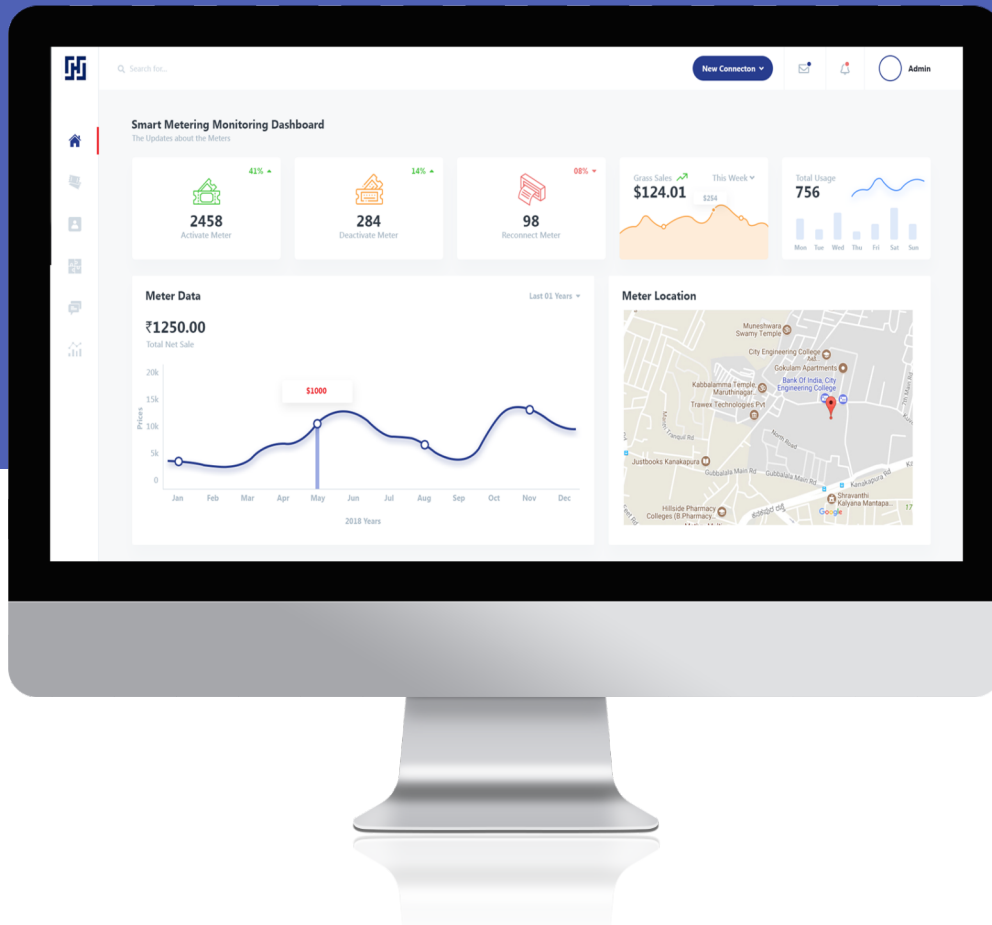# HES for Smart Metering

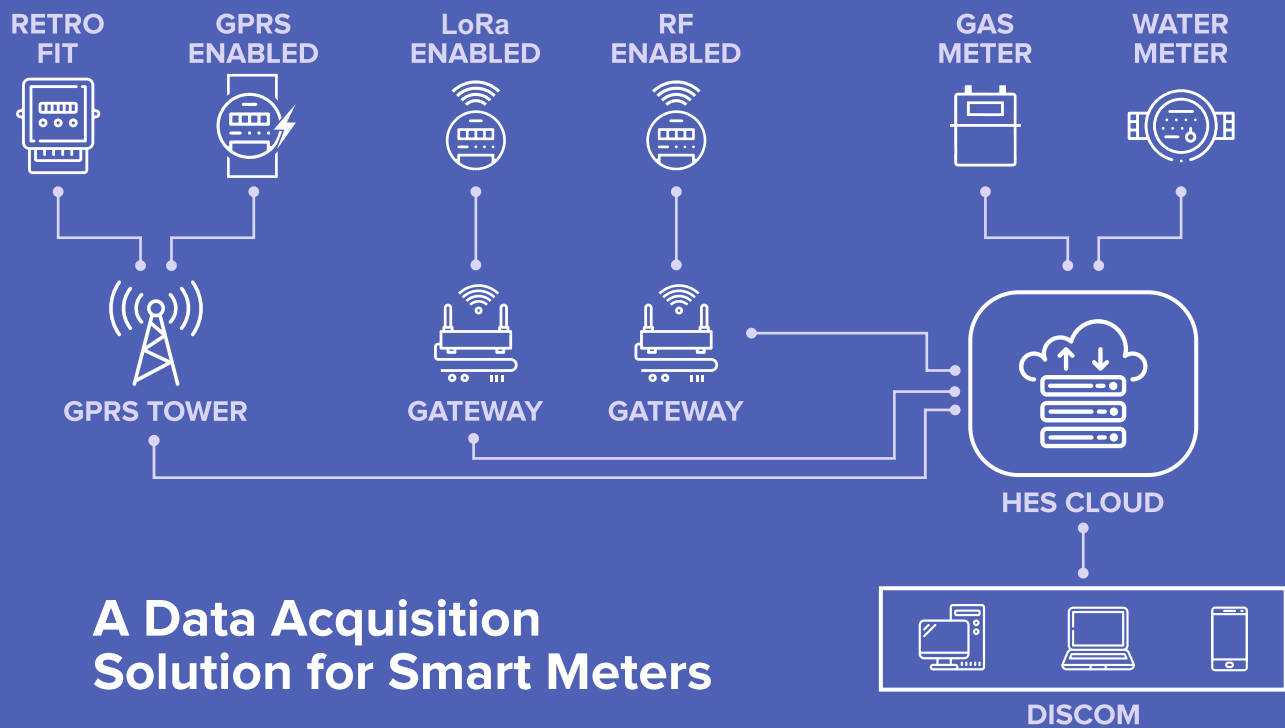## An IoT Based Energy Management Solution

A Step Towards
the **Smart Grid Initiative**

HES for Smart Metering is our scalable Head End Data acquisition solution for Advanced Metering Infrastructure (AMI). The IoT based solution monitors & controls smart meters operating as a communication driver between MDM Systems and measurement devices. The HES collects system-wide telemetry data & enables integration with smart energy devices with seamless interoperability, enhancing business intelligence, operational efficiency and system-wide remote device management.

Functions

- Provides platform-wide connectivity between field devices & enterprise-level software
- Manages & stores the acquired meter data enabling remote device management
- Integrates seamlessly using REST APIs.

A Data Acquisition Solution for Smart Meters

Diagram labels: RETRO FIT, GPRS ENABLED, LoRa ENABLED, RF ENABLED, GAS METER, WATER METER, GPRS TOWER, GATEWAY, GATEWAY, HES CLOUD, DISCOM

FEATURES

- Provides seamless integration with billing, data management and enterprise-level AMI applications using REST APIs.
- Compatible with IS16444 based Smart Meters.
- Establishes connectivity using RF Technology, 2G/3G, LoRaWAN.
- Highly scalable and secure data acquisition layer.
- Enables remote configuratoin/firmware upgrade/identity/access management of field devices.
- Uses DLMS/COSEM protocol for meter data acquisition.

ADVANTAGES

- Displays collected data using GUI (Graphical User Interface).
  Provides site-specific information enabling intelligent business decisions.
- Manages network Gateways to prevent network overload.
- Monitors, analyses and manages numerous field meters and gateways.
- Uses standard connectors for third party AMI applications like MDM, Billing, etc.

DLMS over LoRaWAN

- HES provides support for communicating with LoRa based DLMS Smart Meters.
- HES communicates with LoRa based Meters through LoRa Gateways and LoRa servers, where fragmentation and de-fragmentation of data is performed in order to support large frame sized data to and from DLMS based Smart Meters.

Smart Electricity Meter — DLMS/COSEM METER

LoRaWAN Module — Fragmentation

LoRa Gateway

LoRa App Server Defragmentation

DLMS based HES — LoRa App Server Defragmentation

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