

 **QUAKELOGIC**

QL-Electra Sense

ADVANCED MULTI-CHANNEL ELECTRICAL
CHARACTERIZATION SYSTEM

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- The QL-ElectraSense Advanced Multi-Channel Electrical Performance Monitoring System for Real-Time Aging Analysis is a high-performance, integrated measurement platform engineered to deliver precise, real-time electrical characterization of advanced materials and semiconductor packaging components under multi-stress accelerated aging conditions. The system enables simultaneous, fully independent multi-channel measurements across four channels with advanced electrochemical techniques including chronopotentiometry and electrochemical impedance spectroscopy (EIS), allowing accurate detection of degradation mechanisms and failure onset.
- Designed for high reliability research environments, QL-ElectraSense provides wide dynamic measurement ranges, high-resolution control of current and voltage, and seamless data acquisition for time-resolved analysis. Its scalable architecture, combined with high-current capability and advanced data processing software, ensures superior flexibility, accuracy, and long-term operational stability for demanding laboratory and research applications..

Technical Specifications



- Multi-channel electrical performance monitoring system with modular architecture
- 4-slot expandable chassis design
- 4 fully independent measurement channels (simultaneous operation)
- Applied current capability: ± 2 A and above (via integrated high-current module)
- Current measurement resolution: high-precision picoampere-level sensitivity
- Wide current measurement range: from nA to A-level
- Applied potential capability: ± 10 V polarization range
- High-resolution voltage control and measurement
- Electrochemical Impedance Spectroscopy (EIS) capability integrated on all channels
- Frequency range: 10 μ Hz to 1 MHz
- Impedance measurement range: 1 m Ω to 100 T Ω
- Chronopotentiometry (CP) testing capability
- Chronoamperometry (CA) and advanced electrochemical techniques support
- Full suite of electrochemical methods including CV, LSV, and pulse techniques
- Simultaneous multi-sample testing with independent channel control
- Fully isolated channel architecture for accurate parallel measurements
- Multi-user software environment
- Advanced EIS analysis and curve fitting capabilities
- Real-time data acquisition and visualization
- Integration capability with external temperature sensors and data logging systems
- Direct-to-disk continuous data storage
- High-speed data acquisition with high-resolution analog-to-digital conversion
- Automated test sequencing and programmable measurement routines
- Rugged, laboratory-grade system design for continuous operation
- Compatible with standard laboratory computing environments (Windows-based systems)

Advanced Electrical Characterization Solutions with QuakeLogic Excellence

Corporate Headquarters

QUAKELOGIC INC.
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Executive Support Line

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Direct access for advanced technical consultations and priority technical support.

Available Monday - Friday, 9 AM - 5 PM PST

Strategic Inquiries

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For strategic collaborations, enterprise-level testing and measurement solutions, and comprehensive technical inquiries.

Our Unwavering Commitment to Operational Excellence

Certified Quality Assurance

Complying with international standards for product reliability, performance, and safety.

Pioneering Industry Leadership

Delivering advanced electrical characterization and electrochemical analysis technologies that ensure precision, repeatability, and reliable performance.

Dedicated Client Success

Providing responsive technical support, calibration support, and complete after-sales assistance for every system delivered.

Explore Our Complete Product Portfolio



Scan to Explore Advanced Measurement Solutions

Discover how QuakeLogic's advanced electrical characterization and multi-channel testing solutions can transform your research workflows and elevate analytical precision to new heights.

www.quakelogic.net