

QUAKELOGIC · ON-SITE EARTHQUAKE EARLY WARNING

QUAKEALERT™

INDUSTRIAL ALARM DISPLAY · 14 IN

Detects the P-wave on site, verifies it with QUAKEAI, and sounds a full-screen voice alarm and relay outputs before strong shaking arrives.

14-INCH IPS TOUCHSCREEN

ON-BOARD P-WAVE DETECTION

TONE + VOICE ALARM

2-4 FORM C RELAYS

MODBUS TCP · MQTT · REST



MADE IN USA

With Globally Sourced Materials

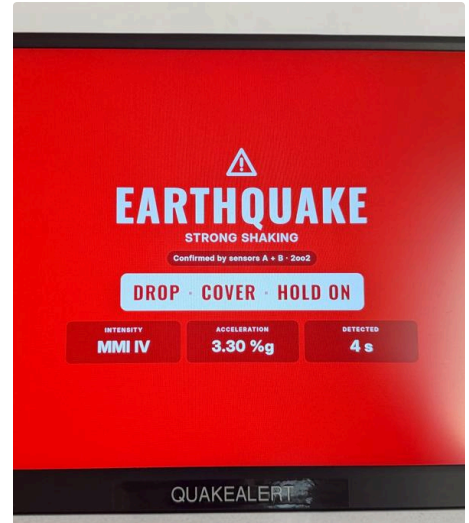
PRODUCT OVERVIEW

SECONDS OF WARNING, ON SITE.

A wall-mounted alarm display for control rooms, security operations centres and plant floors that detects earthquakes on its own and shows network alerts on the same screen.

QuakeAlert™ Industrial watches the ground with two built-in triaxial MEMS accelerometers. When the faster P-wave arrives, STA/LTA and τ_c / P_d triggers detect it, the two sensors must agree, and the QUAKEAI neural classifier confirms a real earthquake before the alarm sounds.

The 14-inch IPS touchscreen then switches to a full-screen alarm with the expected intensity on the MMI, JMA or PEIS scale, dual speakers play tone and voice alarms, and Form C relays trigger sirens, strobes and safety actions. It also receives alerts from QuakeLogic central software, so local and network warnings appear on one screen.



QuakeAlert™ full-screen alarm

14 in

IPS TOUCHSCREEN

Full-screen alarm

≈ 1 s

DETECTION LATENCY

After P onset, typical

3

ALARM LEVELS

MMI · JMA · PEIS

2–4

FORM C RELAYS

2 A @ 30 VDC

STANDARD FEATURES

- 14 in IPS touchscreen, capacitive
- Full-screen earthquake alarm
- Dual speakers: tone + voice alarm
- Multi-language voice prompts
- Three alarm levels per scale
- On-board P-wave detection
- Two MEMS sensors, 2oo2 voting
- QUAKEAI neural verification
- MMI, JMA, PEIS intensity
- PGA, PGV, PGD in real time
- 2 × Form C relays (up to 4)
- SMS and email notifications
- Gigabit Ethernet · Wi-Fi · BT 5.0
- Modbus TCP · MQTT · REST API
- 64 GB industrial storage
- VESA wall mount, indoor

BUILT FOR ROOMS THAT ACT FIRST

One display warns the people in the room, triggers the equipment around it and reports to the systems that coordinate the response.



SECURITY OPERATIONS CENTRES

Gives operators an immediate full-screen alarm, expected intensity and confirmation of every output fired.



CONTROL ROOMS

Alerts process operators and trips safe-state actions through relay outputs and Modbus TCP.



INDUSTRIAL PLANTS

Relays stop lines, close gas and chemical valves, and put robots and cranes in a safe state.



SCHOOLS & CAMPUSES

Voice alarm prompts drop, cover, hold on; staff receive SMS and email at the same moment.



HOSPITALS & CLINICS

Seconds to pause procedures, secure patients and protect sensitive equipment.



DATA CENTRES

Triggers controlled shutdown and alerts on-call engineers by SMS and email.



ELEVATORS & UTILITIES

Relay outputs recall elevators to the nearest floor and shut gas service.



MULTI-SITE MONITORING

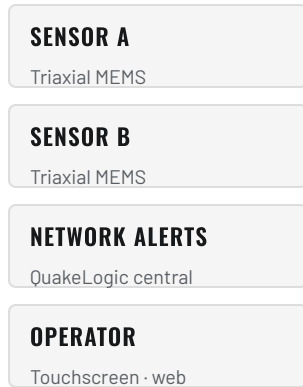
Several QuakeAlert™ units report to one dashboard for campus-wide status and alerts.

HOW IT WORKS

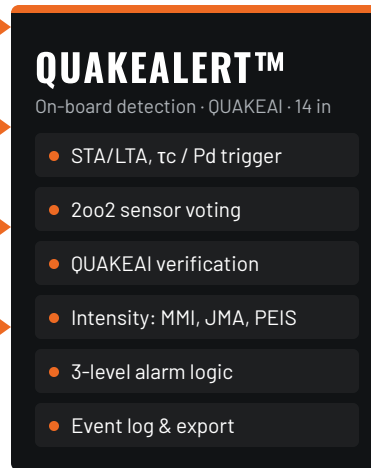
CATCH THE P-WAVE FIRST.

QuakeAlert™ makes its own decision on site and also acts on network alerts, then warns people and triggers equipment at once.

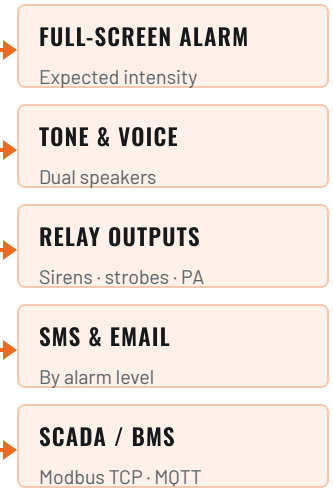
INPUTS



QUAKEALERT DISPLAY



ACTIONS



01

SENSE

Two triaxial MEMS sensors sample ground motion continuously at up to 200 samples per second.

02

DETECT & VERIFY

STA/LTA and τ_c / Pd detect the P-wave; both sensors must agree and QUAKEAI confirms the event.

03

ALARM

Full-screen alarm, voice, relays, SMS and email fire at the configured intensity level.

Warning time depends on distance. Sites far from the epicentre can receive several seconds or more of warning. Sites very close to the source may receive little or no warning; QuakeAlert™ still alarms, records and notifies as shaking begins.

LOUD WHEN IT MATTERS.

The on-device software shows live status, intensity and waveforms in normal operation and switches to an unmistakable alarm when shaking is coming.



FULL-SCREEN ALARM

Expected intensity on the selected scale, protective-action guidance and confirmation of every output fired.



MULTI-LANGUAGE VOICE

Voice prompts and on-screen text in the language of the occupants, with tone and voice through dual speakers.



EVENT HISTORY

Every trigger is logged with intensity and QUAKEAI class; records export as CSV or MiniSEED.



WEB & REMOTE ACCESS

Configure and monitor from any browser on the local network or securely over the internet; updates delivered by QuakeLogic.

THREE-LEVEL ALARM LOGIC

LEVEL	BEHAVIOR
Pre-alert	Chime and on-screen notice for light shaking; optional SMS/email to selected recipients; relays stay idle
Alarm	Voice alarm, full-screen warning, assigned relays energize, SMS and email to all alarm-level recipients
Critical	All relay outputs and external sirens activate; continuous alarm until manual or timed reset
Thresholds	Set independently per level on the selected scale, e.g. MMI IV / V / VI or JMA 3 / 4 / 5-
Self-test	Daily automatic self-test and heartbeat report

Ethernet

Wi-Fi

Bluetooth

Modbus TCP

MQTT

REST API

SMS

Email

WARN PEOPLE. TRIGGER EQUIPMENT.

Alarm outputs, relay contacts and network interfaces work together, so one event reaches the room, the equipment and the control system at once.

CHANNEL	TYPE	RATING	TYPICAL CONNECTION
Relays (K1-K2)	2 × Form C	2 A @ 30 VDC	Sirens, strobes, PA trigger, interlocks
Relay expansion (K3-K4)	2 × Form C, optional	2 A @ 30 VDC	Valves, elevator input, line stops
Audio	Dual speakers	Tone + voice	Occupants in the room
Ethernet	Gigabit RJ45	Modbus TCP, MQTT, REST	SCADA, BMS, central software
Wireless	Wi-Fi 802.11ac · BT 5.0	Optional 4G LTE	Network backup, SMS over cellular
Power	AC adapter	100-240 VAC	Optional internal UPS module

Installation rule. Mount indoors on a structural wall or anchor the unit to a floor slab with the supplied anchor plate, so the built-in sensors measure building motion rather than furniture movement.

INSIDE THE UNIT

- 14 in IPS touchscreen, capacitive
- Two triaxial MEMS accelerometers
- Quad-core 64-bit ARM processor, 2.4 GHz
- 4 GB memory (8 GB optional)
- 64 GB industrial-grade storage
- Dual speakers
- Form C relay board
- Gigabit Ethernet, Wi-Fi and Bluetooth

OPTIONS

RELAY EXPANSION
Expands the outputs from two to four Form C relays.

4G LTE CELLULAR MODEM
Sends SMS directly over cellular, with automatic failover from the building network.

BATTERY BACKUP (UPS)
Keeps detection, alarm and notifications running through a mains power loss.

QUAKEALERT AT A GLANCE

DETECTION & DISPLAY	VALUE
Sensors	2 × triaxial MEMS accelerometers
Sensor voting	Two-out-of-two (2oo2)
Full-scale range	±2 g (±4 / ±8 / ±16 g selectable)
Sampling rate	100 / 200 sps
P-wave trigger	STA/LTA, t_c / P_d
AI verification	QUAKEAI neural P-pick + classifier
Detection latency	≈ 1 s after P onset (typical)
Intensity scales	MMI, JMA, PEIS
Ground motion	PGA, PGV, PGD
Alarm levels	3, user-set per scale
Display	14 in IPS, capacitive touch
Audio	Dual speakers; tone + voice
Network alerts	From QuakeLogic central software

QUALITY & COMPLIANCE

Designed and assembled by QuakeLogic in Roseville, California, under an ISO 9001:2015 quality management system. QuakeAlert™ is a trademark of QuakeLogic Inc.

Specifications are subject to change without notice. For best detection, the unit or its sensor must be rigidly anchored. Warning time depends on distance to the earthquake; sites close to the source may receive little or no warning.

INTERFACES & PHYSICAL	VALUE
Relays	2 × Form C, 2 A @ 30 VDC; up to 4
Network	Gigabit Ethernet; Wi-Fi 802.11ac; BT 5.0
Cellular	4G LTE (optional)
Notifications	SMS, email (SMTP/TLS)
Protocols	Modbus TCP, MQTT, REST API
Time sync	NTP
Processor	Quad-core 64-bit ARM, 2.4 GHz
Memory / storage	4 GB (8 GB opt.) / 64 GB
Data formats	CSV, MiniSEED
Power input	100–240 VAC adapter
Battery	Internal UPS module (optional)
Mounting	VESA 75 / 100; desk stand
Operating temp.	32–104 °F (0–40 °C), indoor
Humidity	10–90% RH, non-condensing

SUPPORT

Delivered configured for the site's alarm levels, relays and recipients. QuakeLogic provides remote commissioning, software and QUAKEAI model updates, and technical support from the USA.

QUAKEALERT™

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CORPORATE HEADQUARTERS

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ABOUT QUAKELOGIC

California-based engineering company delivering seismic monitoring, earthquake early warning, structural health monitoring and testing systems worldwide.



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