Remote Intelligent Gateway

Trimark’s Remote Intelligence Gateway (RIG) is a CAISO-accredited RIG that fulfills requirements to participate in California’s electric markets.

Business Value

- CAISO-validated data telemetry applicable to any balancing authority or host utility
- Secure bidirectional data telemetry that aligns with NERC CIP requirements
- Industry-standard communication protocols
- Professional support through every step of CAISO’s New Resource Implementation (NRI) process
- Ability to aggregate data from multiple, authorized field RIGs
- Configurable as Aggregating RIG (ARIG) for up to 25 resources with up to 400 MW combined generation

Performance Monitoring, Reporting, and Control

Developed in-house, Trimark’s turnkey RIG solution includes a computer, software, design, testing, configuration, installation, and certification. Product enhancements and innovations can be easily implemented as requirements change. Trimark’s RIG is scalable and supports NERC CIP compliance.

In addition, Trimark is committed to supporting its clients during RIG commissioning and for many years of future compliance.

Trimark’s RIG meets CAISO RIG requirements including:

- Real-time data telemetry between site devices (revenue meters, plant interfaces, meteorological systems, and PV inverters) and CAISO
- Sends data securely from generation to CAISO using DNP and 2048-bit encryption
- Automated Generation Control (AGC) enables authorized set point adjustments
- Data aggregation from multiple resources
- Supports resource generation control, data historization, alarms and alerts, reporting, and analytics
SCADA | Metering | Energy Storage | Technical Support

CAISO New Resource Implementation Services

To connect to California’s electric grid, resource owners must first complete CAISO’s New Resource Integration (NRI) process. Trimark has guided hundreds of generation resources from concept to successful commissioning — including RIG and meter certification.

Certified CAISO RIG Third Party Engineering Firm

CAISO requires RIG re-certifications every three years. As a certified CAISO RIG Third Party Engineering Firm, Trimark can be trusted to manage this process.

Trimark’s engineering team configures the RIG according to CAISO’s I/O points spreadsheet, identifies the equipment the RIG communicates with, and orders the SSL certificate. Trimark’s team also establishes communications ports, ensures they work as specified, and tests communications with intelligent devices.

Trimark’s Ongoing Support

The Trimark Operations Center offers Service Agreements to troubleshoot and solve your RIG and equipment issues.
- 24/7 onsite technical support, maintenance, repairs, and emergency support
- RIG security certificate renewal
- Proactive system maintenance
- RIG hardware replacements

Trimark’s Gateway Features

Trimark’s RIG software runs on Microsoft Windows® based application servers or industrial computers, such as Trimark’s Data Gateway (TDG).

This software enables secure, bidirectional data telemetry via SSL encryption. Installation includes a security certificate issued by CAISO.

- System supports:
  - Multi-drop connection
  - 16 to 64-bit signed and unsigned, and real data types
  - Packed digital support
  - 30+ calculation types
  - Configuration export/edit/import
  - Built-in testing and diagnostics functions
- Industry-standard communication protocols including:
  - DNP3 master/slave over TCP and Serial
  - MODBUS master/slave over TCP and Serial
  - SSL connection ready
  - OPC client
  - Discrete analog inputs
- Runs on Microsoft Windows® operating systems
- Factory-tested for scalability
- Redundant/failover capable
- Online editing

Developed in-house, Trimark’s RIG includes software and a computer. Product enhancements can easily be implemented to meet new requirements.