Android. The overall interface can be controlled by customers by connecting a mouse or keyboard through the USB port.

## 2. Product Description

### 2.1 Product Description

The Android video terminal AMS-R20-C uses a 30X optical zoom lens, and built-in intelligent echo cancellation and noise suppression audio algorithms to provide users with a high-quality conference audio-visual experience; it adopts an integrated design that integrates the Android platform, camera, Mechanical gimbal, Wi-Fi, Bluetooth, easy and fast wiring and installation; fully open API, built-in low-power high-performance processor, supports the development of third-party applications.

#### 2.1.1 Dimension





## 2.1.2 Accessories

When opening the package, please check and confirm all the accessories that should be provided. The accessories that come with the product are shown in Table 2-1:

Product Name	Quantity	●Standard ○Optional
Integrated smart terminal	1	●
Remote control	1	●
Power Adapter	1	●
HDMI 2.0 cable	2	●
CAT6 Cable	2	●

## 2.2 Features

- Image sensor: 2.07 million high-quality CMOS image sensor
- Wide-angle distortion-free lens: Using a wide viewing angle lens, the optical zoom reaches 12 times
- Wireless support: 2.4G / 5G dual-mode Wi-Fi, Bluetooth 5.0, convenient for customers to directly connect wireless applications, such as wireless screen projection, Bluetooth speakers, etc.
- Multiple video compression standards: supports H.265/H.264 video compression
- Advanced focusing technology: Advanced auto-focusing algorithm allows the lens to complete auto-focusing quickly, accurately and stably
- Low noise and high signal-to-noise ratio: Low-noise CMOS effectively ensures the ultra-high signal-to-noise ratio of camera videos. It uses advanced 2D and 3D noise reduction technology to further reduce noise while ensuring image clarity
- Fully open API: Fully open API supports the development of third-party applications and facilitates secondary development by customers to meet customization needs
- Silent pan/tilt: Using high-precision stepper motors and precision motor drive controllers to ensure smooth and noiseless pan/tilt operation.

## 2.3 Parameter

System	Android	Android 13
	RAM	8G
	ROM	128G
Camera1	Sensor	2.07M
	View	2.48° (T) ~ 65.4° (W) (D) / 2.14° (T) ~ 58.1° (W) (H) / 1.2° (T) ~ 33.8° (W) (V)
	Zoom	30X optical zoom
	Video out	Up to 1080P
Camera2	Sensor	2.07M
	View	115° (D) / 108° (H) / 74° (V)
	Zoom	3X digital zoom
	Video out	Up to 1080P
Audio	MIC	6x Pickup MIC
	Audio processing	AEC, AGC, ANS
Port	HDMI OUT	1x HDMI OUT, HDMI 1.4, up to 4K@30Hz
	HDMI IN	1x HDMI IN, HDMI 1.4, up to 4K@30Hz
	USB	3x USB 2.0 1x Micro USB
	Wireless	2.4G / 5G Wi-Fi, Bluetooth 5.0
	MIC IN	1x RJ45, for connecting cascade MIC and speaker

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	Ethernet	1x 10/100M/1000M RJ45
	Power	1x HEC3800 DC12V
	Power Switch	On/Off

## 3. Maintenance and troubleshooting

### 3.1 Product maintenance

- 1) If the equipment is not used for a long time, please turn off the power switch when not in use, and disconnect the AC power adapter from the AC socket.
- 2) When removing dust from the device casing, please use soft cloth or tissue paper to avoid scratches.
- 3) When cleaning the device lens, please use a dry soft cloth to wipe it. If the dirt is serious, please use a neutral detergent to wipe it gently. Do not use strong or corrosive cleaners to avoid scratching the lens and affecting the image quality.

### 3.2 Troubleshooting

#### 1) Video output has no picture

Solution:

- a. Check whether the power supply of the device is connected properly and whether the power indicator light is on.
- b. Check whether the device is functioning normally after powering off and restarting.
- c. Check whether the bottom DIP switch is in normal working mode (refer to Table 2-9)
- d. Check whether the video output and video monitor connection cables are normal.

#### 2) The image sometimes disappears

Solution:

Check whether the video output and video monitor connection cables are normal

#### 3) The remote control cannot control

Solution:

- a. Check whether the battery of the remote control is installed properly or the battery is insufficient.
- b. Check whether the equipment working mode is the normal working mode (refer to Table 2-9)
- c. Check whether the menu has not exited. After exiting the menu, you can control it normally. If the web page outputs an image, the menu will not be displayed and no operation will be performed. The menu will automatically exit after 30 seconds and you can control it.

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