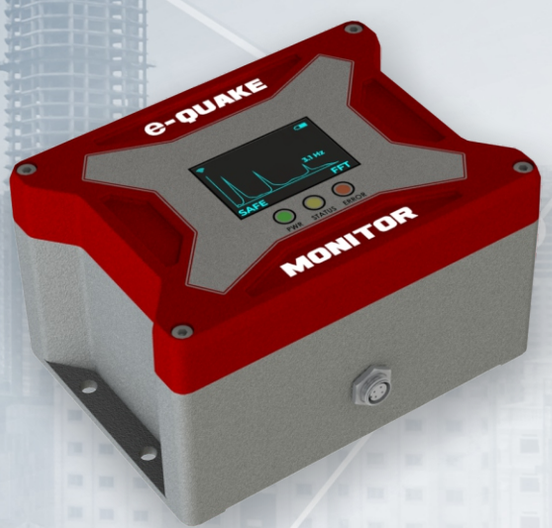
TDG

structural
health
monitoring



A SAFER LIFE IS POSSIBLE'

Based on Scientific Studies & in Compliance with Regulations

e-QUAKE® MONITOR

Compact Structural Health Monitoring System for Buildings

e-QUAKE® MONITOR

Compact Structural Health Monitoring System

"Based on Scientific Studies & in Compliance with Regulations"

This product family is a compact and optimum structural health monitoring solution which can be used on all buildings. It is ideal for apartments, housing estates, building complexes, office buildings, residential buildings, schools & industrial structures.

This solution enables the usage of minimum number of sensors corrersponding to the sturcture, and hence provides easy installation & unmatched cost advantage.

Tri-axial ultra-sensitive accelerometers allows dynamic monitoring of rigid structures under ambient vibration (without any strong excitation or earthquake)

When the structure is exposed to an impact, building status report is prepared in a matter of minutes, by the analysis & comparison of before and after data.

"DEVELOPED 100% IN TDG LABORATORIES"

TDG 24/7 STRUCTURAL HEALTH MONITORING CENTER

Alarms / Warnings
Periodical& Automatic Reporting Just after Event
Dynamic Identification Monitoring

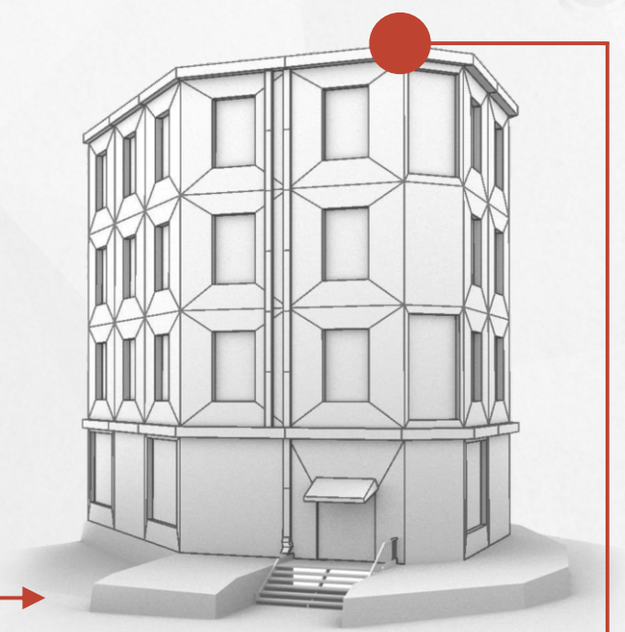
Modal Frequencies
Damping Ratios
Basic Mode Shapes

Post-Event Risk Analysis (Indicators)

Before & After Comparison
Top Displacement/Acceleration

Base Shear Force
Basic Modal Frequency Degradation Ratio

Tilt Monitoring
Basic Aging & Fatigue Monitoring



Local Triggers
Alarms / Warnings
SMS / e-Mail

A SAFER LIFE IS POSSIBLE!

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Compact Structural Health Monitoring System

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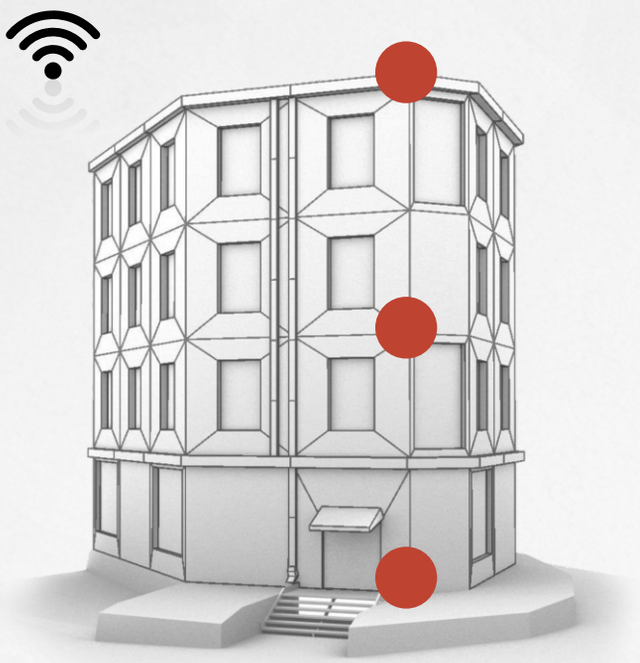
Standard Buildings & Apartments

One, two or more sensors depending on the number of floors



Schools, Hospitals & Industrial Buildings

Sensor Layout Fitting to Stuctural Geometry

Housing Estates & Building Complexes

One Sensor per Building & Shared Ground Motion Sensor

TDG engineers will guide you to analyze your SHM project and lead you to the most effective system solution.

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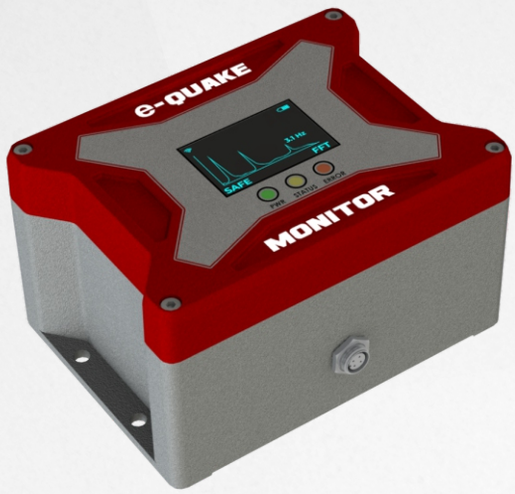


FEATURES

Unmatched Cost Advantage / Worldwide Unique Solution
Tri-Axial Accelerometer
Ultra-Low Noise / Micro-G Level Sensitivity
Bi-Axial Sensitive Tilt Detection
Compact & Stand-Alone Design
Ambient Vibration Measurements
Ideal for Quick Intervention to Risky Building Stock
Easy Configuration and Installation
Fully compatible with National / International Codes & Regulations

FIELDS OF APPLICATION

RESIDENTIAL BUILDINGS
APARTMENTS / HOUSING ESTATES
HOUSES / BUILDING COMPLEXES
OFFICE BUILDINGS / SHOPPING MALLS
SCHOOLS / PUBLIC BUILDINGS
INDUSTRIAL PLANTS / FACTORIES
OPERATIONAL MODAL ANALYSIS

STRUCTURAL HEATH MONITORING

1.STEP
for secure data collection and sensor fusion
PRE-ANALYSIS

2.STEP
for determining the most suitable monitoring system for the structure
DESIGN

3.STEP
SETUP

4.STEP
365/24/7 MONITORING AND EVALUATION

5.STEP
SAFE LIFE
EVENT-BASED AND MONTHLY REPORTING

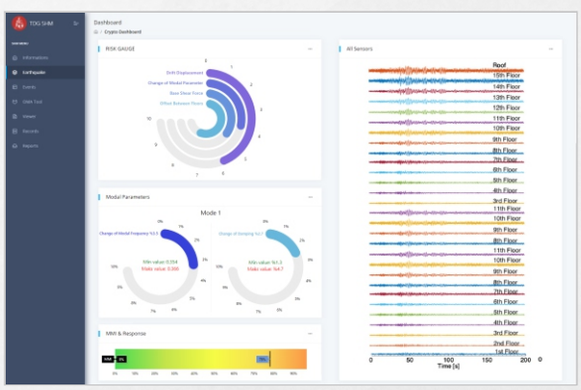
e-QUAKE® MONITOR

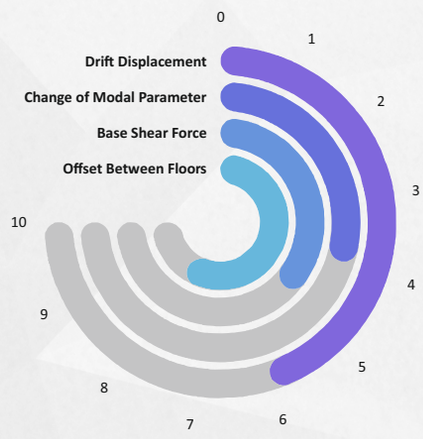
Compact Structural Health Monitoring System

Analysis Capabilities

"Based on Scientific Studies & in Compliance with Regulations"

	Singl-Sensor Solution	Multi-Sensor Solution
Dynamic Identification Monitoring (Modal Analysis)		
Basic Bending Modes	+	+
Further Bending & Torsional Modes		+
Post-Event Analysis (Risk Indicators)		
Top Displacement	+	+
Top Acceleration	+	+
Base Shear Force	+	+
Basic Modal Parameter Shifts	+	+
Floor Accelerations		+
Floor Displacements		+
Inter-Story Drift Displacement Ratios		+
Advanced Modal Parameter Shifts		+
Impact Vibration Monitoring		
MMI / Arias Intensity		+
Response Spectrum		+
PPV, PGA-PGV-PGD		+
Further Analysis		
Tilt Monitoring	+	+
Aging & Fatigue Monitoring	+	+



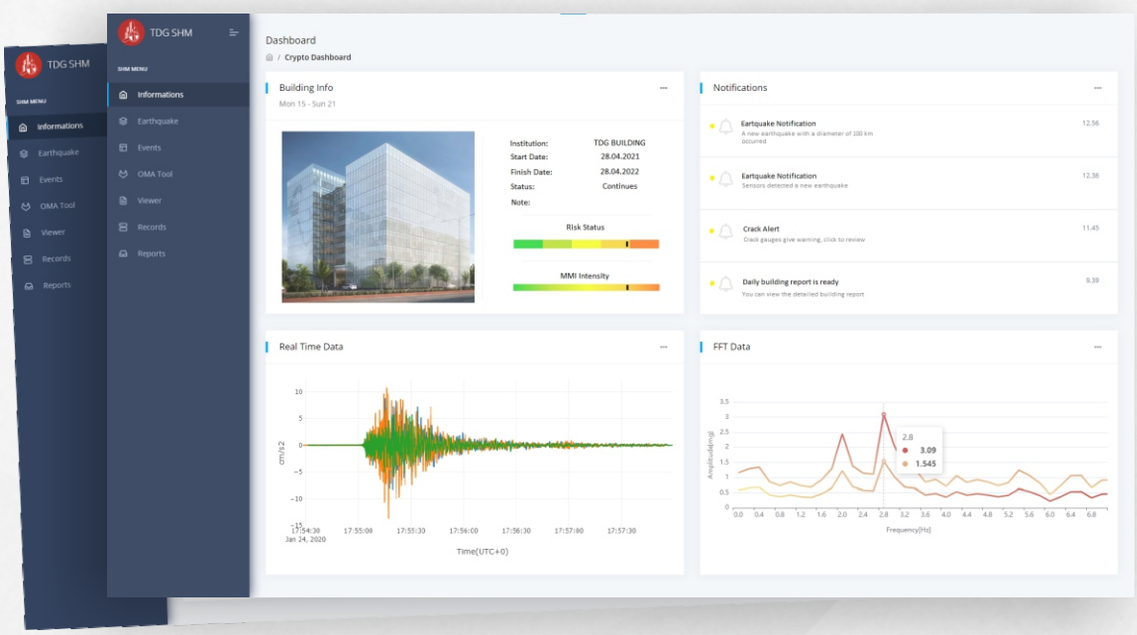


TDG structural health monitoring

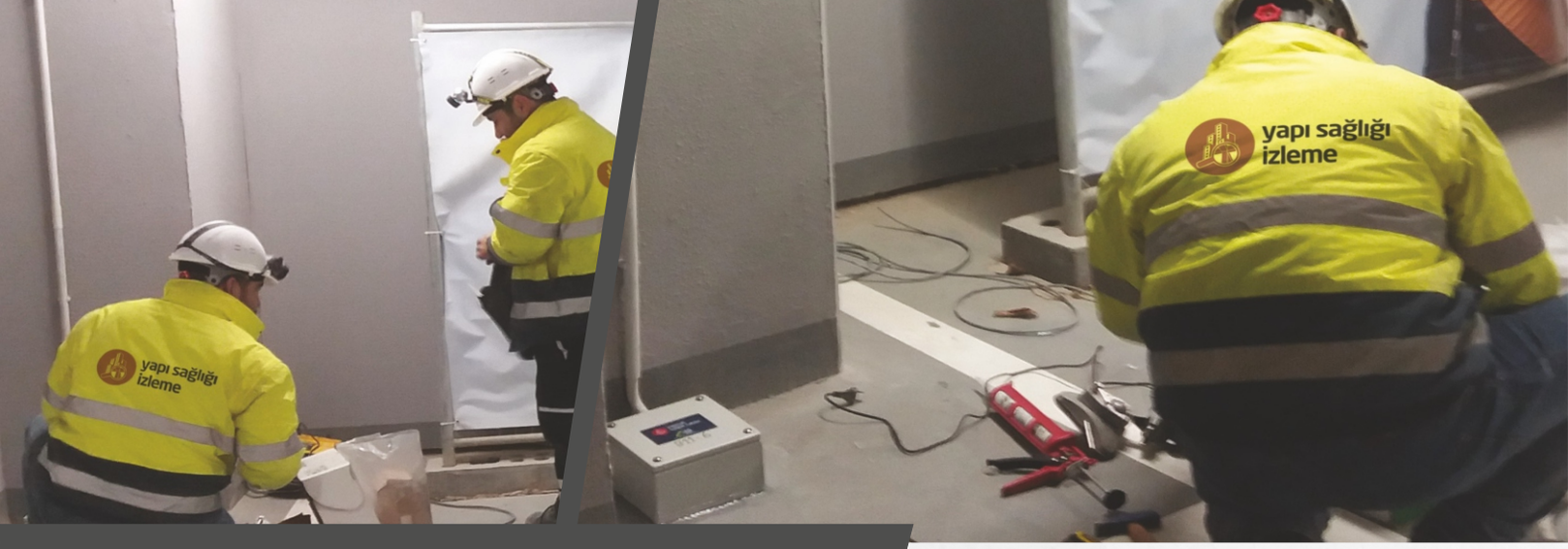
"The first & most powerful global structural health monitoring center!"

Along with TDG's e-QUAKE MONITOR solution, you get the power of monitoring center services.

CLOUD Based
7/24/365 Real Time Monitoring
High Level Data Security
Event-Based Automatic Quick Reporting
Just After an Event & Other Possible Risks
Before & After Comparison
Threshold Alarms / Warnings
With SMS / E-mail
Fatigue & Aging Monitoring
System Diagnostic Services - Best System Up-Time



Reach Your Data Easily & Monitor Yourself with our Unmatched Web Interface !



TECHNICAL SPECIFICATIONS

Measerement Performance

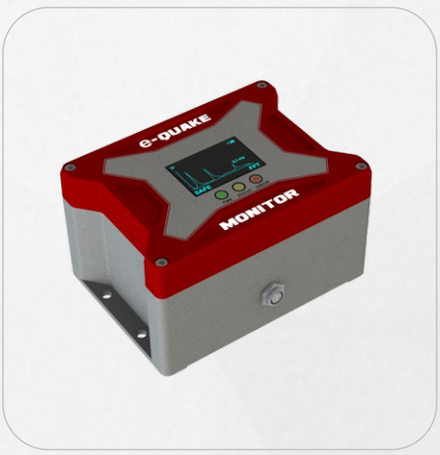
Sensor	3 Component, Ultra-Low Noise, Seismic Accelerometer
Sampling Rate	200, 100, 50 sps Adjustable
Acceleration Range	±2g (±5g, ±15g adjustable)
Freguency Range	DC - 400 Hz
Acceleration Resolution	< 0.1 µG
Tilt Range	±60°
Tilt Resolution	< 0.01 mikro-radyan

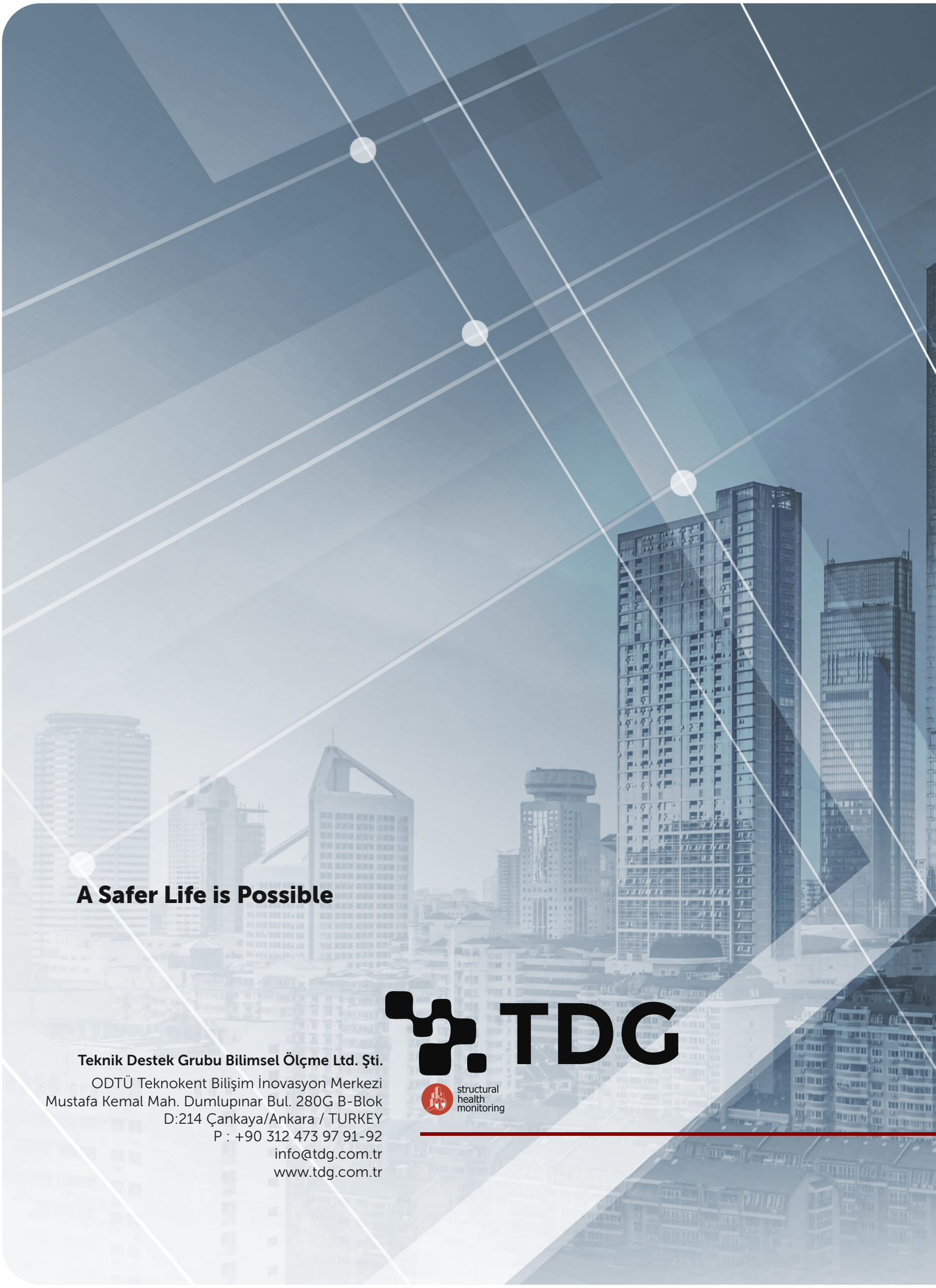
Certification

CE	LVD (2014/35/EU) EMC (2014/30/EU)
Local	Home (Inland) Produce Certification
Calibration	TDG Calibration Lab. Factory Calibration

System Specifications

Real - Time Analysis	Modal Frequencies Damping Rations Model Shapes Top/Floor Accelerations Top/Floor Displacements Drift Displacement Tilt
Communication	Ethernet TCP/IP Serial Port 4.5G Sim Card (Optional) Lo-Ra (Optional)
Power Requirement	220 V - Max. 600 Watt
Operating Tempreature Range	-30 C° ... + 70 C°
Enclosure	IP65 Enclosure & Additional Protective Cover
Display	OLED LCD (Opionall)





A Safer Life is Possible

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