T1-S Gateway RIG™

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 communications protocols.

- Professional support through every step of CAISO's 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

T1-S Gateway RIG is a CAISO-accredited Remote Intelligence Gateway (RIG) that fulfills requirements to participate in California's electric markets. Trimark's T1-S Gateway is the system of choice for hundreds of resources – from 1 MW solar plants to 2.3 GW nuclear sites. T1-S Gateway meets CAISO RIG requirements including:

- Real-time data telemetry between site devices (revenue meters, plant interfaces, meteorological systems, and PV inverters) and the CAISO;

- Send data from generation to CAISO using DNP and 2048-bit encryption;

- Automated Generation Control (AGC) enables authorized set point adjustments;

- Data aggregation of multiple, small resources; and

- Supports resource generation control, data historization, alarms and alerts, reporting, and analytics.

T1-S Gateway software runs on Microsoft Windows® based application servers or industrial computers, such as Trimark's T1-S Data Gateway (TDG).

T1-S Gateway exchanges status data and dispatch signals between CAISO and intelligent devices to facilitate compliance, support performance monitoring and ensure operational excellence.

Trimark ASSOCIATES, INC.

For all your mission critical solutions — we'll be there!
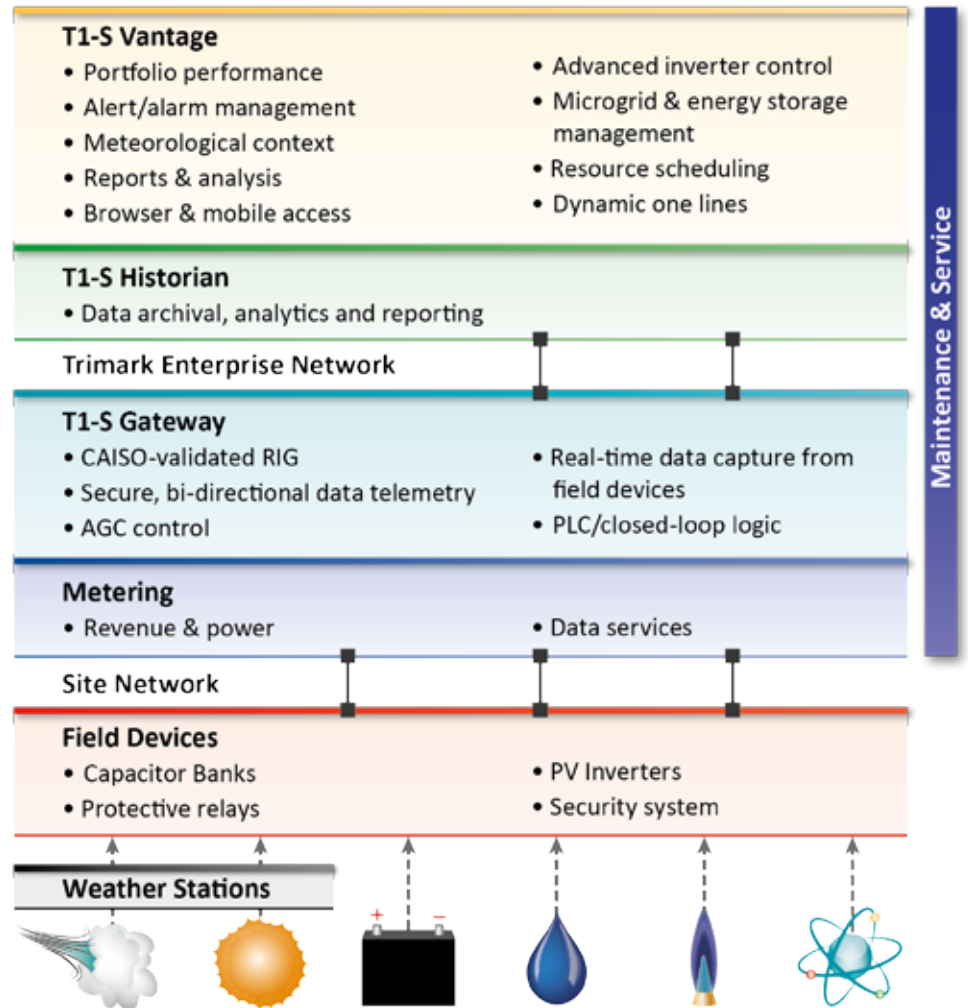
T1-S Gateway Features

- Secure, bidirectional data telemetry via SSL encryption. Installation includes security certificate issued by CAISO.

- System supports:
    - Multi-drop connection;
    - 16 to 64-bit signed and unsigned, and real data types;
    - Packed digital support;
    - 25+ predefined calculations;
    - Configuration export / edit / import; and
    - Built-in testing and diagnostics functions.

- Industry-standard communication protocols including:
    - DNP3 master/slave over TCP and Serial;
    - DNP3 Secure Network;
    - MODBUS master/slave over TCP and Serial;
    - OPC client; and
    - Discrete analog inputs.

- Runs on Microsoft Windows® operating systems.

- Factory-tested for scalability.

Professional Services Through CAISO's Entire NRI Process

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. We'll be there 100% of the way!

Trimark's End-to-End, Integrated Solution

Trimark delivers turnkey solutions designed to help our clients attain compliance, operate efficiently, and manage effectively. From ISO interconnection to PV Power Management, Trimark's integrated solutions help utilities, grid operators, independent power producers, and large energy users meet complex, mission-critical initiatives – on target, on budget and on time.

T1-S Vantage
- Portfolio performance
- Alert/alarm management
- Meteorological context
- Reports & analysis
- Browser & mobile access
- Advanced inverter control
- Microgrid & energy storage management
- Resource scheduling
- Dynamic one lines

T1-S Historian
- Data archival, analytics and reporting

Trimark Enterprise Network

T1-S Gateway
- CAISO-validated RIG
- Secure, bi-directional data telemetry
- AGC control
- Real-time data capture from field devices
- PLC/closed-loop logic

Metering
- Revenue & power
- Data services

Site Network

Field Devices
- Capacitor Banks
- Protective relays
- PV Inverters
- Security system

Weather Stations

Maintenance & Service

A Proven Player in the Energy Market

Trimark Associates, Inc. develops reliable, affordable business and operational solutions that support compliance and optimization of power production.

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