

Video Recorder

The video recorder facilitates communication between the cloud-based security system and on-site video devices.

Contents

The following items are included in the box with each video recorder.

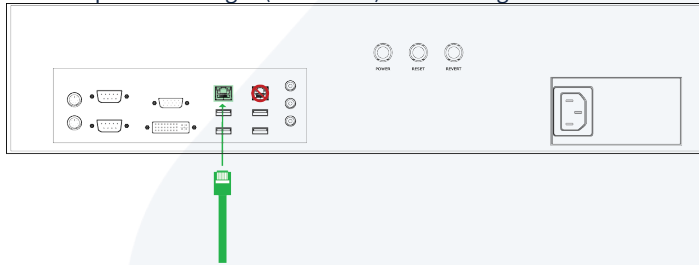
- One (1) recorder unit
- One (1) sticker label containing the System ID
- One (1) power cord

Video Recorder Installation

Before installing the recorder, make note of its System ID. The System ID is printed on a label affixed to the recorder.

Connect the Recorder

1. Connect the recorder to an internet-accessible network. Use the Ethernet port on the left on the back of the recorder (Ethernet 0). The Ethernet port on the right (Ethernet 1) is not configured and should not be used.



- The recorder depends on the network being configured for DHCP. If a static IP address is needed for the recorder, it must be configured using MAC address mapping on the DHCP server.
- Proxy configuration is not supported.

2. Connect the recorder to power.



3. Power on the recorder.

After being connected and powered on, the recorder communicates over the internet. All connections that the recorder establishes are outbound. The firewall does not need any ports opened for inbound connections.

Power and Reset

The recorder has three buttons on the back panel:

- **Reset** - Press this button to restart the system.
- **Power** - Press this button momentarily to power on the system. When the system is up and running, press this button momentarily to initiate an orderly system shutdown and power down. Hold this button down for three seconds to initiate a hard system shutdown and power down.
- **Revert** - This button is not used.

Configure the Recorder

1. In Elements, on the Devices page, add the recorder by selecting **Add > Recorder**.
2. Enter a **Name** for the recorder.
3. Enter the **System ID** of the recorder.
4. Select **Save**.

Status

A single LED installed in a USB port of the recorder indicates the system status.

LED Behavior	Status
Fast blinking white	Initialization
Fast blinking red	No network connection or IP address
Double blinking red	System registration service unreachable
Blinking yellow	System registration service reachable, not connected to IoT
Alternate blinking red, yellow	Lost connection to IoT Hub
Steady green	Recorder operational
LED off	Recorder powered off

Security

Limit access to the network by enabling a firewall to secure ports and endpoints.

Communication for the Gateway

Outgoing: HTTPS (TCP 443) and MQTTS (TCP 8883)

Endpoints:

- deviceregistration.elementssecure.com:443
- deviceregistration.elementslive.net:443
- elements-prd-ioth.azure-devices.net:8883
- elementsprdsa.blob.core.windows.net:443
- gatewayfirmware.elementssecure.com:443
- gatewayimages.elementssecure.com:443



Proxies are not explicitly supported. If a proxy is implemented, it must be transparent to the gateway.

Communication for Video

Configure the network infrastructure to allow connections to and from the addresses on the following ports:

- stun:global.stun.twilio.com
- turn:global.turn.twilio.com
- Port 3478 - Protocol: STUN, TURN UDP
- Port 443 - Protocol: TURN TLS
- Ports range 10000 - 60000 - Protocol: UDP/SRTP/SRTC