TENetwork™

Business Value

- Private, secure network for real-time monitoring and control.
- High data throughput at a competitive rate.
- Cellular network coverage where other networks are not available.
- Fast installation helps maintain project completion schedule.
- For California-based projects, the TENetwork provides connectivity early in the project allowing you to maintain your construction schedule while waiting for your CAISO ECN connection.

Private, Secure Site Communications

The Trimark Enterprise Network (TENetwork) enables performance monitoring and control of your power generation assets through a private, secure, cellular network.

The TENetwork can be deployed at a significantly lower cost than other telecommunication options without the lead time required to install that infrastructure.

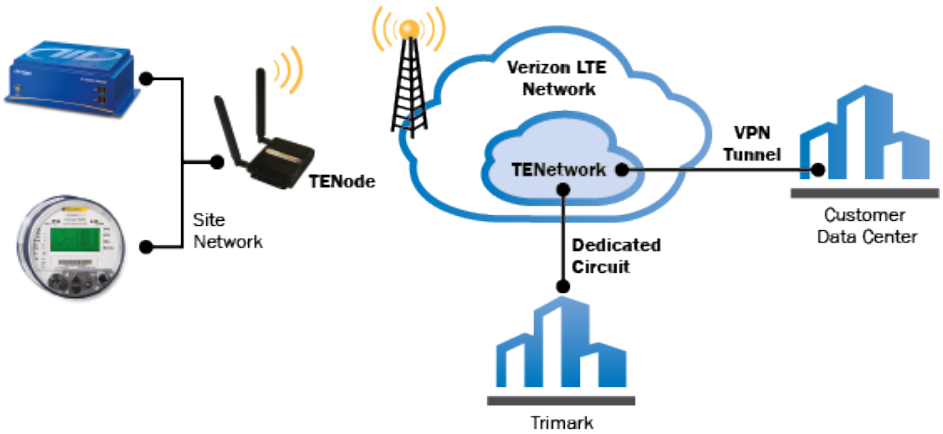
The TENetwork™

The TENetwork provides private, secure communications for real-time site monitoring, command and control, routine maintenance, data disaster recovery, and redundancy.

Access to the TENetwork is controlled by Trimark and restricted to sites and devices with a business need to communicate on the network. Each TENetwork user's traffic is isolated for privacy.

The TENetwork provides remote access to meters, SCADA systems, and other intelligent devices during configuration as well as ongoing operations. For new projects, this means you can maintain your construction schedule without waiting for a Telco to install a separate line.

The TENetwork runs on Verizon's 4G LTE based data network, the nation's largest, most reliable network.



The TENetwork is a secure, private connection that is dedicated to communicating control signals and operational data.

Trimark ASSOCIATES, INC.

For all your mission critical solutions — we'll be there!

The TENetwork allows peak communication rates of 300 Mbit/s download and 75 Mbit/s upload. In addition, with the negotiated Quality of Service (QoS) provisions, the TENetwork provides a transfer latency of less than 5ms. Verizon's support for lower frequency bands provides coverage in rural areas where traditional coverage may not be possible.

The TENode™

Trimark Enterprise Nodes (TENodes™) enable easy connection to the TENetwork. Each ruggedized device can be quickly and safely deployed in harsh environments to provide reliable communications.

Once installed, activated, and connected, TENodes communicate with any device in the network. Cloud managed, each TENode is actively monitored by Trimark to maximize uptime and reliability. Configurations as well as communication analytics and security are monitored and controlled in real-time to minimize communication disruptions.

In addition to the physical appliance, a TENode can exist as a virtual connection. This connection is established by configuring existing Internet routers through a Virtual Private Network (VPN) connection to the TENetwork.

Specifications

WAN

- Integrated 4G LTE modem (with 3G failover)
- Three LAN/WAN switchable 10/100 Ethernet ports

Temperature

- -30° C to 70° C (-22 °F to +158 °F) operating
- -40 °C to 85 °C (-40 °F to +185 °F) storage
- Includes temperature sensor with options for alerts and automatic shutoff

Humidity (non-condensing)

- 5% to 95% operating
- 5% to 95% storage

Power

- DC input steady state voltage range: 9–36 VDC
- Reverse polarity and transient voltage protection per ISO 7637-2
- Power consumption: typical = 400mA@12VDC (4.8W); worst case = 800mA@12VDC (9.6W)

Size

- 5.3" x 4.4" x 1.4"

Weight

- 16.1 oz (457 g)

The TENode connects intelligent devices to the TENetwork.

Certifications

- FCC, CE, IC
- Safety: UL/CUL, CB Scheme, EN60950-1
- Hazardous Locations: Class I, Div. 2 (pending)
- Shock/Vibration/Humidity: compliant with MIL STD 810G and SAEJ1455
- Ingress Protection: compliant with IP64 (includes protection from dust and splashing water)
- Materials: WEEE, RoHS, RoHS-2, California Prop 65
- Telecom: PTCRB/CTIA, GCF-CC

Trimark ASSOCIATES, INC.

Manufactured

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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