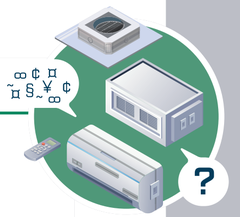
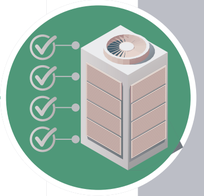
CLOUD HVAC INTEGRATION CHALLENGES



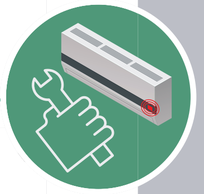
Fragmented HVAC Ecosystems

Retail multisite chains operate many HVAC brands and models across sites, making cloud integration inconsistent. The HVAC proprietary protocols limit visibility, reduce control, and complicate scalability.



Lack of Real-Time Operational Data

Unavailable HVAC telemetry restricts analytics, fault detection, and adaptive temperature control aligned with weather conditions and real-time occupancy across 24/7 retail stores.



High Deployment & Maintenance Effort

Traditional integrations require multiple gateways or custom protocol work. This increases onsite labor, delays rollouts, and strains technical resources across large portfolios.

Limited Cloud Connectivity & Security

Most HVAC gateways were built for BMS use, not IoT. Secure, reliable MQTT communication is often missing, preventing safe cloud control and standardized data management.

Explore all Retail solutions

2 Million AC units connected AROUND THE WORLD

+340m CO2 TONS SAVED

+1.153GWh ENERGY SAVED

WHICH IS EQUIVALENT TO

CO2 SAVED BY	CO2 GENERATED BY	CO2 GENERATED BY	CO2 GENERATED BY
13.608.146 TREES IN 1 YEAR	50.777 EU PEOPLE IN A YEAR	1.064.809.275 PC WORKING 1H	520.986 FLIGHTS LONDON - NEW YORK

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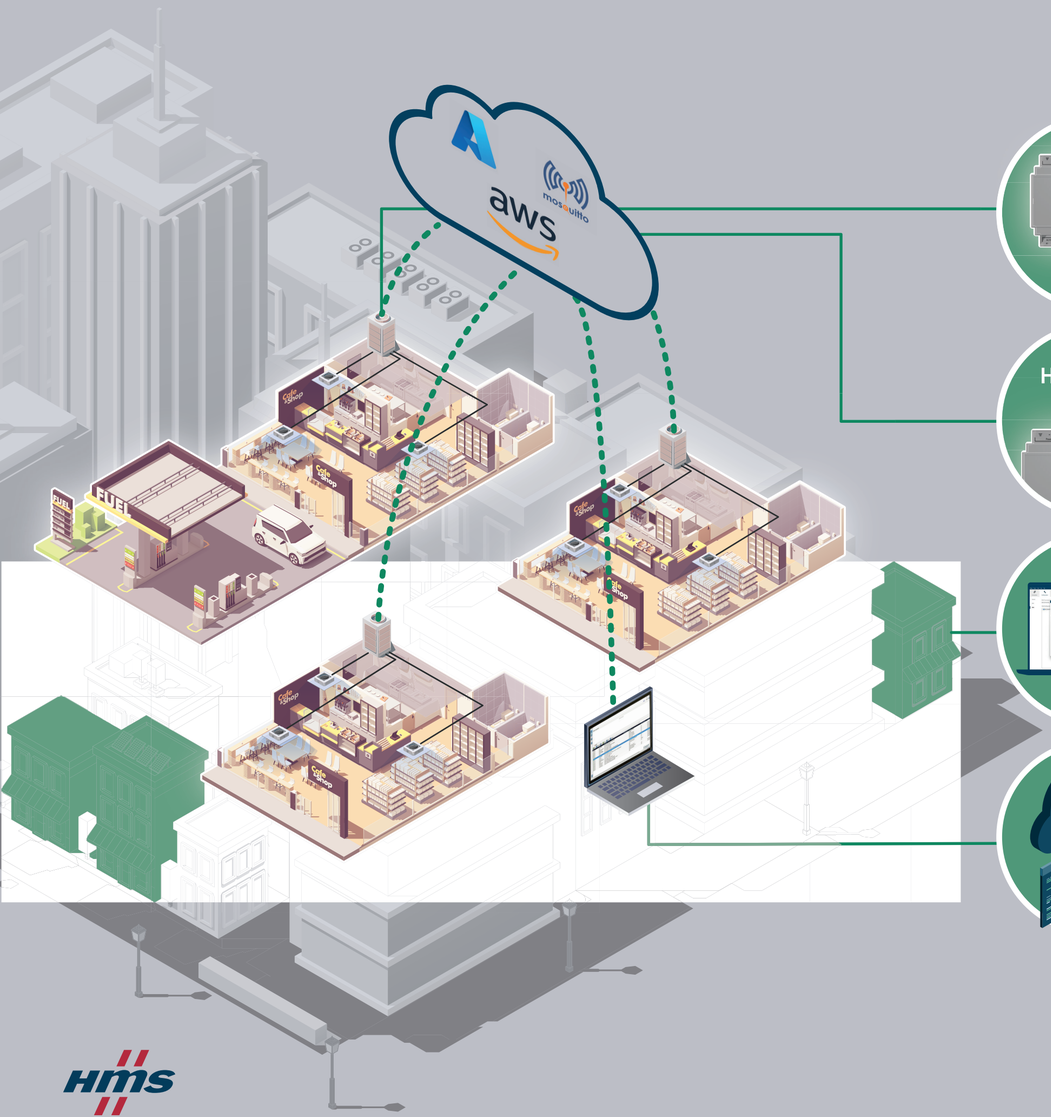
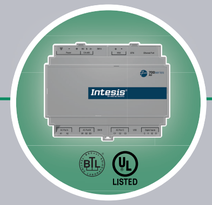
RETAIL MULTISITE

Data Availability for Energy Management

Multi-brand HVAC to Cloud via MQTT





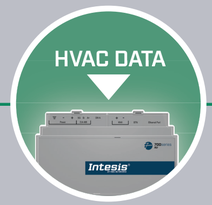
Broad Multi-Brand Compatibility

BOSCH DAIKIN FUJITSU Hisense HITACHI LG
Midea MITSUBISHI ELECTRIC MITSUBISHI HEAVY INDUSTRIES Panasonic SAMSUNG YORK

Supports communication with the main HVAC brands and models through direct outdoor-unit integration, providing a unified method to monitor and control diverse systems across all retail sites using consistent MQTT data structures.

Compatible with:
- VRF/VRV outdoor and indoor units
- Multi-split AC Systems
- Vendor-specific proprietary buses
- Air-to-water heat pump systems
- Air curtains and ventilation

- Standardized HVAC integration across all stores
- Eliminates brand-specific engineering work
- Reduces installation complexity at each site
- Ensures consistent data ingestion to cloud platforms
- Simplifies long-term maintenance and scaling



Unified Data Model

Delivers standardized monitoring and control parameters for all supported HVAC units. Regardless of brand, every gateway outputs the same MQTT structure, ensuring predictable integration and simplifying cloud-side analytics and automation.

- Supports from 4 to 128 indoor units in one gateway
- All brands are compatible within the same hardware
- Direct access to the outdoor unit's proprietary communication buses
- Same control commands per brand
- Unified logic for demand response

- Simplifies cloud integration across thousands of sites
- Reduces development effort for BEMS/IoT platforms
- Ensures consistency for dashboards and analytics
- Accelerates deployment of energy-optimization logic
- Adapts to each project size with the different license variants

Easy, Fast Configuration for Large Project Rollouts

700series Air
Intesis MAPS

Intuitive configuration minimizes onsite effort and speeds deployment across multisite locations. A single gateway replaces multi-device setups, lowering installation time, reducing errors, and improving operational efficiency during the project rollouts.

- Support Ethernet communication
- Auto-detection of indoor units (bus scan)
- Automatic variable mapping with Intesis MAPS
- Unified configuration workflow across all supported brands
- Template-based commissioning

- Minimizes onsite time for technicians
- Reduces commissioning errors and rework
- Lowers total hardware costs and predictable integration time per site
- Supports rapid deployment across large portfolios
- Simplifies long-term updates and maintenance

MQTT with TLS (Secure, Native IoT Connectivity)

MQTT aws mosquitto

Provides native MQTT 3.1.1 communication with TLS 1.2/1.3 encryption. Enables reliable, secure, and continuous data delivery to cloud platforms, optimized for IoT use cases such as energy management, predictive maintenance and demand response.

- Secure remote access to any supported HVAC system
- JSON payload compatibility
- Compatible with the main IoT brokers
- Enable HVAC data access to any cloud BEMS platform
- Enabled for edge-to-cloud environments

- Ensures secure cloud communication across all stores
- Supports continuous data flow for real-time monitoring
- Reduces cybersecurity risks during remote control
- Eliminates dependency on BMS-only gateways
- Consistent topic hierarchies in MQTT

Intesis 700 Series Air Gateways

Key Features

Benefits for Retail Multisite Buildings