

QUAKELOGIC

HANDHELD XRF

LEAD PAINT ANALYZER



QL-ElementX

QL-ELEMENTX

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DISCOVER FAST, ACCURATE LEAD PAINT ANALYSIS IN A HANDHELD DESIGN

QuakeLogic's QL-ElementX Handheld XRF Lead Paint Analyzer is a high-performance X-ray fluorescence (XRF) analyzer engineered to deliver rapid, non-destructive detection and quantification of lead-based paint and other regulated elements. Featuring an advanced X-ray tube, high-resolution Fast Silicon Drift Detector (Fast-SDD), professional analysis software, and wireless connectivity, the QL-ElementX provides a reliable and efficient solution for environmental inspections, regulatory compliance, renovation projects, and building material analysis

- Accelerates inspection workflows by delivering fast, rapid quantitative elemental analysis with real-time quantitative lead measurement and immediate on-screen results.
- Reduces operational complexity by utilizing non-radioisotope X-ray tube technology, eliminating the licensing, source replacement, and regulatory requirements associated with radioactive isotope-based analyzers.
- Enhances inspection accuracy through advanced detector technology, integrated positioning camera, automatic calibration, and intelligent measurement features for consistent field performance.
- Supports comprehensive field analysis with multiple application modes, wireless data transfer, customizable reporting, secure data management, and extended battery operation for demanding inspection environments.

WHAT'S INCLUDED »

- QL-ElementX Handheld XRF Lead Paint Analyzer
- Rechargeable Hot-Swappable Lithium-Ion Battery
- Battery Charger
- AC Power Adapter
- USB Data Cable
- Protective Carrying Case
- Wrist Strap
- Protective Window Films
- Factory Calibration Certificate
- Software Package
- PC Synchronization Software
- Operating Documentation
- Quick Start Guide
- Quality Assurance Certificate

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KEY FEATURES

- High-resolution Fast Silicon Drift Detector (Fast-SDD) delivers rapid, precise elemental analysis with excellent energy resolution for reliable lead paint detection.
- Miniature 50 kV integrated X-ray tube provides stable, non-destructive measurements while eliminating the regulatory burden of radioactive isotope sources.
- Dedicated Lead Paint Analysis Mode delivers fast quantitative lead measurements with results displayed directly in mg/cm² within seconds.
- Wide elemental detection range from Magnesium (Mg) to Uranium (U) supports environmental, industrial, mining, alloy, and RoHS inspection applications.
- Integrated high-resolution inspection camera enables accurate sample positioning and improves measurement consistency during field inspections.
- User-selectable analysis times from 1 to 60 seconds optimize inspection speed while maintaining high analytical accuracy.
- Comprehensive X-ray safety system includes automatic sample detection, trigger interlock, password protection, and automatic X-ray shutoff.
- Industrial embedded Linux platform with a quad-core processor delivers stable performance, intelligent operation, and fast data processing.
- Integrated Wi-Fi, Bluetooth, USB, and PC synchronization enable seamless wireless communication, remote data management, and rapid report transfer.
- Rechargeable hot-swappable lithium-ion battery provides up to 8 hours of continuous operation with uninterrupted battery replacement in the field.
- Professional inspection software supports real-time spectral display, customizable reporting, secure user management, automatic data logging, and comprehensive inspection database management.

PRODUCT FEATURES

Analysis Modes

Lead Paint
Environmental
Alloy
Mining
RoHS
User-Defined Applications
Precious Metals

Measurement Capabilities

Lead Measurement (mg/cm²)
Elemental Analysis (Mg-U)
1-60 s Analysis Time
Real-Time Spectral Display
Automatic Calibration

X-Ray Technology

50 kV X-Ray Tube
Fast-SDD Detector
≤126 eV Resolution
Non-Radioisotope Source
Automatic Energy Calibration

Connectivity

Wi-Fi
Bluetooth
USB
PC Synchronization
Remote Data Management

Applications

Lead Paint Inspection
Environmental Compliance
Building Material Analysis
Heavy Metal Detection
Alloy Identification
RoHS Screening

For more information about the QL-ElementX Handheld XRF Lead Paint Analyzer, please contact QuakeLogic.

MEASUREMENT CAPABILITIES

Type	Description
Measurement Technology	Energy Dispersive X-Ray Fluorescence (EDXRF)
Element Range	Magnesium (Mg) to Uranium (U)
Lead Paint Measurement	Quantitative Lead Analysis (mg/cm ²)
Analysis Time	User Selectable (1–60 Seconds)
Detector Resolution	≤126 eV FWHM
Detector	High-Resolution Fast Silicon Drift Detector (Fast-SDD)
Radiation Source	50 kV, 200 μA Integrated X-Ray Tube
Measurement Output	Lead Concentration (mg/cm ²) & Elemental Analysis
Calibration	Factory Calibration with Automatic Energy Calibration
Data Storage	Up to 400,000 Measurement Records

MEASUREMENT SETTINGS

Type	Description
Analysis Time	User Selectable (1–60 Seconds)
Calibration	Factory & User Calibration Management
Measurement Mode	User-Selectable Application Modes
Measurement Output	mg/cm ² & Elemental Analysis Results
Data Logging	Automatic Measurement Recording
User Management	Secure Password Protection
X-Ray Safety	Automatic Sample Detection & X-Ray Shutoff
Report Format	Customizable Inspection Reports
Display Mode	Real-Time Spectral & Quantitative Analysis

DISPLAY & DATA SETTINGS

Type	Description
Display Interface	4.5" High-Definition Capacitive Touchscreen
Display Information	Real-Time Spectrum & Analysis Results
Sample Camera	Integrated High-Resolution Inspection Camera
Data Storage	Up to 400,000 Measurement Records
Data Export	PDF, Excel, CSV & Custom Reports
Report Generation	Customizable Inspection Reports
Software Platform	Embedded Linux Operating System
Data Synchronization	USB, Wi-Fi, Bluetooth & PC Software
Remote Management	Computer & Mobile Device Synchronization
Internal Storage	Automatic Data Logging & Secure Record Management

ANALYSIS & REPORTING

Type	Description
Elemental Analysis	Quantitative Lead & Multi-Element Analysis
Analysis Modes	Lead Paint, Environmental, Alloy, Mining & RoHS
Real-Time Analysis	Live Spectral Display & Instant Results
Data Logging	Automatic Measurement Recording
Report Generation	Customizable Inspection Reports
Data Export	PDF, Excel, CSV & Custom Formats
Database Management	Secure Inspection Database
Remote Data Management	Computer & Mobile Data Management
Software Platform	Professional Analysis Software Included
User Management	Secure Password-Protected User Accounts

OPTIONAL FEATURES & ACCESSORIES

OPTIONAL APPLICATION PACKAGES

Expand the analytical capabilities of the QL-ElementX Handheld XRF Lead Paint Analyzer with optional application packages. Dedicated calibration libraries and application modes support environmental analysis, alloy identification, mining, RoHS screening, precious metal analysis, and other specialized elemental inspection requirements.

PROFESSIONAL ANALYSIS SOFTWARE

The included professional analysis software provides real-time spectral display, quantitative lead analysis, customizable reporting, secure user management, automatic data logging, and comprehensive inspection database management for efficient inspection documentation and regulatory compliance.

REMOTE DATA MANAGEMENT

Integrated Wi-Fi, Bluetooth, USB, and PC synchronization enable efficient data transfer, remote data management, and seamless report sharing. Computer and mobile device synchronization simplify field data collection and inspection record management.

STANDARD ACCESSORIES

The system includes a rechargeable hot-swappable lithium-ion battery, battery charger, AC power adapter, USB data cable, protective carrying case, wrist strap, protective window films, software package, PC synchronization software, operating documentation, factory calibration certificate, quick start guide, and quality assurance certificate, providing everything required for immediate field operation.

TECHNICAL SPECIFICATIONS

Specification	Description
Product	QL-ElementX Handheld XRF Lead Paint Analyzer
Measurement Technology	Energy Dispersive X-Ray Fluorescence (EDXRF)
Radiation Source	50 kV, 200 μ A Integrated X-Ray Tube (Silver Target)
Detector	High-Resolution Fast Silicon Drift Detector (Fast-SDD)
Detector Resolution	≤ 126 eV FWHM
Element Range	Magnesium (Mg) to Uranium (U)
Lead Paint Measurement	Quantitative Lead Analysis (mg/cm ²)
Analysis Time	User Selectable (1–60 Seconds)
Display	4.5" HD Capacitive Color Touchscreen
Operating System	Industrial Embedded Linux
Processor	Industrial Quad-Core Processor
Memory	40 GB Internal Storage
Storage Capacity	Up to 400,000 Measurement Records
Sample Camera	Integrated High-Resolution Inspection Camera
Operating Modes	Lead Paint, Environmental, Alloy, Mining, RoHS & Precious Metals
Calibration	Factory Calibration with Automatic Energy Calibration
X-Ray Safety	Automatic Sample Detection, Trigger Interlock & Automatic X-Ray Shutoff
Connectivity	USB, Wi-Fi, Bluetooth & PC Synchronization Software
Remote Data Management	Computer & Mobile Device Synchronization
Data Export	PDF, Excel, CSV & Custom Reports
Battery	Rechargeable Hot-Swappable Lithium-Ion Battery
Charging System	Dual-Battery Charging Capability
Environmental Protection	IP54 Dust & Water Resistance
Operating Temperature	-10°C to +50°C
Operating Humidity	Up to 95% Non-Condensing
Weight	Approximately 1.5 kg Including Battery
Compliance Features	Non-Radioisotope X-Ray Tube Technology
Software Features	Real-Time Spectral Display, Quantitative Lead Analysis, Secure User Management, Automatic Data Logging & Comprehensive Inspection Database Management

QL-ElementX

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About QuakeLogic:

- QuakeLogic Inc. is a California-based engineering and technology company providing innovative, reliable, and high-quality solutions to customers worldwide.

Our Commitment

- At QuakeLogic, we are committed to quality, innovation, and customer satisfaction. We build lasting partnerships by delivering reliable solutions and dependable support.

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