

GRIDLYNK HEAD END SYSTEM

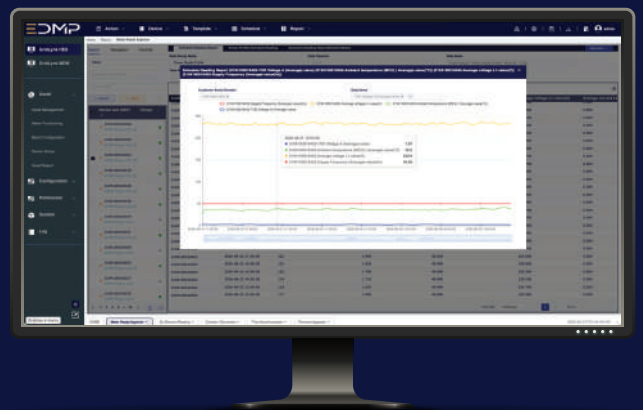
Precision and Performance:
The Smart Choice for Energy
Management



GridLink 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, **GridLink 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.



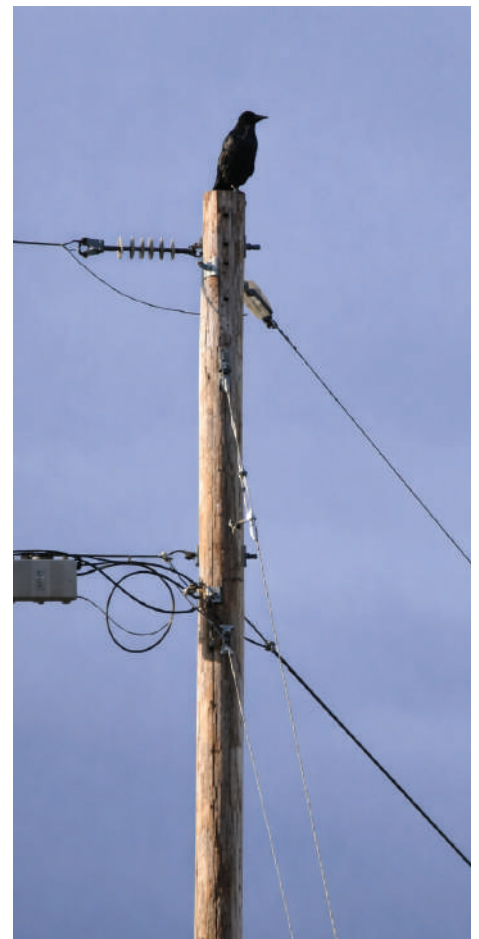
SOFTWARE

THE SMART CHOICE FOR ENERGY MANAGEMENT

GridLynk HES is the intelligent communications and control layer at the heart of modern AMI. Designed to connect and manage large, diverse fleets of smart meters and field devices, it provides secure, reliable and high-performance communications across cellular, RF, PLC and IP-based networks. Its flexible architecture enables utilities to deploy and evolve their AMI infrastructure without being constrained by a single meter technology or communications network.

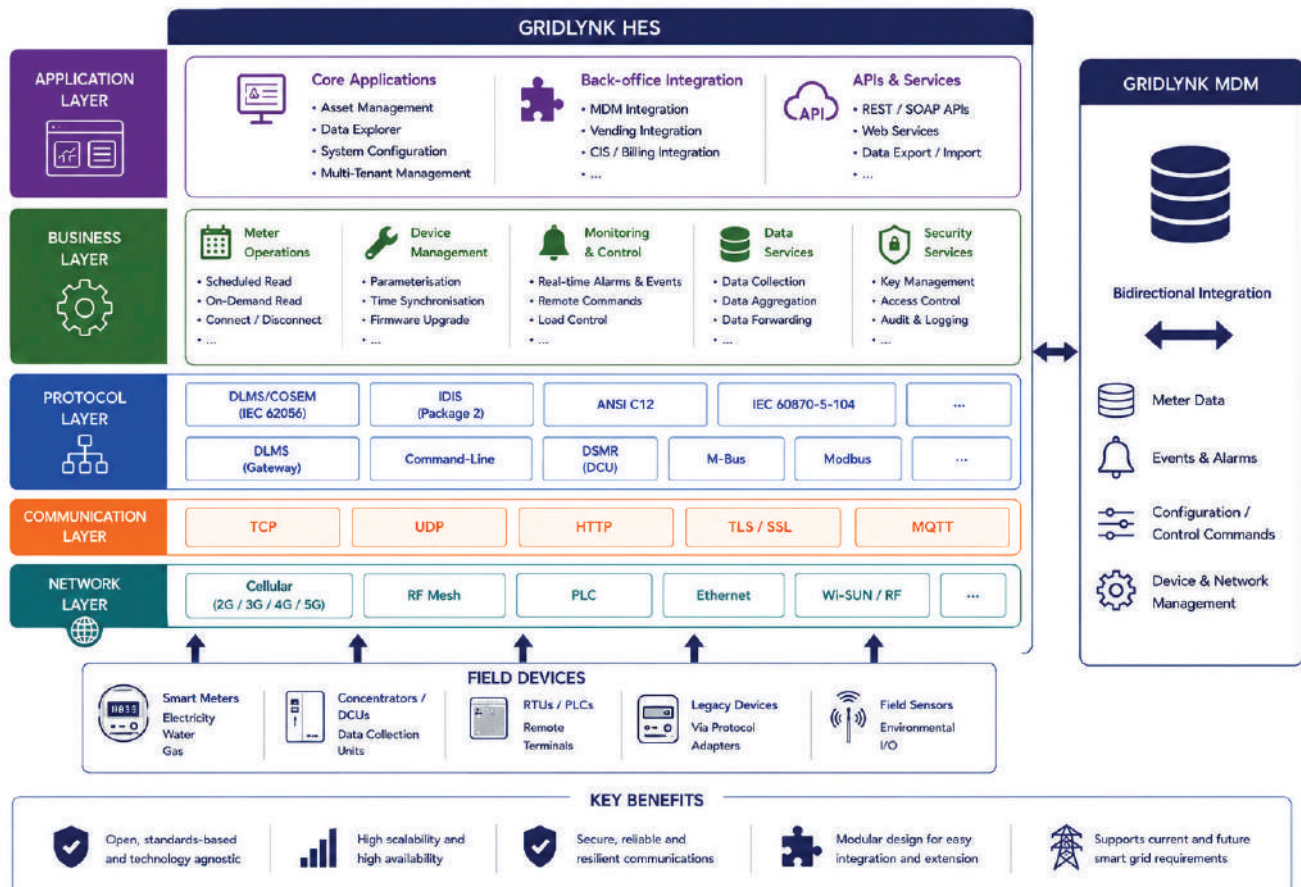
More than a data collection platform, GridLynk HES transforms millions of connected devices into a manageable, responsive smart metering ecosystem. It brings together automated commissioning, fleet and configuration management, scheduled and on-demand data acquisition, remote operations, firmware management, events and diagnostics within a unified platform. High-performance processing and near real-time data capabilities give utilities greater visibility and control over their metering infrastructure.

Built for an increasingly connected and data-driven utility environment, GridLynk HES provides an open bridge between the meter fleet and enterprise systems. Standards-based REST APIs, IEC 61968 CIM/SOAP interfaces and Kafka-based messaging enable scalable integration with MDMS, CIS, billing, analytics and other utility platforms. Comprehensive security, monitoring and audit capabilities help ensure that every interaction – from the field device to the enterprise – is secure, traceable and ready to scale with the utility's future needs.



GridLynk HES Architecture

Open, modular and scalable platform for reliable meter communications and device management



Powerful, Flexible AMI Management

Network Management

- Reliable, secure bi-directional communication with meters and field devices
- Support for cellular, RF mesh, PLC and IP-based communication technologies
- Persistent and on-demand communication modes
- Dynamic and static IP addressing support
- Communication network and device connectivity monitoring
- Carrier and communication-path load balancing

Fleet Management

- Comprehensive meter and device inventory management
- Automated device discovery, registration and commissioning
- Automatic verification of meter configuration and operational status
- Device installation, commissioning and lifecycle tracking
- Flexible device grouping, filtering and tagging
- Centralised meter configuration management
- Remote firmware management and upgrade campaigns

Measured Data Management

- Reliable acquisition and delivery of billing and operational meter data
- Collection of billing registers and Time-of-Use data across configurable billing periods
- Collection of interval data for electricity, water and gas consumption
- Acquisition of PQ data including voltage variations, harmonics, unbalance and over-current events
- Collection of minimum, maximum and average electrical quantities
- On-demand reading of instantaneous values

Non-Measurement Functionality

- Remote connect and disconnect operations
- Load control and demand response operations
- Meter time synchronisation
- Remote meter configuration and operational commands

Scheduling

- Flexible scheduling engine for recurring, ad-hoc and event-triggered operations
- Individual, group and fleet-wide task scheduling
- Automated execution, retry and tracking of scheduled operations
- Support for both HES-initiated and meter initiated communications

Application Management

- Real-time communication and application health monitoring
- System performance and operational KPI monitoring
- Configurable alarms and notifications
- Comprehensive user and system audit trails

B2B Interfaces

- Standards-based RESTful APIs for enterprise system integration
- IEC 61968 CIM-based integration using SOAP web services

- File-based import and export interfaces for bulk data exchange
- Kafka message queue support for scalable, asynchronous delivery of data and events
- Secure integration with MDMS, CIS, billing and other utility systems

High-Performance Data Acquisition

- High-throughput architecture supporting large-scale meter fleets
- Up to one million meter reads and data exports per hour*
- High-frequency reading from 5–15 minute intervals in addition to scheduled billing collections*
- Near real-time data streaming at configurable intervals for operational and customer applications*

Resilient & Scalable

- Scalable architecture designed for growing meter populations and data volumes
- Flexible deployment across cloud, private cloud and on-premises environments
- High availability and fault-tolerant system architecture
- Built-in disaster recovery capabilities
- Optimised infrastructure and operational resource utilisation

Easy to Use

- Automated meter commissioning and provisioning
- Intuitive browser-based user interface
- Single Sign-On integration with enterprise identity platforms
- Real-time meter communication and diagnostic tools
- Role-based access to operational functions
- Object-based meter configuration through reusable Business Services

Easy to Integrate

- Open, standards-based integration through REST APIs and structured data formats
- Integration with enterprise identity and authentication services
- Flexible integration with MDMS, CIS, billing and other back-office platforms
- Reliable and traceable delivery of data to downstream systems

Integrated Field Controller for Windows

- Support for both online and offline field operations
- Secure local meter reading, configuration and diagnostic functions
- Synchronisation of field activities and results with GridLynk HES

Independent Security

- End-to-end protection of meter communications and data integrity
- Secure device authentication and encrypted communications
- Centralised security and cryptographic key management
- Role-based user access and comprehensive security auditing

- 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*

Key Benefits of GridLynk HES for Utilities

Seamless Integration

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

Enhanced Communication

Supports reliable and secure communication across multiple IP Based network technologies with both persistent and non-persistent communication modes. This enables flexible, resilient, and efficient data exchange between smart meters, field devices, and the central system.

Enhanced Communication

Supports reliable and secure communication across multiple IP Based network technologies with both persistent and non-persistent communication modes. This enables flexible, resilient, and efficient data exchange between smart meters, field devices, and the central system.

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.

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.

Flexible Scheduling and Automation

The robust scheduling engine allows for automated function triggering based on timed schedules or meter events, enhancing operational efficiency.

Scalable & Cost-Efficient Architecture

Designed to scale from small deployments to large-scale AMI environments, optimizing infrastructure utilization and operational costs through flexible, usage-based resource management

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.

Advanced Security

The system ensures data integrity with native security features, preventing unauthorized access and protecting sensitive information.

High Availability and Disaster Recovery

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

Easy Integration and Adaptability

GridLynk HES offers seamless integration with back-office systems through RESTful and SOAP APIs, as well as Kafka-based messaging, supporting various data formats to ensure compatibility with other systems and enable flexible, scalable integration and future upgrades.

Efficient Field Management

Integrated field controllers and automated meter configuration streamline field operations, reducing manual effort and errors.

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.

EDMP GROUP

📍 33 Burwood Park Road,
Walton-on-Thames, KT12 5LH,
United Kingdom

EDMP JAFZA

📍 PO Box 125428, Plot No. MO0147C, Junction of N400 & N406
Streets Jebel Ali Free Zone, Dubai, United Arab Emirates
✉ info@edmpgroup.com 🌐 www.edmpgroup.com