

Autonomous Security Box R6

Installation Guide



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Sirix's Autonomous Security Box

First edition.

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Introducing the R6.

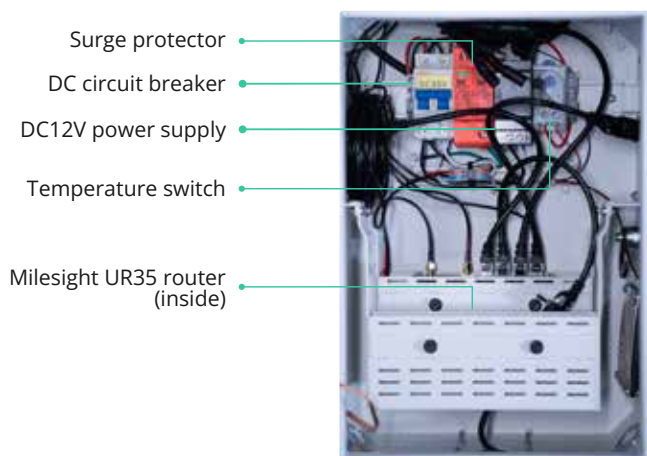
The latest model of the Sirix Autonomous Security Box is designed for enhanced safety, durability, and ease of deployment. It operates on a 48VDC architecture with an external ruggedized supply, improving electrical safety and reliability. Featuring an integrated speaker and deterrence unit with audio and LED lights, it supports customizable voice messages. The design includes refined enclosure and layout for durability and easy servicing, along with a universal mounting bracket and improved locking system for simpler installation. Additionally, it accommodates external battery and solar integrations for off-grid use.



Components of the Autonomous Security Box R6

Explore the advanced features and key components that make the R6 a new benchmark for autonomous outdoor security.

Interior view of the box

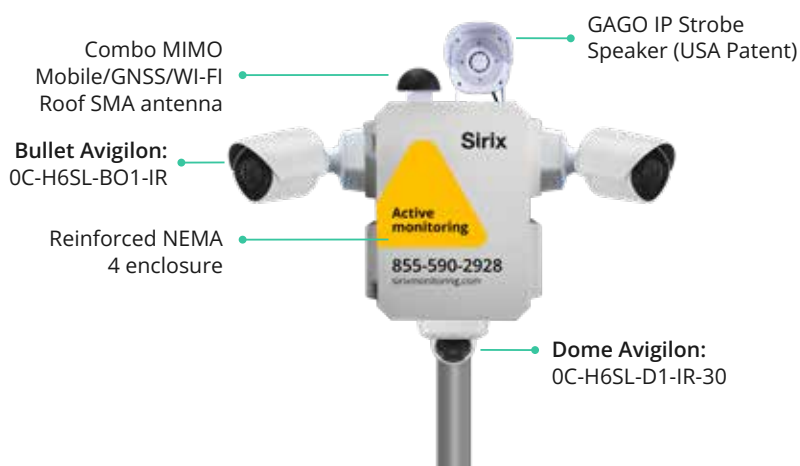


Milesight UR35 router (inside)



Waterproof IP68 junction box

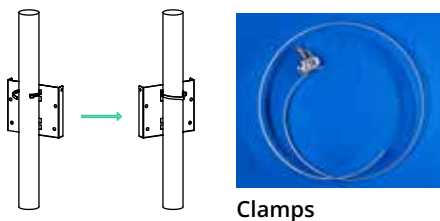
Exterior view of the box



Key to open the box

Physical installation of the Autonomous Security Box R6

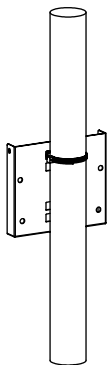
Pole mount step-by-step installation



Clamps

1. Pass the clamp through the bracket

Pass the hose clamp through the hole in the mounting bracket.

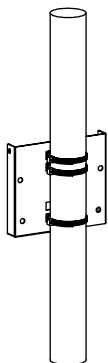


2. Position the bracket on the pole

Wrap the clamp around the pole, then attach the mounting bracket.

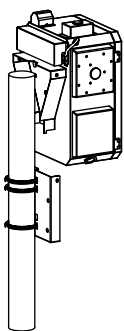
3. Tighten the clamp

Tighten the screw using a Phillips screwdriver.
(Steel pipe diameter: 80–200 mm)



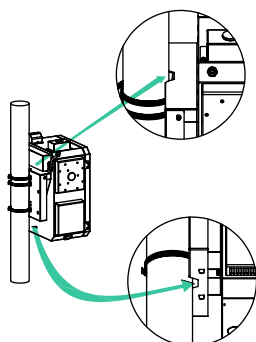
4. Install the remaining clamps

Install 3 pieces in total on the pole.



5. Slide the housing onto the hanger

Slide the housing over the hanger from bottom to top.

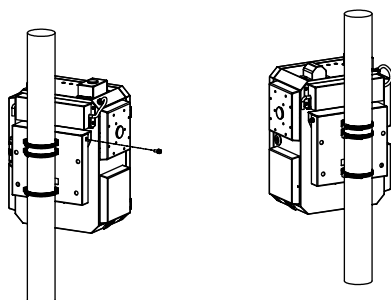


6. Ensure proper engagement

After fitting, ensure the hooks on the housing engage with the hanger.

7. Align the housing with the hanger

The tab on the housing must engage in the square hole of the hanger.



8. Secure the housing

Tighten the M6×16 screws with a Phillips screwdriver. Install one screw on each side.

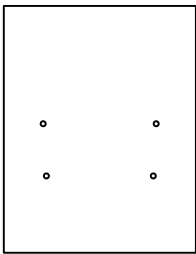
Note | Speaker position

During shipping, the speaker may be placed in a different position to prevent damage. Before completing the installation, simply straighten the speaker as shown in the image.



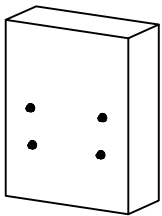
Physical installation of the Autonomous Security Box R6

Wall mount step-by-step installation



1. Drill the mounting holes

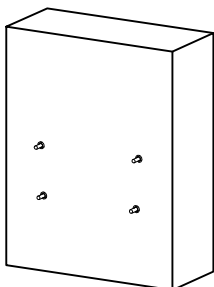
Drill 4 holes of Ø10 mm × 60 mm deep on the wall using a hammer drill.



Expansion anchor bolts

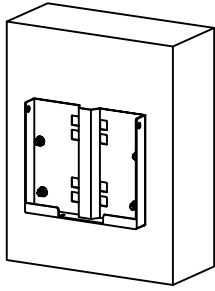
2. Insert the expansion bolts

Tap the M8×80 expansion bolts into the holes.



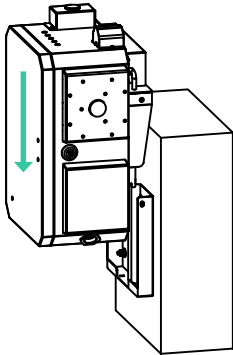
3. Prepare the bolts

Unscrew the nuts from the expansion bolts and remove the washers.



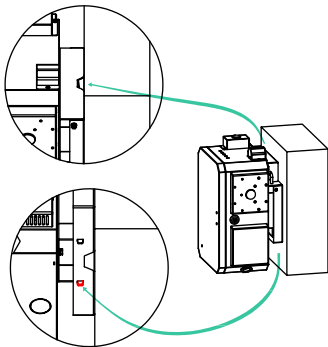
4. Install the hanger

Fit the hanger onto the screw rods, then fit the washers and tighten the nuts.



5. Slide the housing onto the hanger

Slide the housing over the hanger from bottom to top.

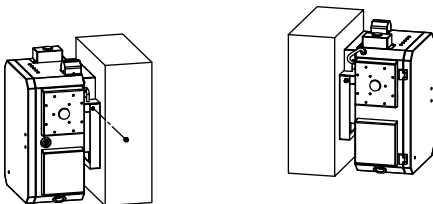


6. Check the hooks

After fitting, ensure the hooks on the housing engage with the hanger.

7. Engage the housing tab

The tab on the housing must engage in the square hole of the hanger.



8. Secure the housing

Tighten the M6×16 screws with a Phillips screwdriver. Install one screw on each side.

Note | Speaker position

During shipping, the speaker may be placed in a different position to prevent damage. Before completing the installation, simply straighten the speaker as shown in the image.



System commissioning & command center connection

Upon delivery

Inspect the box. Check for any hardware damage upon delivery.

Contact Support. Email Sirix at support@sirixmonitoring.com to schedule initial testing. Include your site name and box number (starting with SASB) in the email. Initial testing ensures all components are functioning and the cameras are connected to Sirix's command center.

Initial testing (indoor)

Prepare. Have an Internet-connected laptop, an Ethernet cable, and the box's key ready in case of issues.

Plug the box.

- Connect the NEMA 4 enclosure to a 120VAC, 50/60 Hz electrical circuit protected by a 15A circuit breaker.
- Attach the loudspeaker to the enclosure using the provided CAT6 cable.
- Keep the box plugged in for at least 5 minutes before testing.

Call support. At the scheduled time, call Sirix Support to conduct initial testing. Provide your site name and box number.

Book on-site testing. Schedule a meeting with Sirix Support for on-site installation and testing.

On-site installation & testing (outdoor)

Prepare. Have an Internet-connected laptop, an Ethernet cable, and the box's key ready.

Mount the box. Follow the mounting instructions provided in the "Physical Installation of the Autonomous Security Box" section.

Plug the box.

- Connect the NEMA 4 enclosure to a 120VAC, 50/60 Hz electrical circuit with a 15A circuit breaker.
- Attach the loudspeaker to the enclosure using the CAT6 cable.
- Ensure the box is plugged in for 5 minutes before testing.

Note: Installation must be performed by a certified electrician.

Call support. At the scheduled time, call Sirix Support for on-site testing. Provide your site name and box number. Sirix's security specialist will confirm the box is connected to the command center and fully operational.

Final steps

Set up user access. Once the box is operational, Sirix will create user accounts for your team and send email invitations to join the Alta Aware platform. Use the temporary URL (<https://sirix-pilot.na3.alta.avigilon.com/login>) provided in the email to complete registration and begin monitoring and managing your system.

Questions. Contact support@sirixmonitoring.com anytime for assistance.

Final system setup & verification

01

Camera adjustment

Use the adjustment screws to position the cameras' field of view (FOV) horizontally, vertically, and rotationally as desired.

02

Angle confirmation

Once the cameras are adjusted, confirm that the angles are correct with the Sirix Onboarding Department.

03

Masking & detection zone setup

After angle confirmation, the Onboarding Department will set up the masking and detection zones.

04

Voice down test

Conduct a test of the loudspeaker to adjust the volume and ensure the sound clarity.

05

Walk test

Perform walk tests to verify the effectiveness of the detection zones and confirm that alarms are being received at the Sirix Command Center.

***Routine maintenance recommendation.**

Periodic walk and voice down tests are recommended to ensure the system is functioning properly and remains in good working order.

Performance considerations

Key information for optimal performance with Sirix's R6.

Overlapping of cameras.

When two cameras are positioned to detect the same zone from different angles, it is said that the cameras are overlapping.

This practice is critical since it doubles the likelihood of detection in these zones. For example, if one camera misses the intruder because the detection angle is too steep and the visible area of the individual's body is too small for the camera to categorize it as human, another camera detecting the same zone from a different angle may catch the trespasser.

Camera coverage.

How far can your Autonomous Security Box's cameras see and detect intrusions?

To answer this question correctly, you need to know these THREE BASIC VALUES:

- The minimum pixel per meter (ppm) required to classify an object correctly is 9 PPF at 1080p.
- The megapixel value used by the AI engine is 480p.
- Cameras have a detection range of 95 to 295 feet, depending on the horizontal field of view (HFOV), which refers to the width of the zoom.

For more details on camera coverage, contact a Sirix security specialist or visit:

<https://www.jvsg.com/calculators/cctv-lens-calculator/>

Object detection function.

Object detection is a computer vision technique that enables cameras to identify and locate objects, such as people or vehicles, within their field of view. The system analyzes the video feed using advanced algorithms and triggers an alarm when a human or vehicle is detected, tracking it as long as it remains in view. For detection to occur, the object must stay in the camera's field of view for at least 2 seconds.

Lighting.

Ensure all monitored areas are well-lit to capture clear images for security monitoring. To prevent glare, avoid positioning lights directly in front of your Autonomous Security Box's cameras. Also, steer clear of locations with drastic daylight changes or reflective surfaces, as they can reduce detection accuracy.

Optimal height & angle.

For outdoor or large indoor areas, cameras should be mounted at a minimum height of 2.8 m (9 ft) and positioned level to the horizon and ground plane. Cameras can be tilted within 30° from the horizontal for optimal object classification, with a maximum tilt of 45° from the horizontal. Increasing the tilt angle can help detect targets that are directly approaching the camera.

For additional best practices on optimizing camera coverage and detection, consult our Remote Video Monitoring Installation & Performance Guide. Contact your sales representative to receive a digital copy.

Troubleshooting. Your step-by-step.

Enclosure integrity

Make sure the power bar switch is on and operational. Try plugging another device into the power bar to confirm it's working.

Breaker inside the box. Check the breaker inside the security box to make sure it hasn't tripped. If tripped, reset it.

Check LTE connectivity

Make sure the LTE connection is stable and working. Check signal strength or use a mobile device to test the connectivity in the same location.

If LTE is not working, ensure the SIM card is correctly installed and has an active data plan.

Restart or reset router

Soft reset. Try rebooting the router by powering it off for 10–30 seconds, then turning it back on.

Hard reset. If soft reset doesn't work, perform a factory reset (usually by pressing and holding the reset button for 10–15 seconds). Make sure to reconfigure the network after the reset if necessary.

Reset network switch

Power cycle the network switch by unplugging it and waiting 10–30 seconds before plugging it back in.

If problems persist, consider performing a hard reset (usually via a reset button) or checking for firmware updates.

Reset speaker

Power cycle. Turn off and on the speaker. Disconnect it from power; reboot the POE switch by disconnecting its power source. Wait for 5 minutes before checking if the speaker functionality and voice calls are restored.

Check network connectivity

Check wired connections. Ensure all Ethernet cables are firmly connected and undamaged.

Inspect physical connections

Make sure to securely plug all cables (power, network, audio, etc.) into the appropriate ports. Look for any signs of damage or wear on the cables.

Contact support

If the problem persists after all troubleshooting steps, contact Sirix support for more advanced assistance.

Maintenance

The integrated system, featuring the NEMA 4 enclosure and AI-powered cameras, requires minimal maintenance. However, we recommend cleaning the camera lenses twice a year for optimal performance, though this isn't mandatory. In environments with high temperatures, strong winds, dust, or near motorways and construction sites, more frequent cleaning may be needed. During routine or unscheduled site inspections, perform the following checks when opening the enclosure:



Enclosure integrity

Examine the top of the enclosure, especially around the external antenna mount, for any signs of leaks.



Seal condition.

Inspect the door seal for any broken or dented areas that could compromise the enclosure's integrity.



Rust inspection

Look for any signs of rusting on the enclosure.



Electrical connection

Regularly verify the integrity of the power cable, looking for any cuts, damage, or signs of wear that could impact functionality.



Camera mounting area.

Check the door where the camera is mounted for leak indications.

Specification sheets

Note: The ASB R6 can be supplied with either the Avigilon Alta camera set or the GSD camera set below. Specification sheets are provided for all cameras. Refer to the models included with your unit.



ALTA H6SL BULLET CLOUD CAMERA (2MP)

- **Resolutions.** 2 MP (1920 × 1080)
 - **Lens Options.** 3.4–10.5 mm varifocal lens
 - **IR Illumination Range.** Long-range IR illumination (model dependent)
 - **Dynamic Range.** Wide Dynamic Range (WDR) for high-contrast environments
 - **Weather Resistance.** IP66 / IP67 rated enclosure, suitable for outdoor deployments
 - **Impact Resistance.** IK10-rated vandal resistance
 - **Operating Temperature.** Approx. –40°C to +60°C (–40°F to 140°F)
 - **Power Supply.** PoE (IEEE 802.3af) or auxiliary power
 - **Network Interface.** 100BASE-TX Ethernet
 - **Video Compression.** H.264 / H.265 with SmartCodec technology
 - **Analytics.** AI-powered video analytics for event detection and alerts
 - **Security.** HTTPS encrypted communication and authentication controls
- Please refer to the [datasheet](#) for additional information.



ALTA H6SL DOME CLOUD CAMERA (2MP)

- **Resolutions.** 2 MP (1920 × 1080)
 - **Lens Options.** 3.4–10.5 mm varifocal lens
 - **IR Illumination Range.** Up to 30 m (100 ft)
 - **Image sensor.** 1/2.8" progressive scan CMOS
 - **Dynamic Range.** Wide Dynamic Range (WDR) for challenging lighting conditions
 - **Weather Resistance.**
Indoor model: IP52 rating
 - **Impact Resistance.** IK10-rated vandal resistance
 - **Operating Temperature.** Approx. –40°C to +60°C (–40°F to 140°F) typical for H6SL line
 - **Power supply.** PoE (IEEE 802.3af) or 12VDC auxiliary
 - **Network Interface.** 100BASE-TX Ethernet
 - **Video Compression.** H.264 and H.265 (HDSM SmartCodec)
 - **Analytics.** Next-generation video analytics with real-time alerts
 - **Security.** HTTPS encryption and password protection
- Please refer to the [datasheet](#) for additional information.

Specification sheets (continued)



GSD OCTAVUE BULLET AI CAMERA (5MP)

- **Model.** B7Z2812IP5MP-AI-N (NDAA compliant)
- **Resolutions.** 5 MP (2592 × 1944)
- **Lens Options.** 2.7–13.5 mm motorized varifocal lens
- **IR Illumination Range.** Up to 50 m (164 ft)
- **Image Sensor.** 1/2.7" progressive scan CMOS
- **Dynamic Range.** Wide Dynamic Range (WDR) for high-contrast environments
- **Weather Resistance.** IP66 rated enclosure, suitable for outdoor deployments
- **Operating Temperature.** -35°C to +60°C (-31°F to +140°F)
- **Power Supply.** PoE (IEEE 802.3af) or 12VDC
- **Network Interface.** 10/100BASE-T Ethernet
- **Video Compression.** H.265 / H.264 with triple-stream capability
- **Alarm and Audio.** 1 alarm input/output, 1 audio input/output (RCA)
- **Analytics.** AI-powered human and vehicle detection, perimeter intrusion, line crossing and face detection
- **Security.** HTTPS support, enforced complex passwords and IP address filtering
Please refer to the [datasheet](#) for additional information.



GSD OCTAVUE PTZ DOME AI CAMERA (4MP)

- **Model.** PTZD4XIP4MP-AI
- **Resolutions.** 4 MP (2560 × 1440)
- **Lens Options.** 2.8–12 mm motorized lens with 4× optical zoom
- **Pan / Tilt Range.** 350° pan, 0° to 80° tilt, 255 presets
- **IR Illumination Range.** Up to 20 m (66 ft), IR and warm light for color night vision
- **Image sensor.** 1/1.8" progressive scan CMOS
- **Dynamic Range.** True Wide Dynamic Range (120 dB)
- **Weather Resistance.** IP66 rated enclosure, suitable for outdoor deployments
- **Impact Resistance.** IK10-rated vandal resistance
- **Operating Temperature.** -30°C to +60°C (-22°F to +140°F)
- **Power supply.** PoE or 12VDC (max. 13 W)
- **Network Interface.** 10/100BASE-T Ethernet
- **Video Compression.** H.265+ / H.265 / H.264+ / H.264
- **Audio.** Built-in microphone and speaker for two-way communication
- **Analytics.** AI-powered human and vehicle detection, perimeter intrusion, line crossing and face detection
- **Security.** HTTPS encryption, password protection and IP address filtering
Please refer to the [datasheet](#) for additional information.



MILESIGHT UR35 INDUSTRIAL CELLULAR ROUTER

- **Application.** Provides secure cellular connectivity between the Autonomous Security Box and the Sirix Command Center.
- **Cellular connectivity.** 4G LTE Cat-4 with 3G fallback (up to 150 Mbps download / 50 Mbps upload)
- **Dual SIM.** Two SIM slots with automatic failover for network redundancy
- **Ethernet ports.** 5 × 10/100 Mbps RJ45 ports (1 × WAN + 4 × LAN)
- **PoE support.** Up to 4 × IEEE 802.3af/at PoE PSE ports (model dependent)
- **Wireless connectivity.** Optional Wi-Fi (IEEE 802.11 b/g/n)
- **Processor & memory.** ARM Cortex-A7 processor, 128 MB DDR3 RAM, 128 MB Flash
- **Industrial interfaces.** RS232 / RS485 serial ports, digital input/output for device integration
- **Operating temperature.** -40°C to +70°C (-40°F to 158°F)
- **Power input.** 9–48 VDC industrial power input
- **Security & networking.** Supports VPN (OpenVPN, IPsec, PPTP, L2TP, GRE) and firewall features for secure connectivity
- **Management.** Remote management via Milesight DeviceHub and web interface
Please refer to the [datasheet](#) for additional information.



COMBO MIMO MOBILE / GNSS / WI-FI ROOF SMA ANTENNA

- **Frequency range.**
LTE: 698–960 MHz, 1710–2690 MHz
GNSS: 1575–1610 MHz
Wi-Fi: 2400–2483.5 MHz, 4900–5825 MHz
- **Polarization.**
LTE: Linear
GNSS: RHCP
Wi-Fi: Linear
- **Gain.**
LTE: 3 dBi
GNSS: 2 dBi
GNSS LNA Gain: 28 ±2 dB
- **Impedance.**
50 Ω
- **VSWR.**
LTE: < 3.0
GNSS: < 2.0
Wi-Fi: < 2.5
- **Connectors.**
2 × SMA (LTE MIMO)
1 × SMA (GNSS)
2 × RP-SMA (Wi-Fi)
- **Mounting.**
Screw roof mount
- **Cable length.**
5 × RG174 cables, 3 m
- **Ingress protection.**
IP67 radome protection
- **Operating temperature.**
-40°C to +85°C
- **Dimensions.**
Ø110 mm × 55 mm
- **Weight.**
< 550 g

Please refer to the [datasheet](#) for additional information.



IP STROBE SPEAKER (USA PATENT)

- **Power supply.** PoE (IEEE 802.3af) with optional DC input
- **Network interface.** RJ45 Ethernet (10/100 Base-T)
- **Audio output.** Integrated network speaker with high-power deterrence audio
- **Strobe light.** Built-in high-intensity visual strobe for alarm and deterrence signaling
- **Audio support.** Supports MP3 and WAV audio decoding
- **Network protocols.** ONVIF, TCP/IP, HTTP, HTTPS, and other IP communication protocols
- **System integration.** Compatible with VMS platforms such as Milestone and NX
- **Event triggering.** Supports remote activation and alarm-based deterrence events
- **Firmware management.** Supports remote firmware upgrade via network interface
- **Housing.** Industrial-grade aluminum enclosure for outdoor deployments
- **Environmental protection.** IP-rated weatherproof design for outdoor installations

Please refer to the [datasheet](#) for additional information.

Sirix

Always watching. Always protecting.

For any questions or assistance with your Sirix's Autonomous Security Box, please contact our support team. We are dedicated to prompt problem resolution and mutual success.

info@sirixmonitoring.com | 1-855-788-1919 (24/7 SOC)

