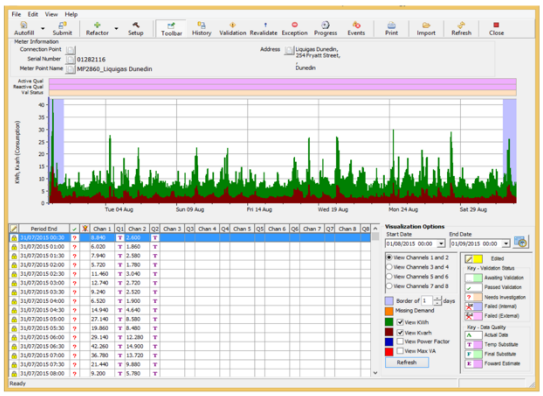
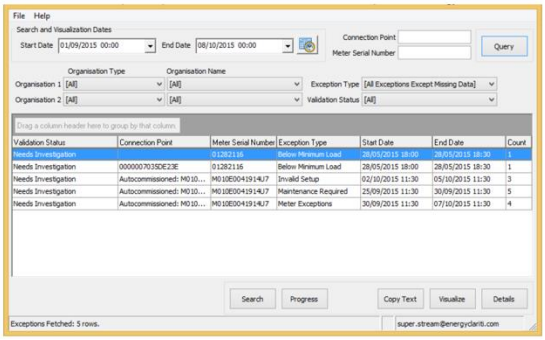
# GridLynk Head End System

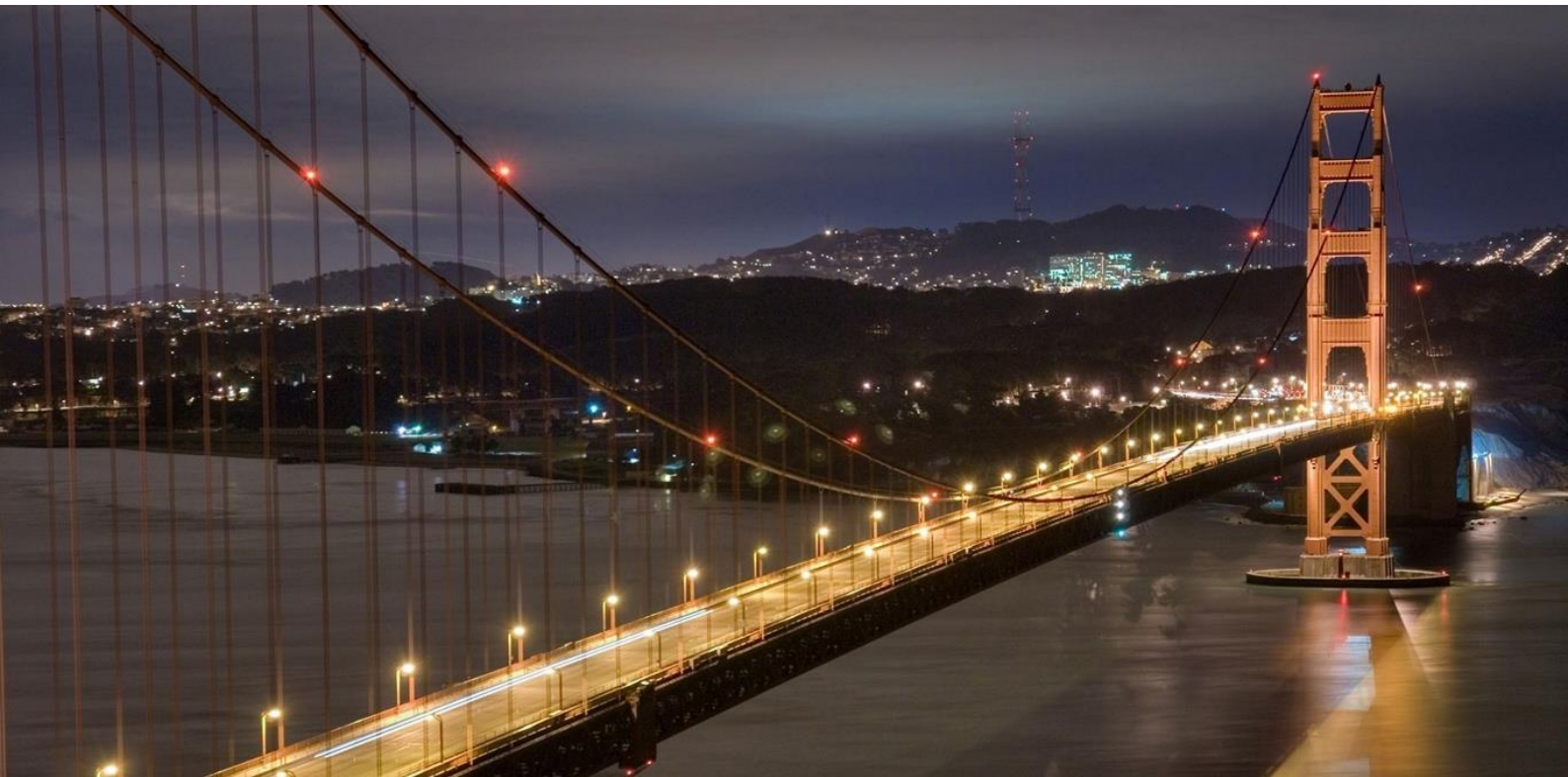
## Precision and Performance: The Smart Choice for Energy Management

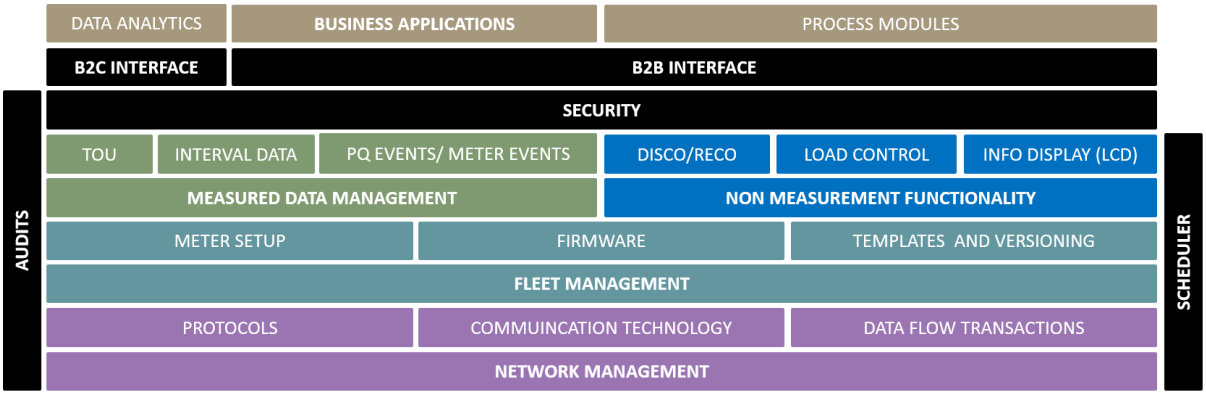


**GridLynk Head End System (HES)** is a state-of-the-art System crafted to seamlessly integrate smart meter infrastructure with utility IT systems. It provides a powerful communication and data collection platform that guarantees secure and efficient interaction with metering infrastructure while ensuring compatibility with third-party devices in line with IDIS standards.



In addition to its core capabilities, **GridLynk HES** features advanced network monitoring tools, delivering comprehensive power quality insights to energy management systems and subsystems. This functionality enables real-time alerts for network interruptions and malfunctions, enhancing the overall operational efficiency.

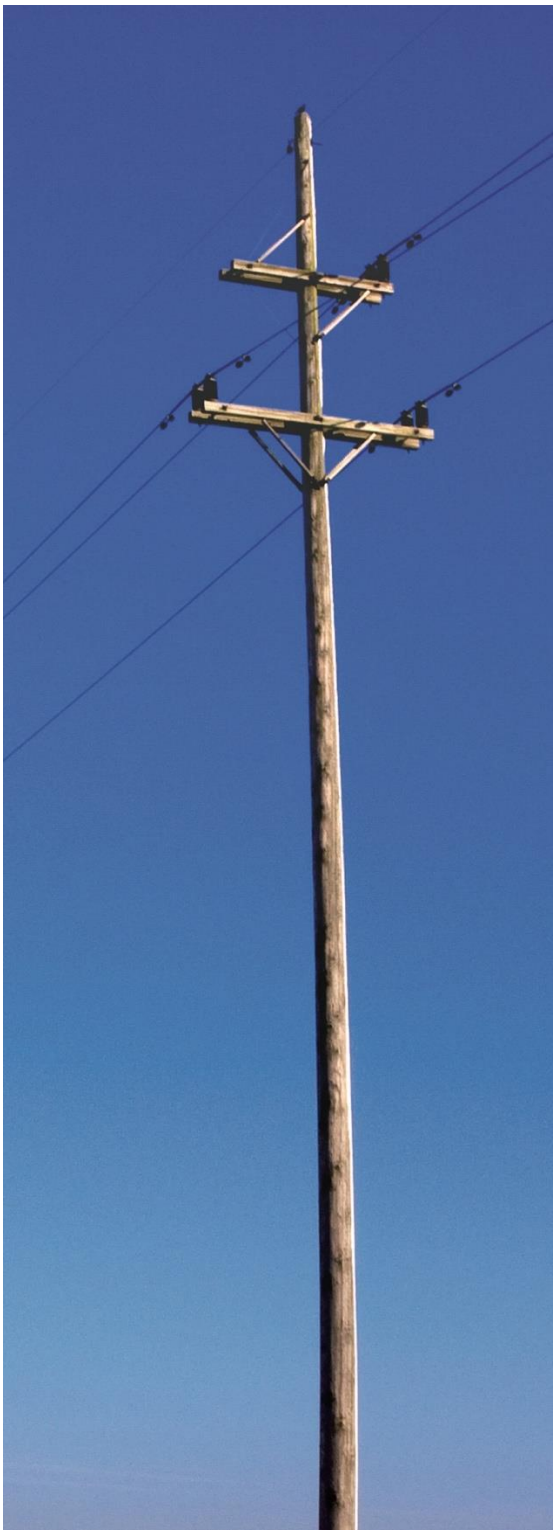





**GridLynk HES** incorporates a comprehensive security framework designed to prevent unauthorized access to both devices and data. The security architecture manages user access through group associations, where each group represents a stakeholder in the meter management process. Functional privileges are determined by group membership, granting users the rights to perform specific actions on meters based on their group affiliations.

Meters are linked to measurement points, each of which can have multiple associated groups representing interested parties. Group memberships are time-based relative to measurement points, allowing users to access data only up until their role as an interested party concludes. This ensures that users can view and manage data appropriately based on their current or past involvement with the site.

**GridLynk HES** includes the capability to manage Load Control through MultiDrive. This feature allows for sending Load Control Commands to manually activate or deactivate Load Control relays in compatible devices. The system ensures that all load control commands are comprehensively logged for auditing purposes. This functionality is applicable to EDMI devices and any other devices that support or have integrated with EDMI for load control commands.



1. **Adaptability to Different Data Sources**

2. **Scalability**

3. **Customizability**

4. **Interoperability**

5. **Flexible Data Models**

6. **Real-Time and Historical Data Management**

7. **User-Friendly Configuration**

8. **Regulatory and Compliance Adaptation**

9. **Enhanced Reporting and Analytics**

10. **Support for Various Data Types**

# Ultimate Flexibility

### Network Management
• Reliable communication with meters
• Compatible with GPRS, 3G, 4G
• Persistent and non-persistent communication options
• Bi-directional connection establishment
• Dynamic IP support
• Carrier network load balancing

### Fleet Management
• Comprehensive meter information
• Automatic verification of meter fleet configuration
• Device installation tracking
• Device filtering and tagging
• Configuration management
• Device firmware management

### Measured Data Management
• Guaranteed data delivery
• Retrieval of time-of-use data supporting multi-register billing requirements, including daily, monthly, and quarterly billing cycles, snapshots, and interval values
• Retrieval of interval data for energy, water, and gas consumption
• Retrieval of power quality event data, including sag/swell, total harmonic distortion, unbalance, and over-current exceedance
• Retrieval of maximum, minimum, and average voltage, current, and other electrical quantities
• Read instantaneous values

### Non-Measurement Functionality
• Connect/disconnect operations
• Load control
• Time synchronization

### Scheduling
• Robust scheduling engine for triggering functions via timed schedules, on an ad-hoc basis, or based on events from meters
• Supports server or meter-initiated connections

### Application Management
• Communication Monitoring
• Performance monitoring
• Notifications
• Audit trail

### B2B Interface
• RESTful web services
• File export/import capabilities

### More Data in Less Time
• One million reads and exports per hour
• High Frequency Reads: 5 to 15-minute collections in addition to nightly window
• Real-Time Data Streaming: 1 to 10-second intervals for customer engagement

### Resilient and Scalable
• Scalability
• Reduced infrastructure costs (pay for what you use, when you use it – not peak usage all the time)
• Reduced IT operations costs (platform and software management and maintenance costs included in the solution)
• Built-in disaster recovery and high availability

### Easy to Use
• Automatic meter commissioning
• Single Sign-On (integrated with the client's corporate Active Directory)
• Fully compliant with advanced distributor load control requirements
• Native support for AMI demand response
• Browser-based user interface
• Real-time meter diagnostics
• Object-based meter configuration through "Business Services"

### Easy to Integrate
• Client-controlled user authentication (through Microsoft Active Directory & ADFS)
• Easy back-office systems integration through web-centric APIs and data formats (REST & JSON)
• Option for "Guaranteed Data Delivery"

### Integrated Field Controller for Windows
• Support for online and offline field operations

### Independent Security
• Native support for data integrity

# Utilities should consider using GridLynk HES for the following compelling reasons:

**1. Seamless Integration:** GridLynk HES integrates effortlessly with existing smart meter infrastructure and utility IT systems, ensuring a smooth transition and minimal disruption.

**2. Enhanced Communication:** It supports reliable communication across various technologies (GPRS, 3G, 4G), with both persistent and non-persistent options, enabling consistent and robust data exchange.

**3. Comprehensive Data Management:** The system provides guaranteed data delivery, supports multi-register billing, and retrieves a wide range of data including energy, water, and gas consumption, as well as power quality metrics.

**4. Advanced Analytics and Insights:** With high-frequency and real-time data streaming capabilities, GridLynk HES offers in-depth analytics for better decision-making, customer engagement, and demand response.

**5. Flexible Scheduling and Automation:** The robust scheduling engine allows for automated function triggering based on timed schedules or meter events, enhancing operational efficiency.

**6. Scalable and Cost-Effective:** GridLynk HES is designed to scale with your needs, reducing infrastructure and IT operations costs by charging based on actual usage rather than peak demand.

**7. User-Friendly Interface:** The browser-based user interface and automatic meter commissioning simplify operations, while Single Sign-On integration with corporate Active Directory enhances security and accessibility.

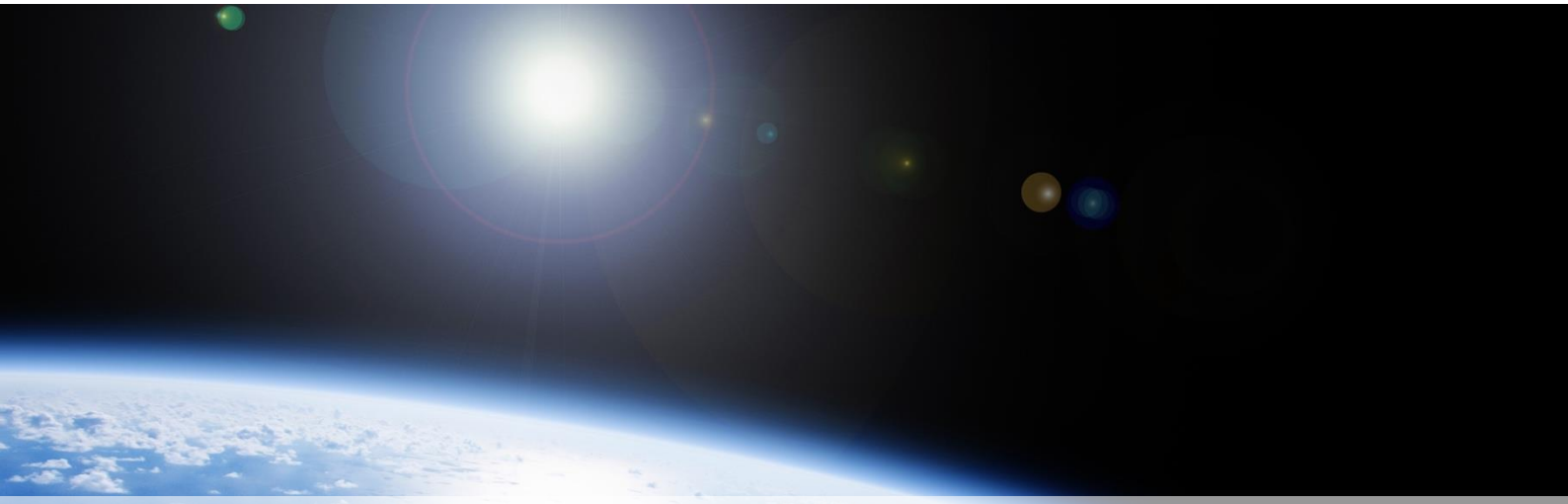
**8. Advanced Security:** The system ensures data integrity with native security features, preventing unauthorized access and protecting sensitive information.

**9. High Availability and Disaster Recovery:** Built-in disaster recovery and high availability features guarantee system reliability and business continuity.

**10. Easy Integration and Adaptability**: GridLynk HES offers seamless integration with back-office systems through RESTful APIs and supports various data formats, ensuring compatibility with other systems and easy future upgrades.

**11. Efficient Field Management:** Integrated field controllers and automated meter configuration streamline field operations, reducing manual effort and errors.

**12. Real-Time and Historical Data Access:** Provides access to both real-time and historical data, allowing for detailed analysis and monitoring of system performance over time.



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