

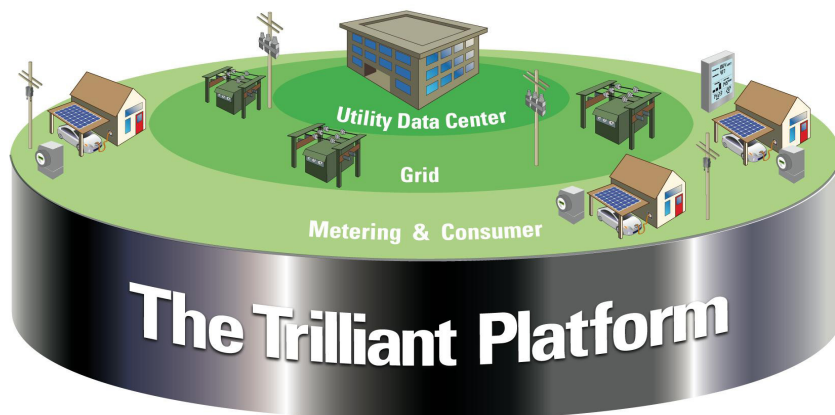
The Trilliant Communications Platform SecureMesh® Network



One Platform for All Utilities Smart Grid Needs, Today and Tomorrow

Having been a trusted partner of leading utilities around the world for more than two decades, Trilliant provides the only proven, state-of-the-art communications solutions that helps utilities deliver the benefits of an end-to-end smart grid, from distribution automation, to advanced metering, to demand-side management, all in one platform.

Trilliant's SecureMesh Network—an RF mesh network and part of the Trilliant Communications Platform—provides a state-of-the-art, two-way communications infrastructure that enables various Smart Grid applications that improves the efficiency and reliability of power delivery. The full monitoring and control capabilities enabled by the SecureMesh network support Advanced Metering Infrastructure (AMI), Distribution Automation (DA), and Demand-Side Management (DSM) applications. Critical functions such as disconnect switch control and load control are made available from the command center. For advanced metering applications, metering and diagnostic data are sent over the SecureMesh network back to the command center where the Trilliant's UnitySuite™ Head-End Software resides. UnitySuite can display and report the information back to utilities' existing application



The Trilliant Communications Platform provides a proven, state-of-the-art two-way communications platform for advanced metering, distribution automation, and demand side management applications that delivers benefits to utilities and consumers - all from a single network.

Key Benefits:

- Reliability – delivers a truly self-healing wireless mesh network
- Remote Control Capability—provides two-way communications to enable full remote control functions such as disconnect and load control switches
- Ease of Installation – enables end nodes that are self-forming and self-balancing
- Configurable – provides various options regarding configuration of meter and diagnostics data exchange
- High-bandwidth, Low-latency Network -- supports connectivity for various applications including advanced metering, DA devices, substation monitoring, video surveillance, and workforce management applications
- Home Area Network Capability -- supports DSM applications including load control switches, programmable communicating thermostats (PCTs), and in-home displays (IHDs)

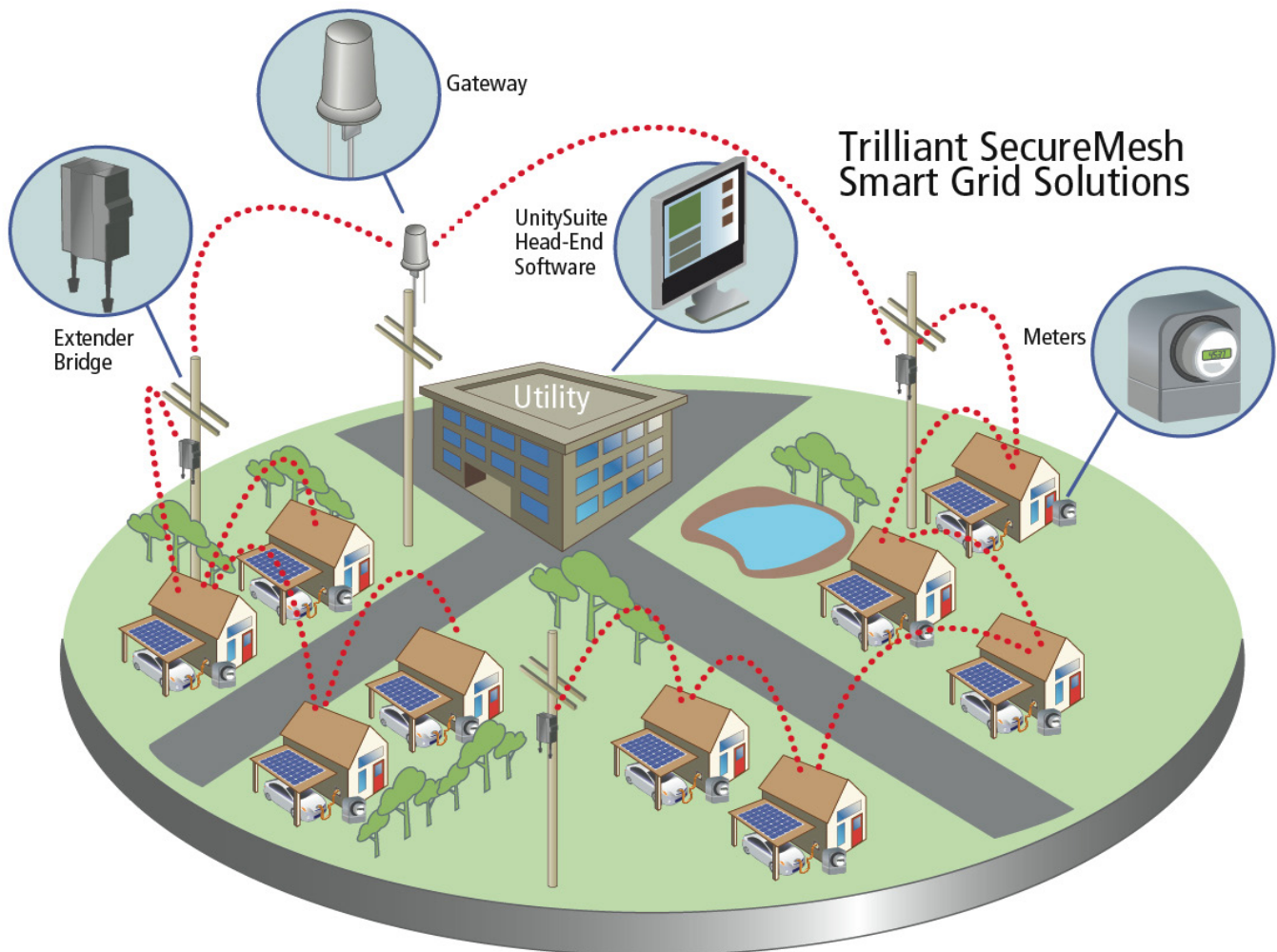
SecureMesh® Network

A True Mesh Network that Supports All Smart Grid Applications

SecureMesh is a true mesh network where endpoints (meters and other devices in the distribution network) communicate in a peer-to-peer manner. As more endpoints are added, the network reliability improves and coverage expands.

The network is self-forming, self-balancing, and self-healing. Endpoints in the network will autonomously form a mesh and exchange messages with neighboring endpoints. Endpoints will determine the optimal path back to the Gateway. In the event of interference (be it a temporary event – failure or noise) or permanent (foliage or construction), the network will self-heal as endpoints will discover a new route back to the Gateway.

The network consists of three main system components as shown below: the meter, the Extender Bridge, and the Gateway. The products use multi-channel communications architecture to ensure the highest possible reliability. Extender Bridges communicate directly with the meters while the Gateway is capable of supporting up to 100,000 meters. The SecureMesh network provides both high-bandwidth and low-latency and supports not only Advanced Metering applications, but also Distribution Automation applications.



SecureMesh® Network



Grid



Metering



Consumer

A Forward Looking Smart Grid Network

Trilliant understands that investment in an Advanced Metering Infrastructure (AMI) network is a major commitment of time, resources, and money. It is critical that such a network support both the immediate and longer term objectives of the utility. Based on this fundamental understanding, Trilliant has developed the SecureMesh network to be:

Robust and Reliable

SecureMesh has been proven to be robust and reliable over many years, avoiding the need for constant upgrades and maintenance

Forward looking

SecureMesh meets the varying requirements of different Smart Grid applications. Whether a utility chooses to implement AMI today and DA and/or DSM later, the SecureMesh network can handle the requirements of all Smart Grid applications in one platform

Secure

SecureMesh offers end-to-end security including encryption and authentication that is compliant with the latest industry standards

Configurable and Upgradable

SecureMesh network nodes are easy to provision and configure. When a network upgrade is desired, nodes can be remotely upgradable, avoiding costly on-site maintenance

Easy to Integrate

the UnitySuite Head-End Software is an open platform, easy to integrate and accessible to existing utility applications

Global, Standards-based

the Trilliant SecureMesh leverages open, global standards to ensure future-proof, interoperable solutions for all Smart Grid applications and long-term viability of deployments

Proven

given the criticality of the investment and the network, the SecureMesh network is a proven solution that has been chosen by leading utilities around the world

SecureMesh® Network



A Complete Range of Meters

Choosing a communications system today goes beyond metering and deep into overall grid management. Choosing the right system is the very foundation of not only a solid AMI system, but also fundamental for the ever-increasing applications where critical data is essential for state-of-the-art smart grid implementation and management.

Allowing a utility to fully utilize the metering and monitoring assets purchased as part of a communications network allows for the utmost in flexibility, and provides peace of mind that today's metering technologies can be fully leveraged with the SecureMesh Communications network now and in the future.

The SecureMesh Communication network is unique in that meter functionality and available data are not limited in any way. Competitive systems often tell utilities what data they can provide with a long list of restrictions. Why should utilities purchase an advanced meter capable of providing up to eight load profile channels when they can utilize only half of the channels – and worse, must also define how those available channels can be configured? Utilities own these meters and they should not be limited in how they can utilize them.

Moreover, Trilliant offers a variety of advanced residential and C&I meters from major manufacturers such as General Electric, Itron, Landis+Gyr, ELO, and others, giving utilities the freedom to choose meters and vendors.

A Few of our Metering Partners



SecureMesh® Network

Because Trilliant provides complete and unrestricted access to all meter data, each SecureMesh-enabled advanced meter deployed can effectively serve as a grid sensor capable of reporting not only consumption data, but also power quality information needed to make informed grid management decisions. Here are some of the basic and fundamental system capabilities:

Power Outage & Restoration

Utilities will be fully informed of their grid status at all times. The SecureMesh takes advantage of a unique, aggregated reporting method to provide reliable, real-time outage reporting, ensuring successful reporting of more endpoints than any other solution. Network infrastructure stays powered for up to eight hours after an outage to provide network communications and troubleshooting. Outage and restoration detection is included with every SecureMesh meter.

Power Quality

Because the SecureMesh solution leverages the full capabilities of the meter, critical power quality data such as voltage, frequency, power factor, and harmonic content are available in real time or in scheduled reporting modes. Use real-time alarm reporting processes to support CVR and generation optimization applications while using daily historical data for compliance reporting, grid modeling, and contingency planning purposes.

Demand Response

Unrestricted use of a SecureMesh advanced meter means utilities can utilize all available channels and interval settings in the meter. No longer are utilities restricted to active energy profile data. Reactive energies, per-phase voltage, per-phase current, and frequency are all available to monitor. Data collected are used to manage and structure pricing programs, including Time of Use (TOU), demand, and prepay.

Remote Disconnect

Every residential meter platform offered by Trilliant offers an optional disconnect to help utilities manage high turnover areas safely and effectively while optimizing field resource availability. Additionally, remote disconnects are essential components for implementing demand and prepay billing programs.

Beyond Electricity

Trilliant's SecureMesh solution has been designed from the ground up with utility applications as the focus. From substation automation devices to SecureMesh gas and water solutions, Trilliant provides complete end-to-end coverage for all utility applications. Every node deployed on the network is an independent two-way communication access point that requires no pairing to be recognized within the network.

Consumer Engagement

Home area networking is key to educating and empowering consumers with information they need to make informed decisions on how they consume electricity. The SecureMesh solution offers ZigBee Sep 1.0 and 2.0 support as well as other options that remove risk from the ever-changing landscape of standards and the possible product obsolescence as this emerging market continues to develop.

Software Integration

Trilliant's UnitySuite Head-End Software applications are designed to easily adapt and integrate into third-party management systems. UnitySuite's SOAP-based API facilitates easy integration with existing Enterprise Resource Planning (ERP), Customer Information System (CIS), Meter Data Management (MDM), and Outage Management System (OMS) applications. UnitySuite's high level of integration capability improves deployment speeds and provides immediate benefits.

Solutions for all Budgets

Since Trilliant's focus is providing utilities world-class communications networks, there is no agenda to upsell a utility to a meter platform that is not suitable for the utility or is too expensive to justify. Trilliant also offers basic energy meters, with and without remote disconnects, that provide two configurable channels of load profile, up to two register reads, and synchronized voltage data for all of the same smart grid applications mentioned above. Basic energy meters can be mixed with advanced meters offering a unique balance of price and functionality.

About Trilliant

Trilliant helps leading utilities and energy retailers achieve their smart grid visions using the Trilliant Communications Platform,—the only communications platform purpose-built for the energy industry that integrates disparate systems of systems into a unified whole. The Trilliant Platform helps utilities and energy retailers enhance energy efficiency, improve grid reliability, lower operating costs, integrate renewable energy resources and electric vehicles, and empower consumers to better manage their energy consumption. Trilliant has worked with more than 200 leading global utilities and energy retailers, including Centrica, Iberdrola USA, and Hydro One Networks and is backed by prominent investors such as ABB, GE, Investor Growth Capital, MissionPoint Capital Partners, UMC Capital, VantagePoint Capital Partners, and zouk ventures. For more information, visit www.trilliantinc.com.



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