FRONTLINE VISION

TECHNOLOGY FOR A SAFER TOMORROW

FV-SENTRY 300

STRUCTURAL STABILITY MONITORING RADAR

KNOW WHEN A STRUCTURE MOVES.
BEFORE IT BECOMES A THREAT.

≤0.1 mm
DEFORMATION MEASUREMENT ACCURACY

≥300 m
REMOTE MONITORING RANGE

≥10 Hz
CONTINUOUS DATA UPDATE

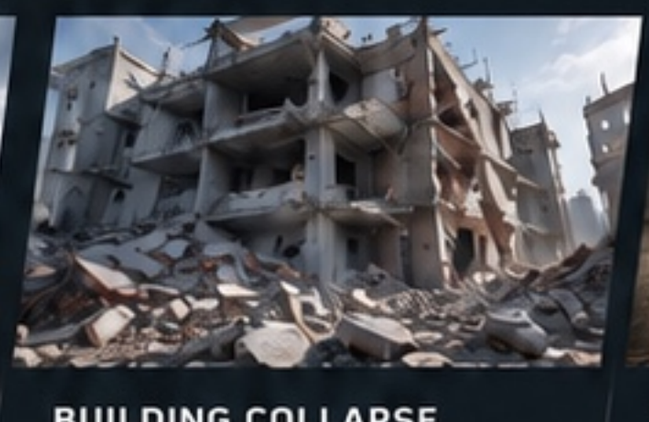


**EARLY WARNING.
SAFER RESCUE.
MORE LIVES SAVED.**

APPLICATION SCENARIOS



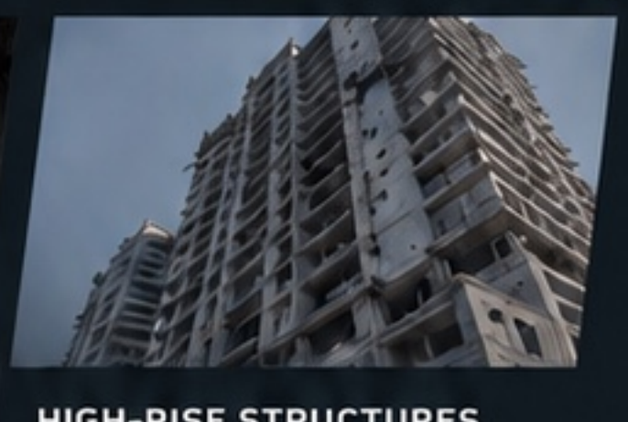
EARTHQUAKE RESPONSE
Monitor unstable structures after earthquakes.



BUILDING COLLAPSE
Detect ongoing movement during rescue operations.



TUNNEL RESCUE
Monitor deformation in underground environments.



HIGH-RISE STRUCTURES
Continuous monitoring of at-risk buildings.

URBAN SEARCH & RESSCUE | FIRE & RESCUE | CIVIL DEFENCE | INFRASTRUCTURE SAFETY | TUNNEL & MINING

PROTECT PEOPLE. ENABLE BRAVER RESPONSE.

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STRUCTURAL STABILITY MONITORING RADAR

MONITOR
DETECT
ALERT
PROTECT

HOW IT WORKS

NON-CONTACT. REAL-TIME. ACTIONABLE INTELLIGENCE.

FV-Sentry 300 uses advanced microwave remote sensing and phase interferometry to detect structural displacement from a safe distance. It continuously monitors multiple points on a building or structure, providing real-time deformation data, trend analysis and early warnings to support safer and more informed rescue operations.



NON-CONTACT
Monitoring from a safe distance

WIDE COVERAGE
Up to 300 m monitoring range

REAL-TIME
Continuous monitoring & alerts

FROM MOVEMENT TO EARLY WARNING

CONTINUOUS MONITORING. CLEARER RISK AWARENESS.

FV-Sentry 300 turns structural movement into actionable intelligence. From data acquisition to alarm notification, it helps teams detect risks early and make faster, safer decisions.

1	2	3	4	5
ACQUIRE	**MEASURE**	**TRACK**	**ASSESS**	**ALERT**
Non-contact radar continuously monitors the target structure.	Detect displacement at multiple monitoring points.	Follow movement trends and changes over time.	Compare movement against configured alarm thresholds.	Provide audible and visual warning when thresholds are exceeded.



MONITOR → MEASURE → ANALYZE → EVALUATE → TAKE ACTION

KEY FEATURES

DESIGNED FOR DEMANDING ENVIRONMENTS.

HIGH ACCURACY
≤0.1 mm deformation measurement accuracy.

MULTI-POINT MONITORING
Monitor multiple points simultaneously to understand overall structural movement.

ALL-WEATHER OPERATION
Unaffected by smoke, dust, firelight and adverse weather.

24/7 CONTINUOUS MONITORING
Low power consumption for long-term deployment.

PORTABLE & RAPID DEPLOYMENT
Lightweight, compact design for quick setup.

INTELLIGENT & SCALABLE
Multiple devices can work together for multi-angle, full-coverage monitoring.

AUDIBLE & VISUAL ALARM
Alarm sound ≥100 dB with on-screen alerts.

APPLICATION SCENARIOS

DIFFERENT INCIDENTS. A SAFER OUTCOME.



EARTHQUAKE RESPONSE
Aftershock and structural movement monitoring



BUILDING COLLAPSE
Monitor unstable walls, beams and structural elements



FIRE & EXPLOSION
Monitor structures weakened by heat or blast damage



TUNNEL RESCUE
Ensure structural safety during underground operations

FRONTLINE VISION
PROTECT PEOPLE. ENABLE BRAVER RESPONSE.

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FRONTLINE VISION

FV-SENTRY 300

STRUCTURAL STABILITY MONITORING RADAR

TECHNOLOGY FOR A SAFER TOMORROW

USER INTERFACE

REAL-TIME INSIGHTS FOR CONFIDENT DECISIONS

SEE MOVEMENT.
ASSESS RISK.
ACT EARLIER.

FV-Sentry 300 provides an intuitive and easy-to-use interface, displaying live video, multiple monitoring points and real-time displacement trends. Alarm thresholds can be configured to trigger visual and audible alerts when abnormal movement is detected, helping incident commanders make faster and safer decisions.

Live Video View
Visual reference for monitoring points

Multi-point Displacement Trend
Track multiple points simultaneously

Detailed Displacement Data
Line-of-sight, horizontal and vertical displacement



System Control
Quick access to settings, playback, capture and data export

Status & Alerts
Clear indication of system status and alarm notifications

ON-SITE OPERATION

SIMPLE. FAST. RELIABLE.



Quick setup in minutes



Rugged tablet for field use



Compact and lightweight design

KEY INTERFACE FUNCTIONS

TURN DATA INTO ACTION

LIVE VIDEO
Real-time visual reference with crosshair/measurement lines

DISPLACEMENT TREND
Multi-point, real-time displacement curves

POINT MANAGEMENT
Add and Remove monitoring points.

ALARM SETTINGS
Configurable thresholds with visual and audible alerts

DATA EXPORT
Export monitoring data and screenshots for reporting

SYSTEM SETTINGS
Language, time, network and operation mode



MONITOR TODAY.
PROTECT TOMORROW.

EARTHQUAKE RESPONSE
BUILDING COLLAPSE
TUNNEL RESCUE
CRITICAL INFRASTRUCTURE

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FV-SENTRY 300

STRUCTURAL STABILITY MONITORING RADAR

MONITOR
DETECT
ALERT
PROTECT

TECHNICAL SPECIFICATIONS

DETAILED PERFORMANCE. TRUSTED IN THE FIELD.

RADAR PERFORMANCE	
Maximum Monitoring Distance	≥300 m
Data Update Rate	≥10 Hz
Deformation Measurement Accuracy	≤0.1 mm
Horizontal Coverage Angle Range	≤5°
Tilt-up and Tilt-down Coverage Angle Range	≥30°
Monitoring Points	Multiple points (simultaneous)

OPTICAL & RANGING	
Visible Light Resolution	1920 × 1080
Visible Light Frame Rate	25 Hz
Operating Modes	Standard / Low-light mode (auto switch by light conditions)
Laser Ranging	≥500 m (accuracy < 1 m)

PHYSICAL CHARACTERISTICS	
Main Unit Weight	3.5 kg (±0.1 kg)
Main Unit Dimensions	240 × 225 × 90 mm (±5 mm)

ENVIRONMENTAL	
Operating Temperature	-20°C to +55°C
Storage Temperature	-40°C to +70°C
Protection Level	IP65

ALARM & NOTIFICATION	
Audible Alarm	≥100 dB
Visual Alert	On-screen alert

CONTROL TERMINAL	
Display	10.1-inch, 1920 × 1200 resolution
Dimensions	275 × 188 × 23 mm (±2 mm)
Weight	1,000 g (±50 g)
Storage	8 + 128 GB
Operating System	Android 12

SYSTEM CONFIGURATION	
Standard Package Includes	Radar Main Unit, Display and Control Terminal, Mobile Power Supply, Network Cable, Charging Cable, Tripod, Charger, Instruction Manual, Packaging Box

* Specifications are subject to change without notice.

PRODUCT DIMENSIONS

COMPACT. RUGGED. FIELD READY.



Front View

Side View

SYSTEM COMPONENTS

A COMPLETE SOLUTION FOR IMMEDIATE DEPLOYMENT.





PEOPLE FIRST

PROVEN TECHNOLOGY

GLOBAL SUPPORT

A SAFER TOMORROW