Hark.

Introducing The Hark Platform

Energy Analytics and Industrial IoT Software for Enterprises
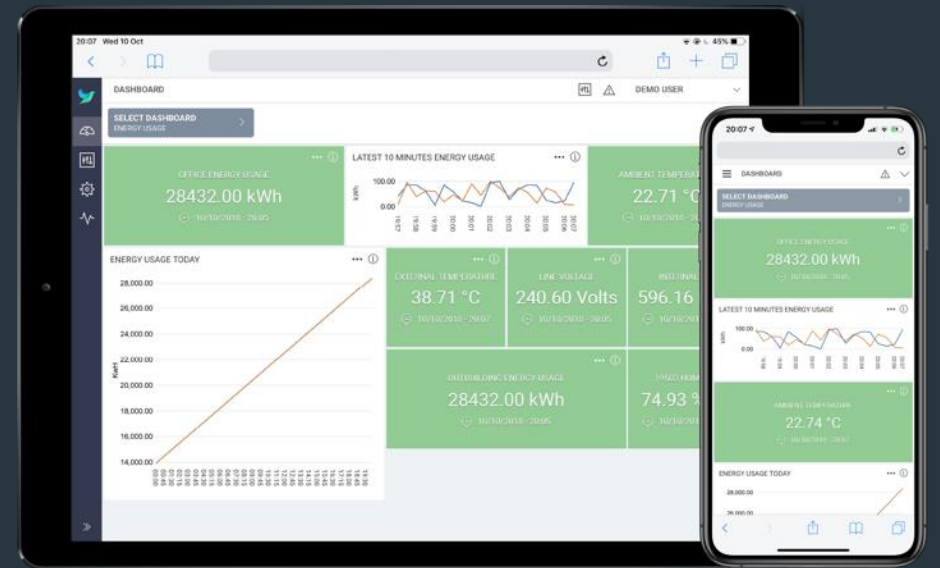
OUR MISSION

Improve efficiency, maximise yield, reduce waste

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The Hark Platform is a cloud-based sensor platform that **monitors**, **stores** and **analyses** sensor data in real-time.

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Platform Features

One-click management

✓ Fast, intuitive, easy to use interface.

Plug and play

✓ Expand and add sensors efficiently and instantly.

Real-time monitoring and alerting

✓ Mitigate disaster and save money in real-time.
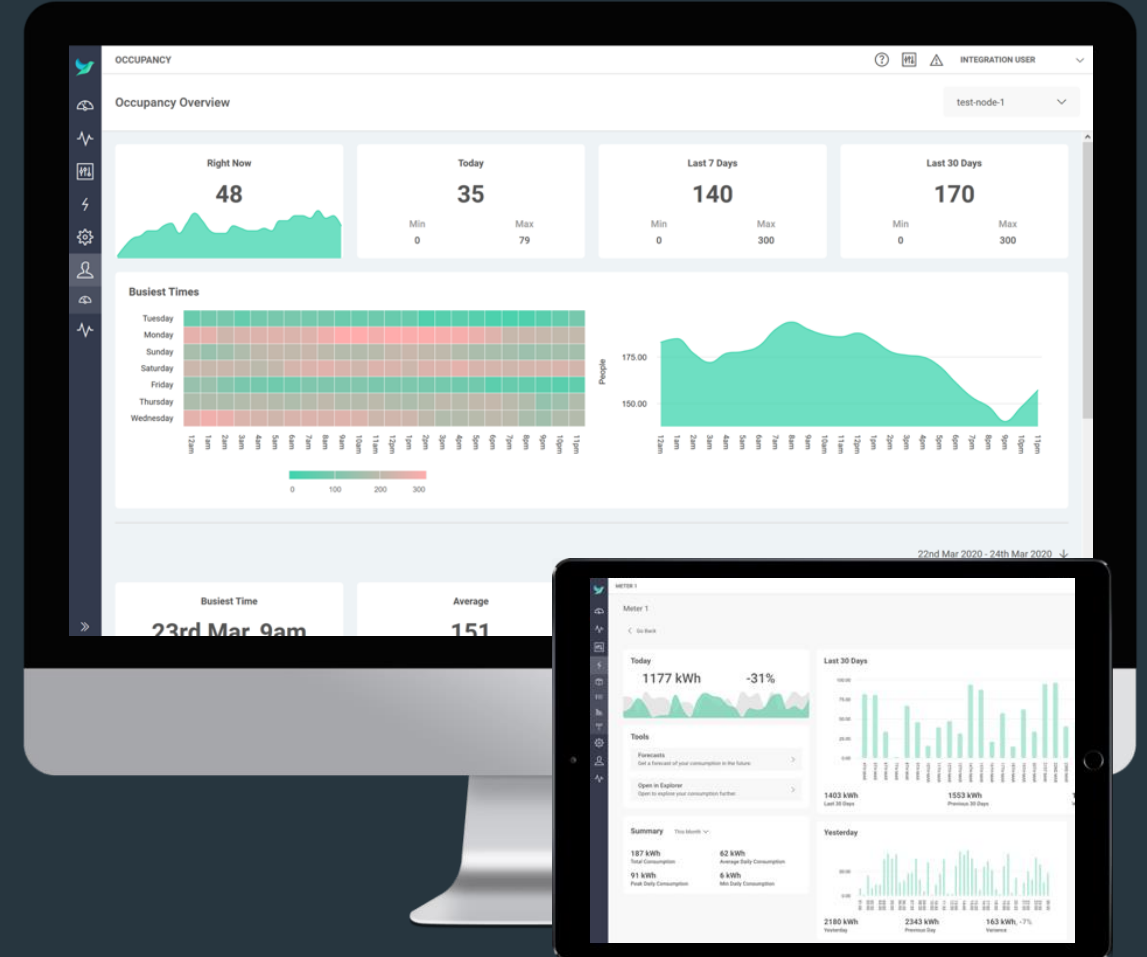
Insights, analysis and dashboards

✓ Draw insights and information from data quickly.

Asset anomaly detection

✓ Automatic pattern analysis and anomaly detection for assets. Batteries included.

FDA 21 CFR compliant

✓ Compliant with the highest regulatory standards.

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Monitoring capabilities and use cases

Monitoring

- Energy and Power Monitoring.
- Oxygen, CO2 and Pollution Monitoring.
- Temperature, Humidity and Pressure Monitoring.
- Flow, Gas and Level.
- Occupancy, People and more.

Use Cases

- Energy Monitoring and Management.
- Facilities and Asset Health Management.
- Industrial Maintenance.

SENSOR ALERT   TEMPERATURE
TRIGGERED   16TH AUG 2019 - 15:53

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Energy Management

Increase visibility of energy utilisation and trends, spot anomalies and discrepancies at an estate wide level, and reduce operational overhead.

Real-time Energy Insight
Estate wide energy analysis in real-time using power, frequency and consumption information.

Peak Demand Analysis
Understand and predict peak demand and load of assets and locations. Advanced multi-variate models utilise external data such as Weather, Building Management and other external sensor data.

Real-time Alerting for Managers
Alert the right people at the right time, before and after problems occur. Automatic emails, SMS and Work Order generation.

Patterns and Load Disaggregation
Identify patterns and assets by breaking down and disaggregating the consumption profiles, this allows the system to identify possible loads on a single meter.

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Asset Performance Monitoring

Enables real-time device and asset monitoring, agnostic of vendor and type. By supporting enterprise, industrial and SCADA protocols, enterprises have a unified view across their estates.

Health Indicator

Visualise the health of an asset in real-time, using machine learning for predictions and anomaly detection.

Assess Risk and Potential Failures

Understand asset failures and diagnose possible issues with increased accuracy.

Real-time Alerting for Operators

Alert the right people at the right time, before and after problems occur. Automatic emails, SMS and Work Order generation.

Performance and Benchmarking

Automatically benchmark performance of assets against the same or similar assets for ROI and future economic impact.

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Asset Building Automation

Connect to Buildings, Lighting Systems, HVAC and other assets in order to provide a layer of intelligent automation that can be remote and centrally managed.

Building and Asset Control

Control buildings, lights, energy storage systems in a single platform – works with multiple vendors without a specific vendor lock-in.

Automation and Integration

Automate and integrate using API's and external system integration for streamlined control more intelligent control strategies.

Digital Twin

Every automated assets has a digital twin used to monitor and orchestrate changes on the edge – ensuring network intermittency isn't an issue.

Any Asset

Monitor and control Building Management Systems, Lighting Systems, Energy Storage Systems, HVAC and Industrial Assets.
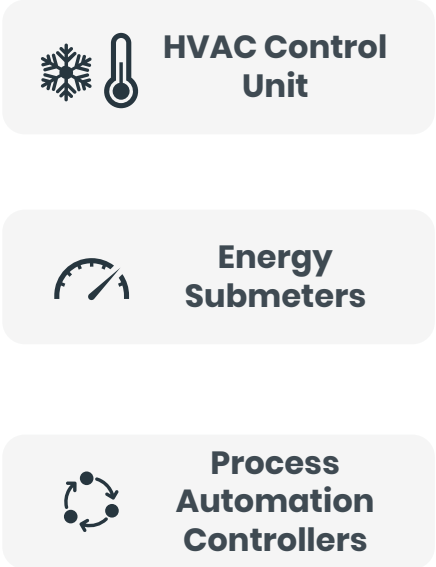
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Simplified cloud connectivity for assets and device

Built on Microsoft Azure

Assets Across Estate

HVAC systems, industrial control systems and various types of devices. New devices and legacy systems.

Hark Gateway

Interconnectivity with a single hardware component capable of talking to all devices.

Secure Cloud Intelligence

Analyse patterns and gain content to impact and control assets to optimize their profiles.

Schneider Electric

Honeywell

SIEMENS

ALLEN-BRADLEY

TREND

HVAC Control Unit

Energy Submeters

Process Automation Controllers

ASHRAE BACnet™

EtherNet/IP™

Modbus

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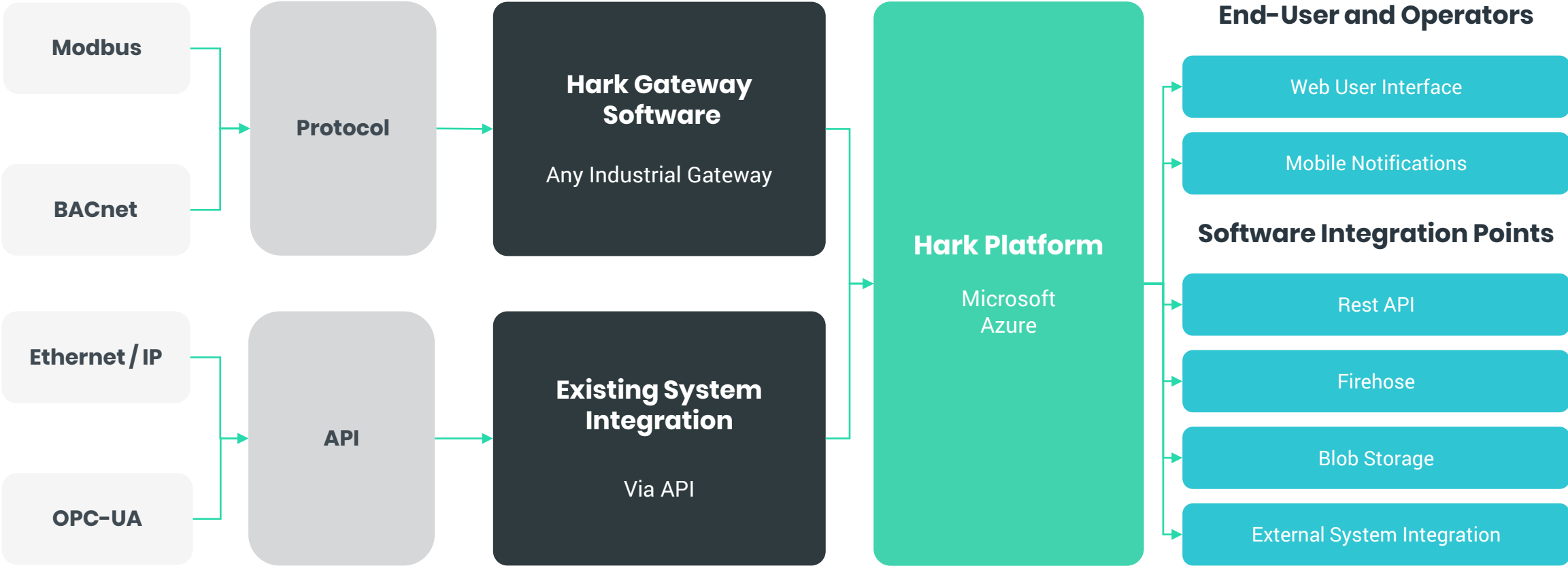
Securely streamed to the Hark Platform

✓ Sensor data is streamed in real-time to the Hark
  Platform, stored redundantly for data integrity.

✓ Software as a service.

✓ Customers pay monthly on contract.

✓ Elastically scalable for limitless growth.

bsi. ISO/IEC 27001 Information Security Management

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Technology Architecture

Modbus

BACnet

Protocol

Hark Gateway Software

Any Industrial Gateway

Ethernet / IP

OPC-UA

API

Existing System Integration

Via API

Hark Platform

Microsoft Azure

End-User and Operators

Web User Interface

Mobile Notifications

Software Integration Points

Rest API

Firehose

Blob Storage

External System Integration

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Asset and Estate Health

Hark Technology

Output

Dent		
ND Meters	Protocol	**Energy and Power**
		Internal Sensors Temperature / Process Values

Assets

Anomaly Detection → **Asset Health**

Pattern Recognition → **Performance Information**

Honeywell / Trend		
Other Hardware	API	**External Factors**
		Historic Work Orders

Predictions + Forecasting → **Recommendations**

Asset + Estate Dashboards → **Alerts and Notifications**

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Our solutions in practice

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Retail Deployment

A range of power-drawing assets:

- Bakery ovens
- Refrigeration systems
- Lighting
- Solar panels

Hark enables control over increasing triad costs.

Highlighted errors in energy-consumption processes that were the leading causes of high usage.

24,000 +
Assets monitored

600+
Sites

200m +
Daily sensor readings

£1m+
Saved in 12 months

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Smart Building Deployment

- National Grid uses the Triad to determine TNUoS charges for customers with half-hour metering.

- Tesla battery charged in green period hours.

- Building taken off grid in red period hours.

- Hark enables control of energy storage assets, used for Triad avoidance and RAG optimisation.

4 minute
Installation

900,000+
kWH

72,000+
Daily sensor readings

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Life Science Deployment

Hark has been monitoring a range of incubators, stability chambers and laboratories for 3 years.

- Temperature
- Humidity
- Oxygen
- CO2

The Hark platform manages FDA 21 CFR compliance.

1000+
Monthly Alerts

40+
Locations

288,000+
Daily sensor readings

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Getting Started

Validate

Validate infrastructure
(incl. hardware & software)

Validate data

Customise dashboard

Pilot

Perform initial network test

Test the experience & deployment

Review data and results

Scale

Increase devices/locations

Regional/national scale

Increase automation

Predictions and intelligence

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Commercial Model

Hark Platform

Monitoring

Dashboards

Alerting

Predictions

Control

and more…

**Monthly fee
Annual Contract**

Professional Services

Validation

Pilot/Beta

Scale

Bespoke projects

From 2–52 weeks

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Contact

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