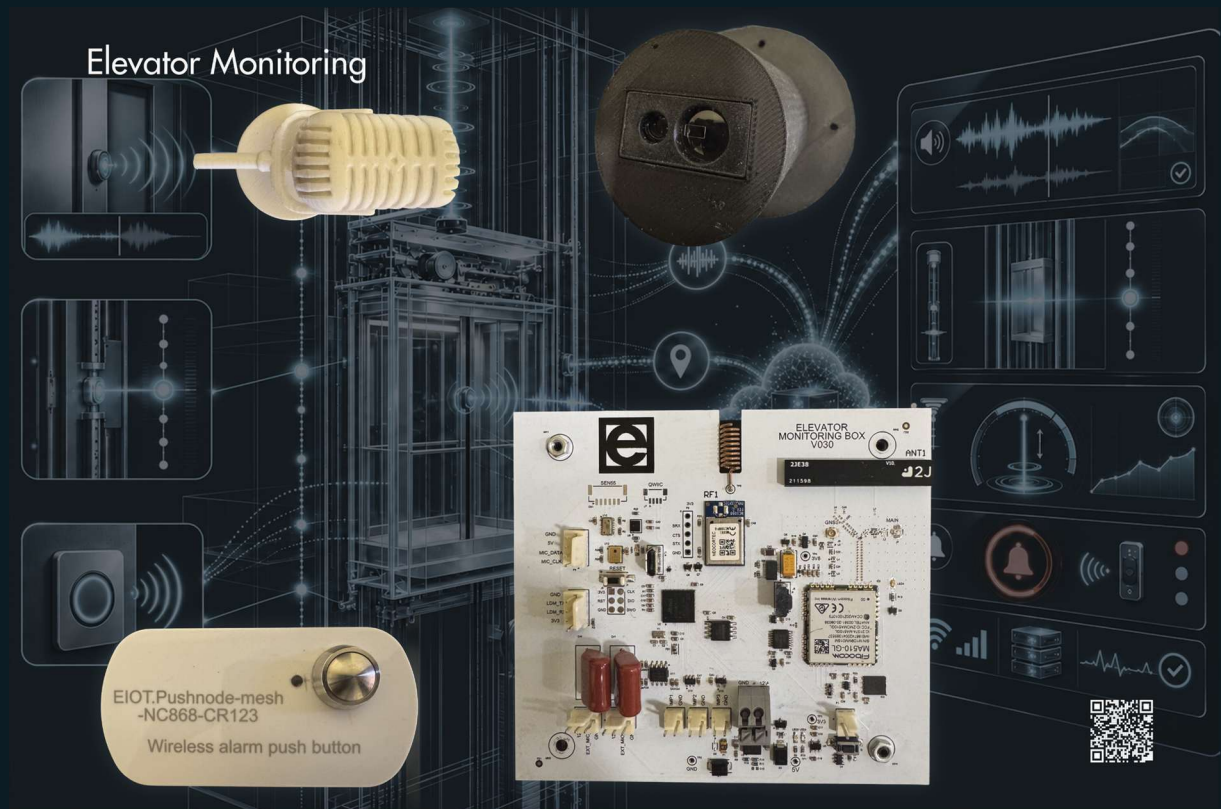




Elevator Monitoring

The E-IOT elevator monitoring solution combines sensor interfaces, wireless connectivity and cloud reporting to support remote supervision of elevator operation. Acoustic monitoring, distance or position sensing and a wireless alarm push button can provide complementary information about equipment behavior and user-reported events, helping maintenance teams identify changes and prioritize inspections.

Products shown

- Elevator Monitoring Box V030 — a central monitoring board featuring sensor connections, a NeoCortec wireless mesh module and a Fibocom MA510-GL cellular module.
- External acoustic sensor assembly — a vented sensor housing for capturing operating sounds.
- Laser Distance Meter — a compact module for distance or position-related measurements.
- E-IOT Pushnode-mesh-NC868-CR123 — a wireless alarm push button for sending manually triggered events through the mesh network.

Product features and operation

Central monitoring and data collection

The Elevator Monitoring Box brings sensor signals and wireless events together in a single platform. It provides the hardware foundation for collecting measurements, processing selected information locally and forwarding reports to the E-IOT cloud.

The monitoring functions depend on the connected sensors and application firmware. A deployment can focus on operating behavior, movement-related measurements, acoustic changes or manually triggered notifications, with reporting intervals adapted to the installation.

Acoustic monitoring of operating behavior

Elevators produce characteristic sounds during travel, starting, stopping and door operation. An external acoustic sensor can capture information about these operating cycles and support comparison over time.

Configured processing can track sound levels or selected acoustic features and highlight deviations from a baseline established during normal operation. These changes can help maintenance personnel identify equipment that warrants closer inspection.

Acoustic changes provide an indication for investigation; identifying a specific mechanical fault requires suitable analysis and validation. Local processing can also reduce the volume of transmitted data by reporting extracted measurements instead of continuous audio.

Distance and position-related sensing

The optical sensor assembly can support distance measurements or detection of a target within its field of view. Depending on its mounting position and measurement range, these readings may help observe movement, detect presence at a reference point or compare positions during repeated operating cycles.

Reliable interpretation requires appropriate sensor placement and commissioning. Measurement geometry, obstructions and target surfaces must be considered when defining the monitoring function.

Combining position-related information with acoustic observations can provide useful context—for example, whether a change in sound occurs during movement or near a particular point in an operating cycle.

Wireless event reporting

The E-IOT wireless push button provides a simple way to generate a manual notification. Pressing the button sends an event through the NeoMesh network to the associated monitoring infrastructure.

This can support service requests, equipment issue reporting or supplementary alarm notifications. The button's application label, event handling and notification recipients can be configured for the intended workflow.

Mesh and cellular connectivity

The monitoring board combines local wireless mesh connectivity with a cellular communication module. NeoMesh provides a connection to compatible wireless devices, while the cellular interface provides a route to the cloud where the selected network service is available.

This architecture can bring sensor measurements and push-button events into a common reporting system. Antenna placement and radio coverage should be assessed during installation, particularly around metal enclosures and elevator shafts.

Cloud visibility and maintenance support

Within a configured E-IOT cloud application, measurements and events can be presented as historical trends, equipment status and notifications. Maintenance teams can compare operating patterns, review reported incidents and investigate changes before deciding on a service action. The solution supports condition monitoring and maintenance planning. Its monitoring and push-button functions are supplementary to the elevator's certified safety controls and required emergency communication system.

Typical applications

- Remote monitoring of existing elevator installations.
- Acoustic trend analysis and investigation of unusual operating behavior.
- Distance or reference-position monitoring.
- Wireless service requests and supplementary alarm notifications.
- Centralized monitoring across multiple buildings.
- Collection of operating data to support condition-based maintenance.