

Akuvox R20A_WALL

Akuvox R20A-Silver Video SIP Door-phone User Manual

Model: R20A_WALL | Brand: Akuvox

1. INTRODUCTION

The Akuvox R20A-Silver Video SIP Door-phone is an advanced communication device designed to enhance security and convenience at your entrance. It features a wide-angle camera, an RF card reader, and two-way audio communication, integrating seamlessly with SIP-capable PBXs and ONVIF-compliant surveillance systems. This manual provides essential information for the proper installation, operation, and maintenance of your R20A-Silver door-phone.

- **Vandal Resistant Design:** Constructed with a durable aluminum alloy front panel and a flush button for enhanced resilience.
- **Wide-Angle Camera:** Equipped with a 1100 (H) / 580 (V) camera for broad viewing coverage.
- **Power over Ethernet (PoE):** Supports IEEE802.3af for simplified installation and power delivery.
- **Two-Way Audio:** Provides clear audio communication with Echo Cancel feature.
- **SIP & ONVIF Compliance:** Ensures broad compatibility with existing communication and surveillance infrastructures.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installing and operating the device. Failure to follow these instructions may result in electric shock, fire, or damage to the device.

- Ensure power is disconnected before any installation or maintenance procedures.
- Do not expose the device to extreme temperatures, humidity, or direct sunlight beyond specified operating conditions.
- Use only specified power adapters or PoE sources.
- Avoid placing the device near sources of strong electromagnetic interference.
- Installation should be performed by qualified personnel in accordance with local electrical codes.

3. PACKAGE CONTENTS

Verify that all items are present in the package before beginning installation:

- Akuvox R20A-Silver Video SIP Door-phone Unit
- Mounting Bracket (for flush or wall mount)
- Screws and Wall Plugs
- Connector Cables (if applicable)
- Quick Start Guide / Installation Template

4. PRODUCT OVERVIEW

The Akuvox R20A-Silver features a compact and robust design. Familiarize yourself with the main components:





Figure 4.1: Front view of the Akuvox R20A-Silver Door-phone, showing the camera lens, RF card reader area, and call button.



Figure 4.2: Angled view of the Akuvox R20A-Silver Door-phone, highlighting its slim profile and side ports.

- **Camera:** 2M pixels, automatic lighting, 1100 (H) / 580 (V) viewing angle.
- **Light Sensor:** Detects ambient light for automatic lighting adjustment.
- **Infrared Sensor:** For enhanced night vision capabilities.
- **Call Button:** Single button for initiating calls.
- **RF Card Reader:** Supports 13.56MHz (with NFC) & 125kHz for access control.
- **Microphone:** 40 dB sensitivity for clear audio capture.
- **Speaker:** 48 / 3W for clear audio output.
- **Ethernet Port (RJ45):** 10/100Mbps adaptive for network connection and PoE.
- **12V DC Connector:** Alternative power input if PoE is not used.
- **Wiegand Port:** For integration with external access control systems.

- **RS485 Port:** For serial communication with other devices.
- **Relays Out (2):** For controlling door locks or other devices.
- **Inputs (2):** For connecting external sensors or buttons.

5. SETUP AND INSTALLATION

The R20A-Silver supports both flush mounted and wall mounted installations. Ensure you have the necessary tools and follow local building codes.

5.1 Mounting Options

- **Flush Mounted:** Dimensions 189 x 120 x 56.5 mm. Requires cutting a recess in the wall.
- **Wall Mounted:** Dimensions 145 x 85 x 27.5 mm. Mounts directly onto the wall surface.

5.2 Wiring and Power

1. **Network Connection:** Connect an Ethernet cable from your network switch (preferably PoE-enabled) to the RJ45 port on the door-phone.
2. **Power Supply:**
 - If using PoE (IEEE802.3af), power will be supplied via the Ethernet cable.
 - If not using PoE, connect a 12V DC power adapter (not included) to the 12V DC connector.
3. **Relay Connections:** Connect the relay outputs to your electronic door lock or gate opener as per your lock's specifications.
4. **Input Connections:** Connect any external sensors or exit buttons to the input ports if required.
5. **Wiegand/RS485:** Connect to compatible access control systems or devices as needed.

5.3 Initial Setup

After physical installation and wiring, the device will power on. Refer to the Akuvox configuration guide for network settings, SIP registration, and initial system setup via a web browser interface.

6. OPERATING INSTRUCTIONS

The R20A-Silver is designed for intuitive operation, providing secure access and communication.

6.1 Making a Call

Press the single call button on the front panel. The door-phone will initiate a SIP call to the pre-configured indoor monitor or softphone. Once the call is answered, two-way audio and video communication will be established.

6.2 Door Entry Control

- **DTMF Tones:** During an active call, the door relays can be controlled individually by sending specific DTMF tones from the indoor monitor or phone. Consult your system administrator for the correct DTMF codes.
- **RF Card Reader:** Present a pre-registered 13.56MHz (NFC) or 125kHz RF card to the card reader area on the door-phone. If the card is authorized, the door will unlock for a set duration.

6.3 Video Monitoring

The camera is permanently operational. You can access the video stream from compatible indoor monitors,

NVRs, or surveillance systems that support ONVIF or SIP video. The high-intensity IR LEDs provide clear images during dark hours, automatically activating via the internal light sensor.

7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Akuvox R20A-Silver door-phone.

- **Cleaning:** Use a soft, damp cloth to clean the exterior. Do not use abrasive cleaners, solvents, or strong chemicals.
- **Lens Care:** Gently wipe the camera lens with a microfiber cloth to ensure clear video quality.
- **Firmware Updates:** Periodically check the Akuvox official website for firmware updates to ensure your device has the latest features and security patches.
- **Environmental Protection:** While the device is IP65 rated for water and dust resistance, avoid direct high-pressure water jets.

8. TROUBLESHOOTING

If you encounter issues with your R20A-Silver, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No power/Device not turning on	No power from PoE switch or 12V DC adapter; faulty cable.	Check PoE switch status or 12V DC adapter connection. Verify Ethernet cable integrity.
No video feed	Network connectivity issue; incorrect camera settings; NVR/monitor not configured correctly.	Verify network connection. Check camera settings via web interface. Ensure NVR/monitor is compatible and configured for ONVIF/SIP video.
No audio (two-way)	Network latency; incorrect audio codec; microphone/speaker issues.	Check network quality. Verify audio codec settings (G.711a/5, G.729, G.722). Ensure microphone and speaker are not obstructed.
Door not unlocking with RF card	Card not registered; incorrect card frequency; relay wiring issue.	Ensure the RF card is properly registered in the device's access control settings. Verify card frequency (13.56MHz/125kHz). Check relay wiring to the lock.
Call button not responding	Button malfunction; SIP registration issue.	Check SIP registration status via web interface. If button is physically damaged, contact support.

If the problem persists after attempting these solutions, please contact Akuvox technical support or your system integrator.

9. SPECIFICATIONS

Category	Parameter	Value
Physical & Power	Front Panel	Aluminum alloy

Category	Parameter	Value
	Camera	2M pixels, automatic lighting
	Button	1 call button
	RF Card Reader	13.56MHz (with NFC) & 125kHz
	Power	802.3af Power over Ethernet or 12V DC
	Water & Dust Proof	IP65
	Working Temperature	-400C ~ +650C
Audio	SIP Protocol	SIPv1 (RFC2543), SIPv2 (RFC3261)
	Narrowband Codec	G.711a, G.7115, G.729
	Broadband Codec	G.722
	Features	Echo Cancellation, VAD, CNG
Video	Sensor	1/2.72, CMOS
	Video Codec	H.264, H.265
	Resolution	Up to 1920x1080p
	Frame Rate	1080p - 25fps (Max.)
	Viewing Angle	1100 (H) / 580 (V)
Interfaces	Ethernet Port	RJ45, 10/100Mbps adaptive
	Relays Out	2
	Inputs	2
Dimensions	Flush Mounted	189 x 120 x 56.5 mm
	Wall Mounted	145 x 85 x 27.5 mm

10. WARRANTY AND SUPPORT

For warranty information, please refer to the warranty card included with your product or visit the official Akuvox website. Technical support can be obtained by contacting your local distributor or Akuvox customer service. Please have your model number (R20A_WALL) and serial number ready when contacting support. **Contact Information:** Refer to your purchase documentation or the Akuvox official website for the most up-to-date support contact details.

