TITAN PRODUCTS

Energy Manager

Understand your building energy usage

Simplify the Complex®

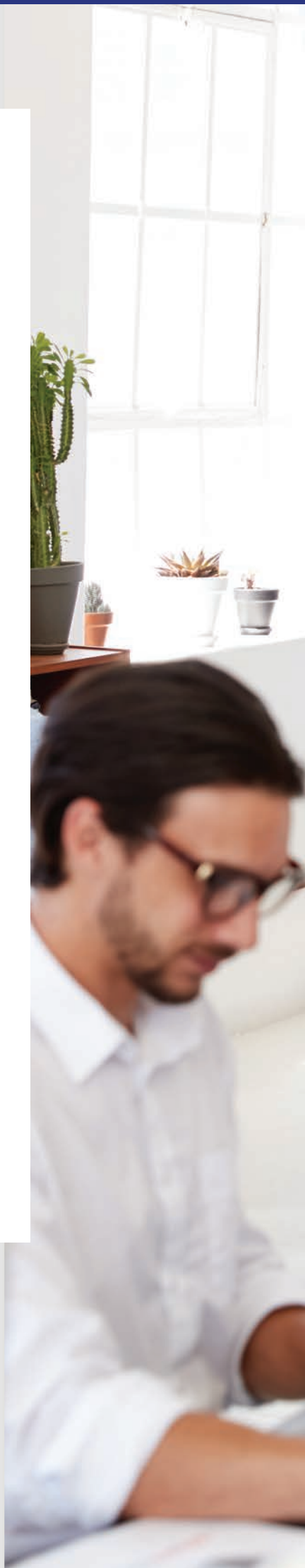
FROM CONCEPT TO COMPLETION

At Titan we design and develop our products and services to aid every stakeholder in the delivery of smart and efficient building control and monitoring. From design, install and commissioning through to end user, facilities managers and building owners, every feature of the solution has been carefully selected and developed to add value to the users experience.

UNDERSTANDING BUILDING PERFORMANCE

At Titan we simplify the complex to help our customers create truly smart spaces promoting wellbeing, comfort and energy efficiency.

We believe in helping you run your buildings as efficiently as possible and understand the cost benefits this can bring.



Titan Products' Energy Manager surpasses traditional smart meters by offering advanced analytics, customisable reporting and seamless building integration. Empowering you to optimise energy usage, cut costs and make data-driven decisions effortlessly.

By providing detailed insights into where your building is consuming energy, the Energy Manager helps create a clear understanding of energy use, enabling users to identify inefficiencies. With this improved understanding, building owners, facility managers, and tenants can make informed decisions to reduce waste and lower energy bills.

The Energy Manager offers truly smart metering with advanced integration through MQTT and BACnet protocols. MQTT, a lightweight messaging protocol, enables real-time data transmission, making it ideal for IoT applications. BACnet, a robust communication protocol for building automation and control networks, provides Building Management integration via BACnet/IP, supporting proactive maintenance and energy-saving strategies.

Housed in a pre-wired enclosure, the Energy Manager is designed for quick and easy installation with minimal on-site time, making it ideal for retrofit projects in buildings such as hospitals or schools, as well as new commercial buildings.

Sub-metering Made Easy

The Energy Manager caters for up to 16 BACnet, Modbus, Pulsed, 0-10V or 4-20mA meters, allowing you to create a customised sub-metering network. Sub-metering offers numerous benefits, including:

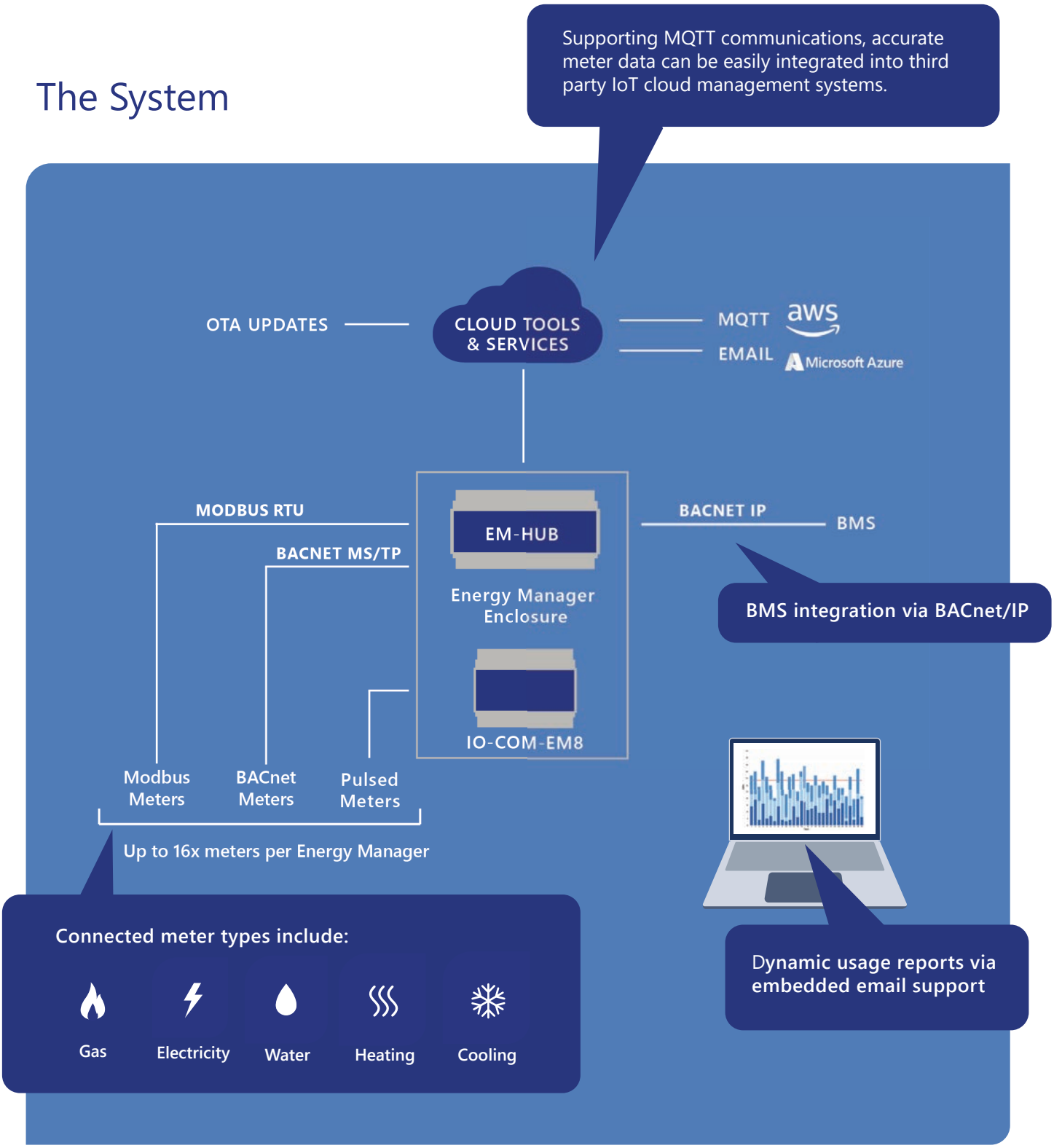
Detailed Energy Usage Insights: Sub-metering provides granular data on energy consumption, allowing building owners and managers to see exactly where energy is being used within a building. This detailed view helps identify specific areas or equipment that consume the most energy.

Cost Allocation: By measuring energy use in different areas or by different tenants, sub-metering enables precise allocation of energy costs.

Behavioural Change and Awareness: When occupants are aware of their energy consumption through detailed sub-metering data, they are more likely to adopt energy-saving behaviours. This awareness can lead to a collective effort to reduce energy usage.

Regulatory Compliance: Sub-metering can help building managers meet energy reporting requirements and energy usage goals, through comparing real time data against benchmarks.

The System


Supporting MQTT communications, accurate meter data can be easily integrated into third party IoT cloud management systems.
OTA UPDATES
CLOUD TOOLS & SERVICES
MQTT
EMAIL
aws
Microsoft Azure
MODBUS RTU
BACNET MS/TP
EM-HUB
Energy Manager Enclosure
IO-COM-EM8
BACNET IP
BMS
BMS integration via BACnet/IP
Modbus Meters
BACnet Meters
Pulsed Meters
Up to 16x meters per Energy Manager
Connected meter types include:
Gas
Electricity
Water
Heating
Cooling
Dynamic usage reports via embedded email support

Email Reporting

Easily configure reports to be sent daily, weekly, monthly, quarterly or annually by email.

Grouping meters to users within the Energy Manager setup enables dynamic email reporting, allowing for a multi-level reporting structure. This means tenants can receive data specific to their area, while building owners and facility managers can access comprehensive reports for the entire building.

This data enables businesses to understand their energy usage patterns more comprehensively, helping them identify opportunities for efficiency improvements. For instance, users can make informed decisions about energy-saving measures, such as adjusting temperature setpoints, control deadbands and equipment timers.

Benchmark Usage

Performing to energy usage standards is critical for modern buildings. The Energy Manager allows building owners to set the designed target energy usage to benchmark reports against actual usage to understand if the building energy usage is performing to the design.

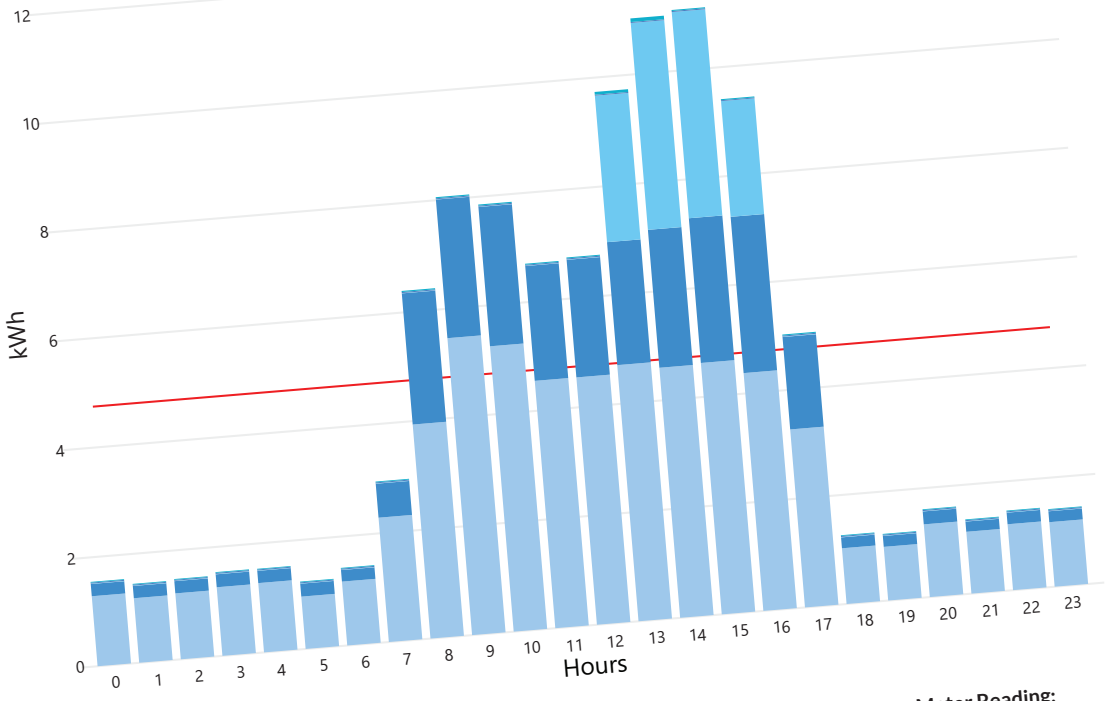
TITAN PRODUCTS

Daily energy report

Covering: 18 Jun 2024 to 18 Jun 2024

Location: Office

Your electricity usage



Meter Name:	Meter Serial:	Target Usage:	Actual Usage:	Meter Reading:
Warehouse Heater	230550064	1 kWh	0.000 kWh	28.600 kWh
Office DB	3929869757	50 kWh	62.875 kWh	3170.510 kWh
Production DB	230550056	25 kWh	27.287 kWh	1282.699 kWh
EV Charger	230518117	20 kWh	12.559 kWh	504.967 kWh
AC1	230508220	6 kWh	0.440 kWh	96.440 kWh
AC2	230518123	6 kWh	0.000 kWh	0.039 kWh

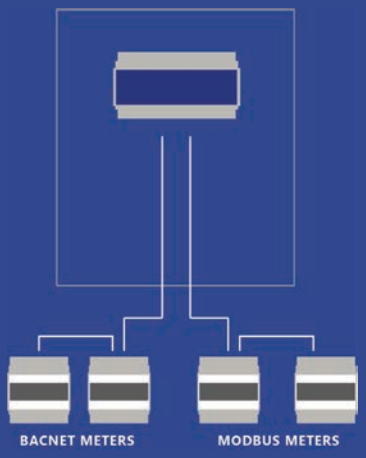
Easy Setup

At Titan we understand the need for quick commissioning processes to minimise on-site time. Via its embedded web browser, the Energy Manager provides a simple and intuitive set up procedure to get the solution up and running in minutes

Configuration Options:

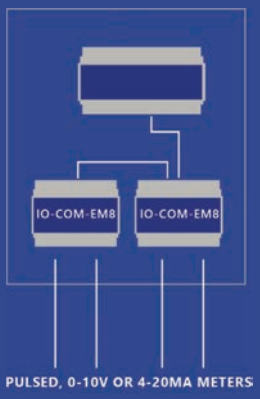
Network Meters

BACnet or Modbus meters connected directly to Energy Manager Hub.



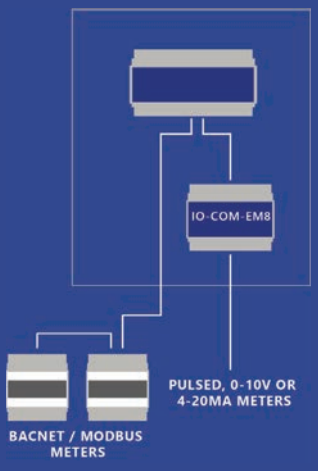
Pulsed, 0-10V or 4-20mA Meters

Titan can supply market leading IO Modules (IO-COM-EM8) to fit into the Energy Manager enclosure allowing pulsed, analogue 0-10V or 4-20mA meters to be connected.



Combination of the above

The Energy Manager supports network meters as standard, adding the IO-COM-EM8 opens up the input possibilities to create a combination of incoming meter types depending on your application requirements.



Bespoke Enclosures

Titan Products can manufacture bespoke Energy Manager enclosures fully pre-installed with MID approved single or three-phase din rail mounted CT meters, providing a custom sub-metering solution for your application.

Contact our sales team for more infomation.

Example bespoke Energy Manager fitted with 6x three-phase CT meters

Case Study: Leading by Example

How installing the Energy Manager at Titan's office has saved money

The Installation

We installed 2 separate energy manager systems at our Manchester based Titan Products Office to better understand our energy usage across the building. Initially we installed a system of **8 CT based 3 phase meters** from Eastron at our main distribution board, this covered all the sub mains feeding various distribution boards and heavy loads around the facility. This gave us some interesting insights into our electrical usage and ultimately led to the addition of a separate Energy Manager system installed at our Office Distribution board with multiple circuits monitored using **single phase meters in a custom enclosure** to give a more detailed view of where our energy was being consumed.

"Installing the Energy Manager solution provided more insights than we imagined. Our Smart Meter was advising how much energy was being used but didn't answer the question of where this energy was being used (and in our case, where it was being wasted). We already have identified potential savings that will payback the cost of the Energy Managers in less than a year "

Ian Florey,
Head of Product

Insights

After a month of monitoring, we discovered something very interesting. When the building was unoccupied, we were still consuming around 30kWh a day! After reviewing the **daily reports** from the office system, we discovered that much of our usage was made up from "vampire loads", phone chargers, PCs in standby etc. But the biggest consumer was our on-premise server, which has lead us to **accelerate our migration to cloud infrastructure** reducing our energy consumption in the building.

The Results

Even in the short-term Titan expect to save 10% on our energy costs after implementing a few changes. As we learn more about our building through our reports and make further changes to our usage, we expect to see these savings increase.

Part Codes

Pre-wired Energy Manager	**Part Code**
Pre-wired energy manager for up to 16 x BACnet, Modbus, Pulsed, 0-10V, 4-20mA or custom meters*.	TP-EM-16
Bespoke pre-wired energy manager for up to 16 x single phase CT meters or 4 x 3 phase CT meters.	Contact Titan for bespoke CT meter enclosure details
Accessories	**Part Code**
8-way input module for pulsed meters	IO-COM-EM8
*Pulsed, 0-10V and 4-20mA meter connection provided by IO-COM-EM8 expansion modules provided separately.	

+44 (0) 161 406 6480
sales@titanproducts.com
www.titanproducts.com
15 Latham Close, Bredbury Park Ind. Estate, Stockport, Cheshire, SK6 2SD