CONNECTING
THE WORLD

Niagara 101

Radu Petrescu
Innon Energy

TRIDIUM

Agenda

hello

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Agenda

- Our story
- How Niagara will help your business
- Motor Control Centre Solutions
- Wireless Monitoring & Control Solutions

Our story

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Our story

The forgotten bottom up story of Niagara

- BMS engineers saw Niagara as liberating their creativity and could not stop using it
- BMS engineers started to suggest the use of Niagara to their managers. It was simply the right thing to do
- More and more projects started to see Niagara being used and more BMS engineers got exposed to using it
- The passion of engineers is what created Niagara and what pushes it forward

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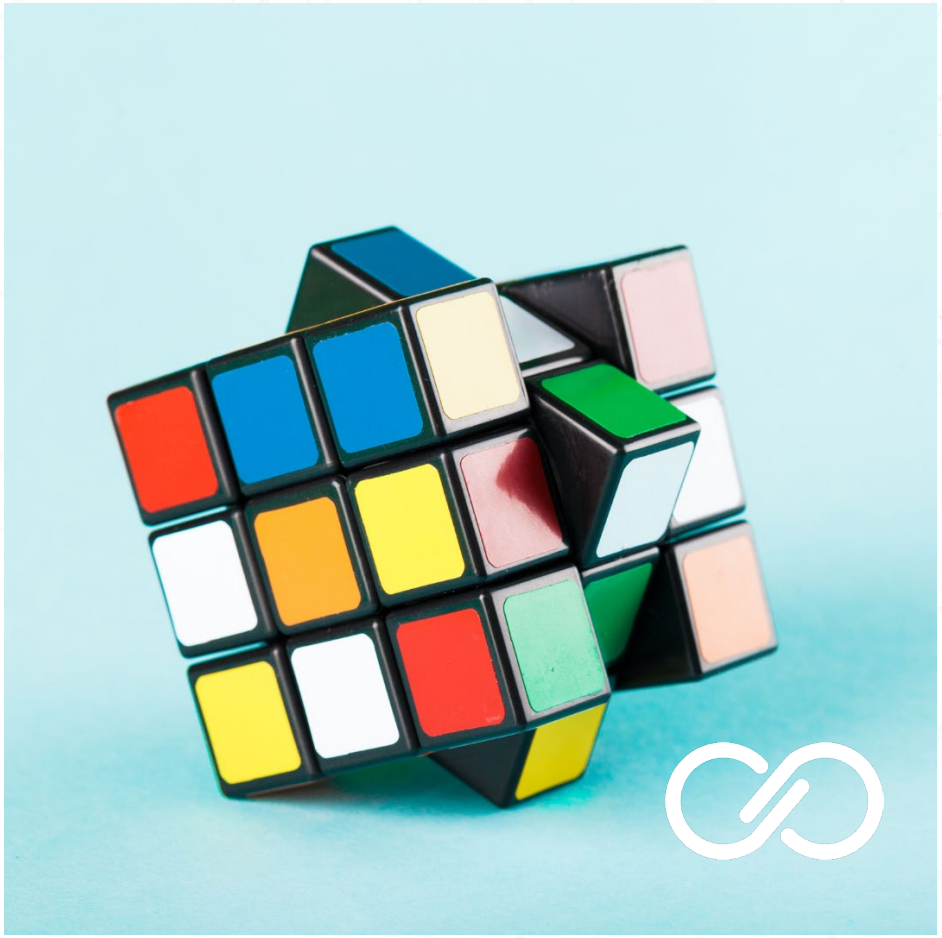
Our story



Our Story

- As BMS engineers we were frustrated by the limitations of proprietary closed solutions.
- We were relentless in our refusal to be restricted by the lack of variety in alternative BMS products.
- Started to distribute carefully selected BMS products, all around the Niagara Framework.
- Today all BMS & IoT engineers are finally able to be their most creative selves and unleash their engineering potential.

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Our story

- We exclusively work with BMS & IoT companies

147

Tridium Partnerships

257

Trading Accounts

127

UK
Tridium Partners

17

EU
Tridium Partners

3

Rest of the World
Tridium Partners

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Our story

- We carefully select our brands

21

Manufacturers

597

Part Numbers

10

UK
Manufacturers

4

EU
Manufacturers

7

Rest of the World
Manufacturers

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Our story

- The only thing exceeding our passion for Niagara is our devotion to our client's success. This is the community.

Trustpilot

Reviews 122 • Excellent

4.8

VERIFIED COMPANY

How Niagara will help your business

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How Niagara will help your business

For End-users

- Proprietary solutions (one brand) traditionally used to be considered the safest option with the lowest lifecycle cost due to quality and backwards compatibility.
- Buildings gets refurbished sooner than most BMS equipment takes to fail. The technology in general simply got better.
- Everything is changing faster than ever before so the BMS needs to be agile and adapt to new requirements.

How Niagara will help your business

For Technology Specifiers

- Not one single manufacturer can possibly cover all BMS needs from end to end. To get the absolute best of technology one needs to combine products from multiple vendors.
- Niagara continuously evolves and makes your solutions future proof when making best use of all the regular updates.
- Stay safe with ‘first in class’ IT Security for peace of mind and resilience.

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How Niagara will help your business

For BMS & IoT Engineers

- Make best use of Niagara's Compatibility & Flexibility to free your creative nature and come up with more of your own solutions.
- Turn your creativity into profitability. Challenge proprietary (one brand) solutions which can be artificially complicated to justify a higher price point.
- Create more unique selling points for your BMS company. Increase the value of your business with your own solutions.

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Motor Control Centre Solutions

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Motor Control Centre Solutions

- Hardwired control and monitoring – MCC control circuits, hardwired control to plant and field devices
- Integration with communicating devices in the MCC and plantroom, e.g. variable speed drives, using various protocols, e.g. Modbus
- User Interface – locally or with site, campus or estate supervisors

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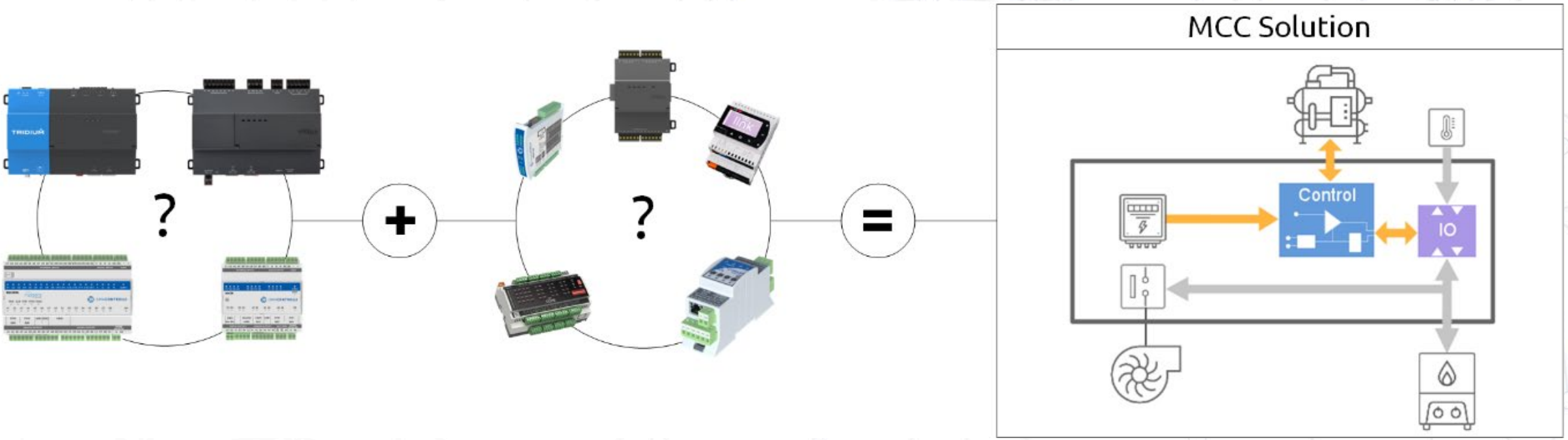
Motor Control Centre Solutions



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BMS Controller and IO Module Options Matrix

I/O Modules ▶	Tridium IO-R-xx	Innon Link IO	Innon Core IO	iSMA MIX/MINI	iSMA SfAR
Protocol & Comms Option Key N Niagara IO B BACnet M Modbus RS RS485 IP Ethernet/TCP/IP	 N RS	 B M RS IP	 M RS IP	 B M RS IP	 M RS
Controllers ▼	Consumes no proxy points	Onboard strategy Touchscreen Web config	Conig. App via BlueTooth 4-20mA direct inputs	Modbus Gateway Ethernet Switch (MIX only)	Active digin reading Pulse memory
Tridium N4 JACE 8000 ✓ Large proxy point count ✓ RS232/485 LON ports ! No onboard IO	✓ Does not consume ✓ proxy points	✓	✓	✓	✓
Tridium N4 Edge 10 ✓ Super-fast boot ✓ Onboard IO ! Limited comms options ! Only 50 proxy points	Max limits = 4 x 16 OR 2 x 34 OR ! 2 x 16 + 34 ✓ Does not consume ✓ proxy points	✓	✓	✓	✓
iSMA N4 MAC36 ✓ Onboard IO ✓ Mbus port option ! No RS232 expansion	✗	✓	✓	✓	✓
iSMA AAC20 ✓ Onboard IO ✓ Mbus or DALI port ! Limited web GUI ! NOT N4 framework	✗	✓	✓	✓	✓

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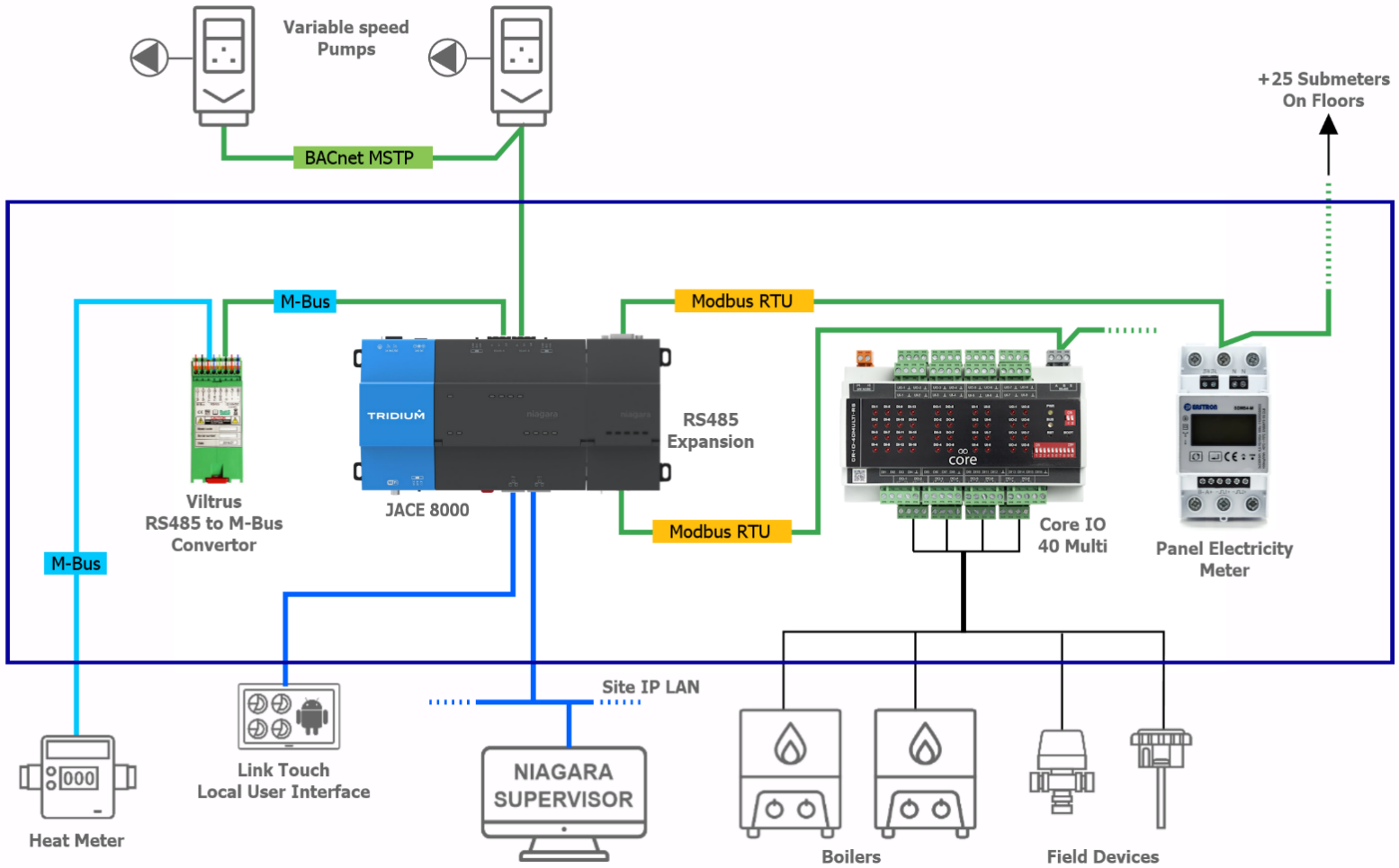
Application Example 1 – JACE 8000 and Core IO



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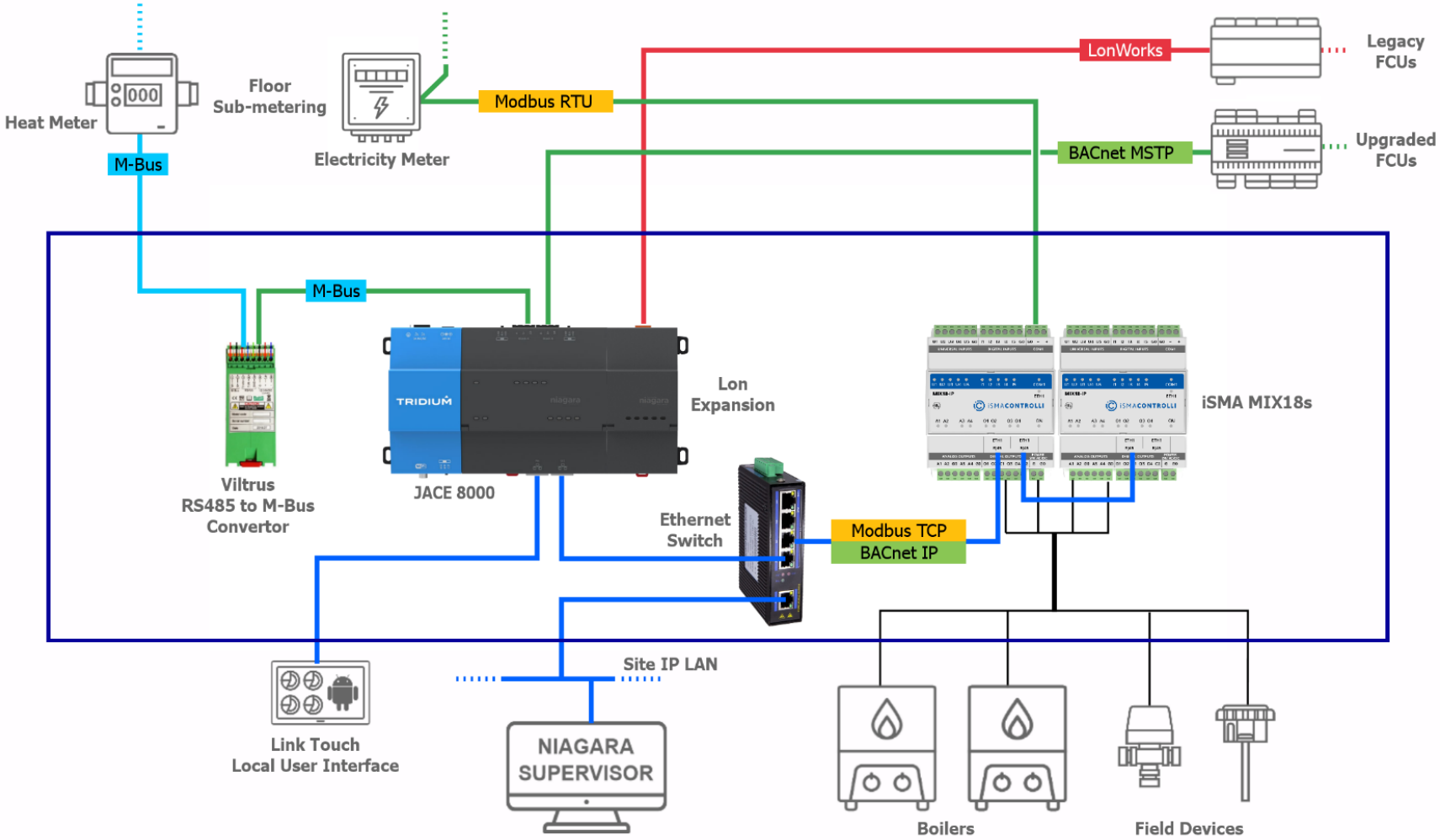
Application Example 2 – JACE 8000 and iSMA IO



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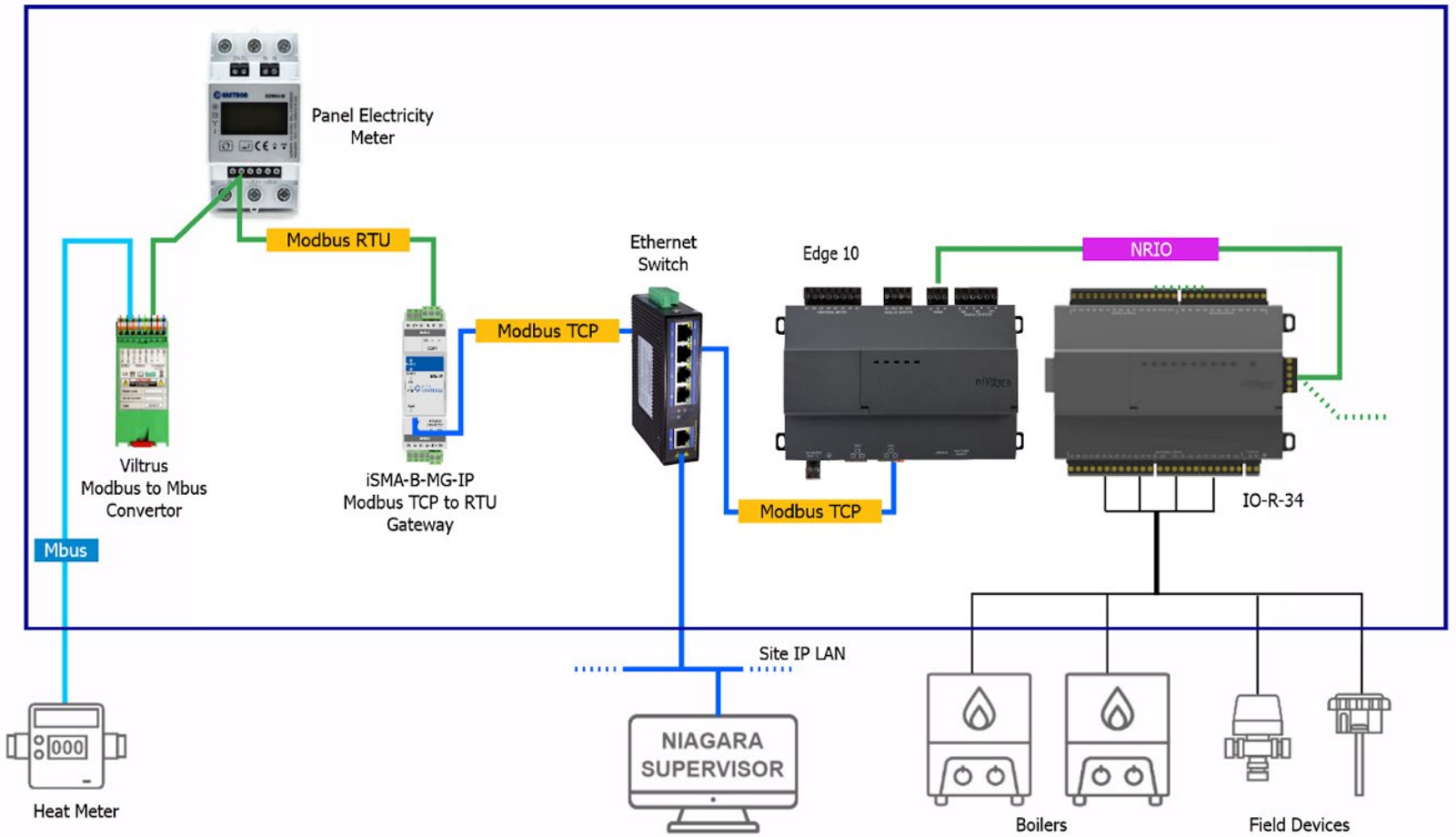
Application Example 3 – Edge 10 and IO-R-xx



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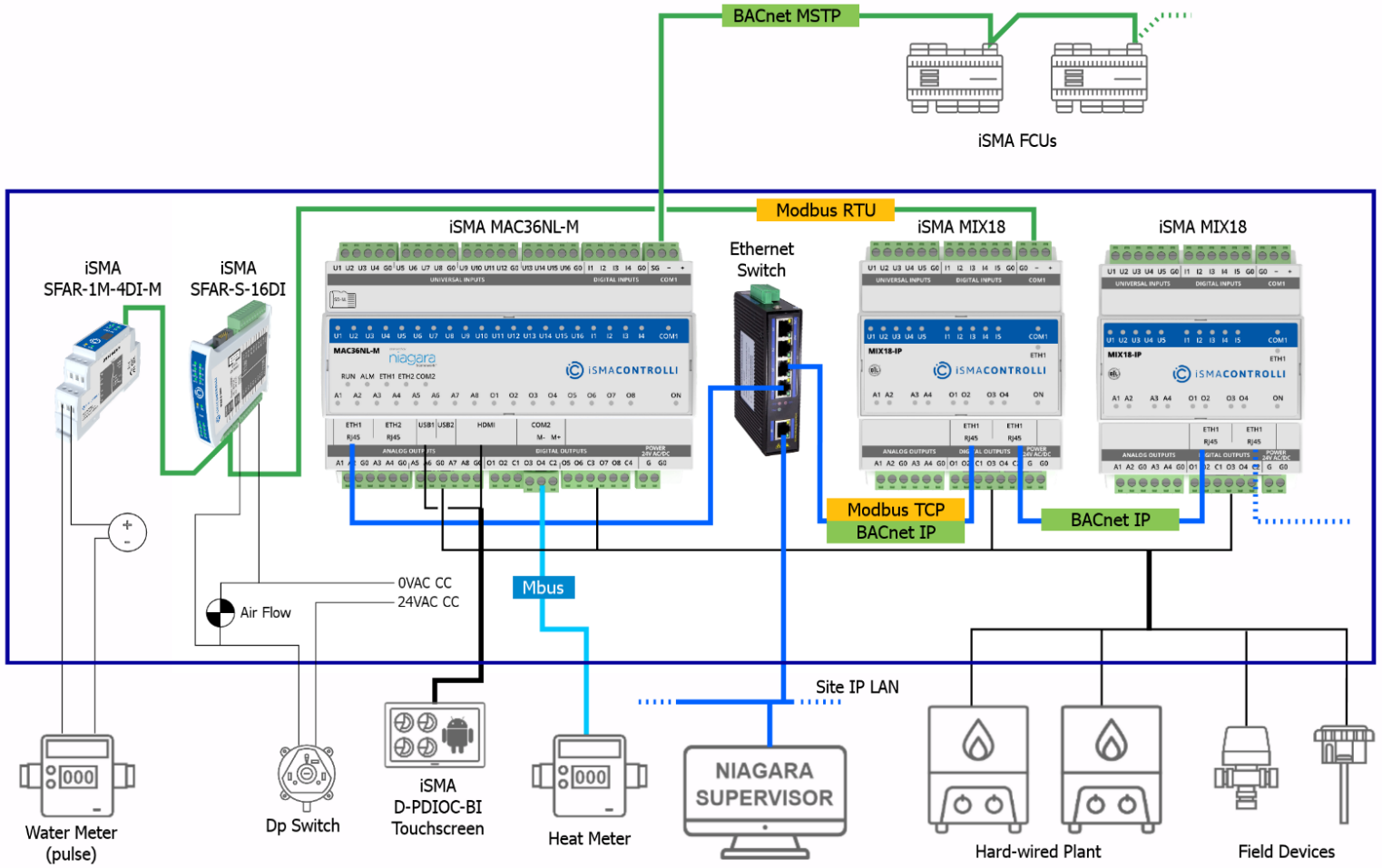
Application Example 4 – iSMA MAC36 and IO



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Wireless Monitoring & Control Solutions

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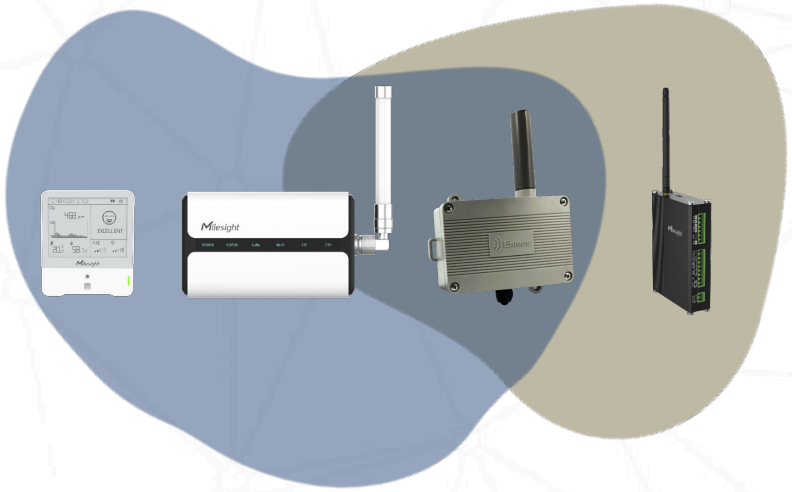
Wireless Monitoring & Control Solutions



- Internal Air Quality Sensing – checking of the environment to ensure people are in a healthy work, study or living environment
- Plant sensing and control – interfacing with various plant to monitor and control using built in detectors or IO interfacing
- Integration of wireless data into the BEMS – gateway and MQTT broker devices to link the field devices to various types of BEMS controllers

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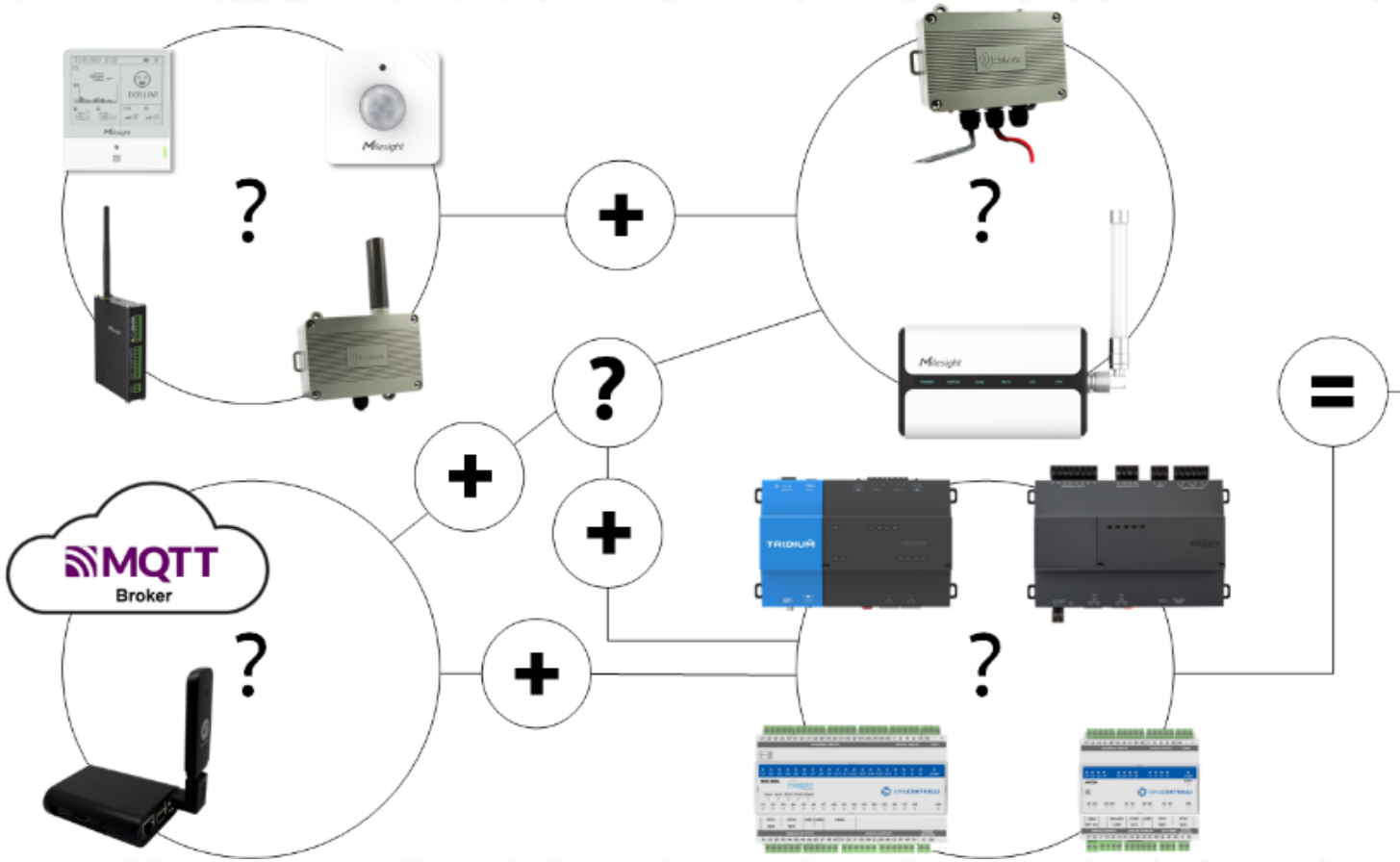
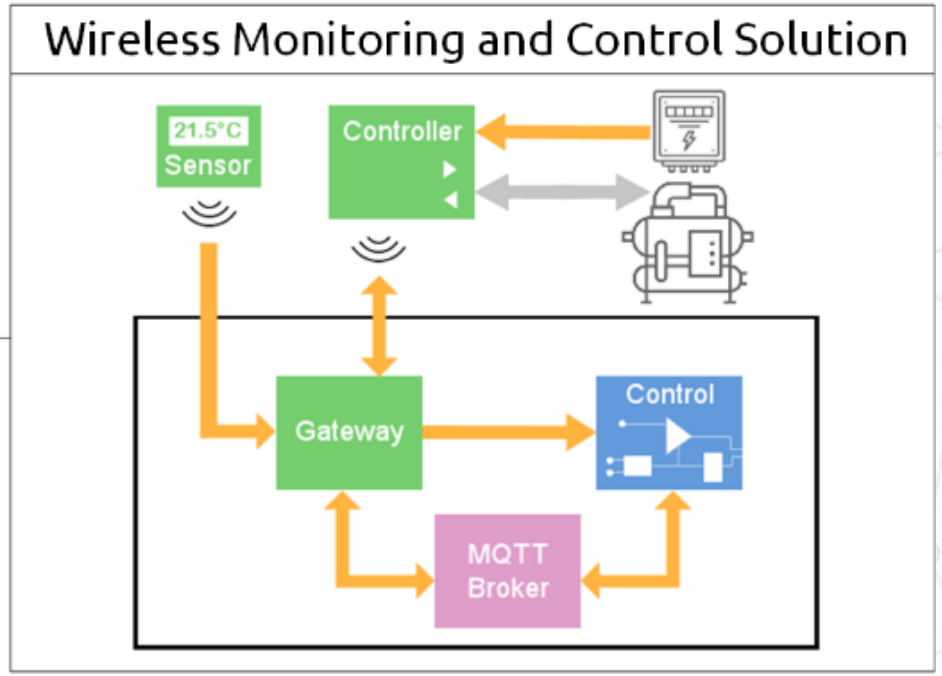
Wireless Monitoring & Control Solutions





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LoRaWAN Transmitters/Receivers Options Matrix

Transmitter Sensors/Devices ▶ / Receivers/Gateways ▼	Milesight	Enless	Others
			?
Milesight UG65	✓	✓	? Testing required case-by-case, limited support
BEMS Interface ▶	HTTPS MQTT BACnet IP	HTTPS MQTT	? Testing required case-by-case, limited support
Enless RX-xxx-500	✗	✓	✗
BEMS Interface ▶		BACnet IP & MS/TP Modbus TCP and RTU	
Other Public/Private Receivers/Gateways ?	✓ Limited support	✓ Limited support	✓ Limited support

Controller Comms Option Possibilities

JACE 8000	Edge 10	MAC36	AAC20
BACnet IP & MS/TP	BACnet IP & MS/TP	BACnet IP & MS/TP	BACnet IP & MS/TP
Modbus TCP and RTU	Modbus TCP and RTU	Modbus TCP and RTU	Modbus TCP and RTU
MQTT		MQTT	
HTTPS		HTTPS	

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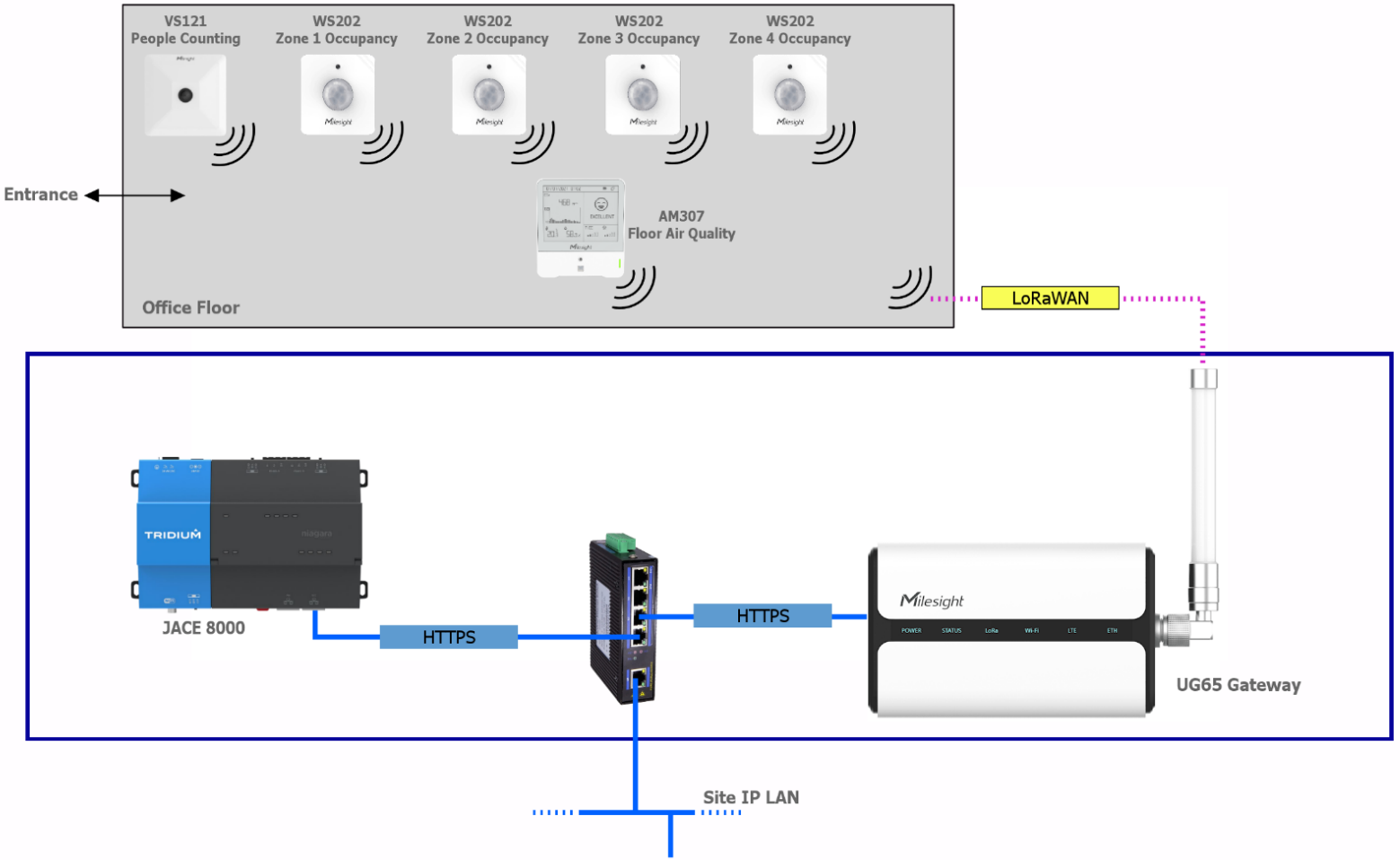
Application Example 1 – Office Space Monitoring



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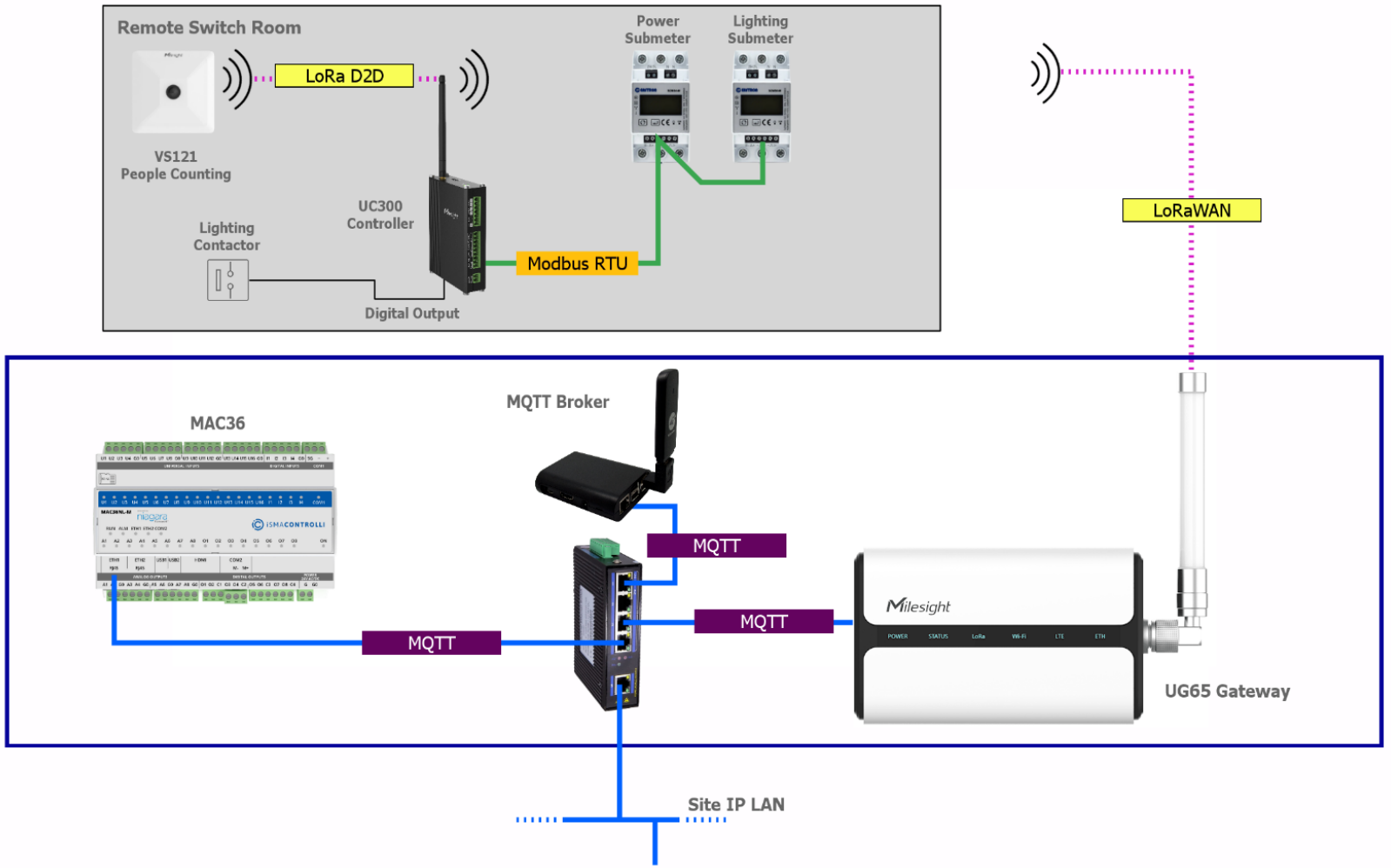
Application Example 2 – Remote Metering & Control



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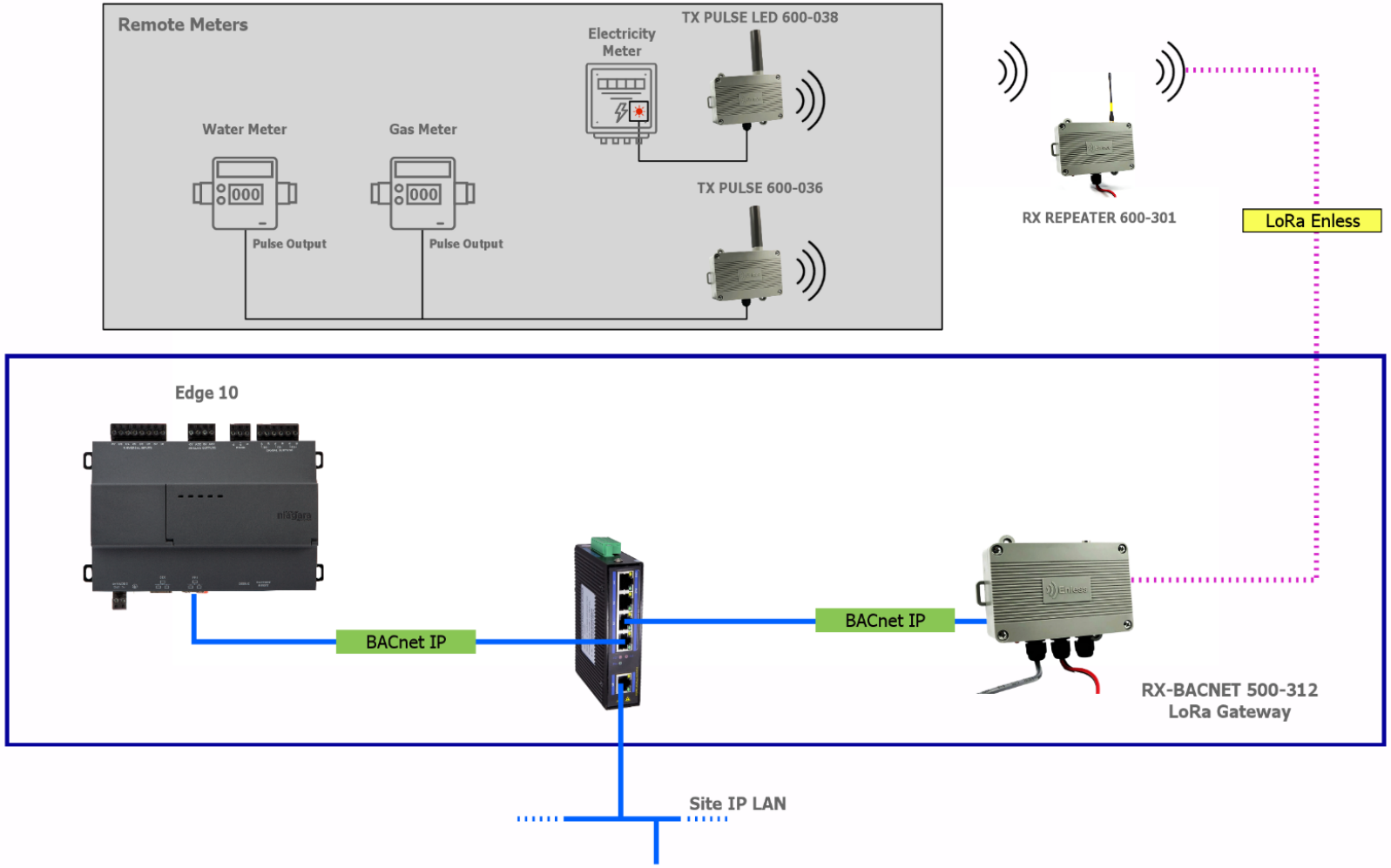
Application Example 3 – Pulse Meter Reading



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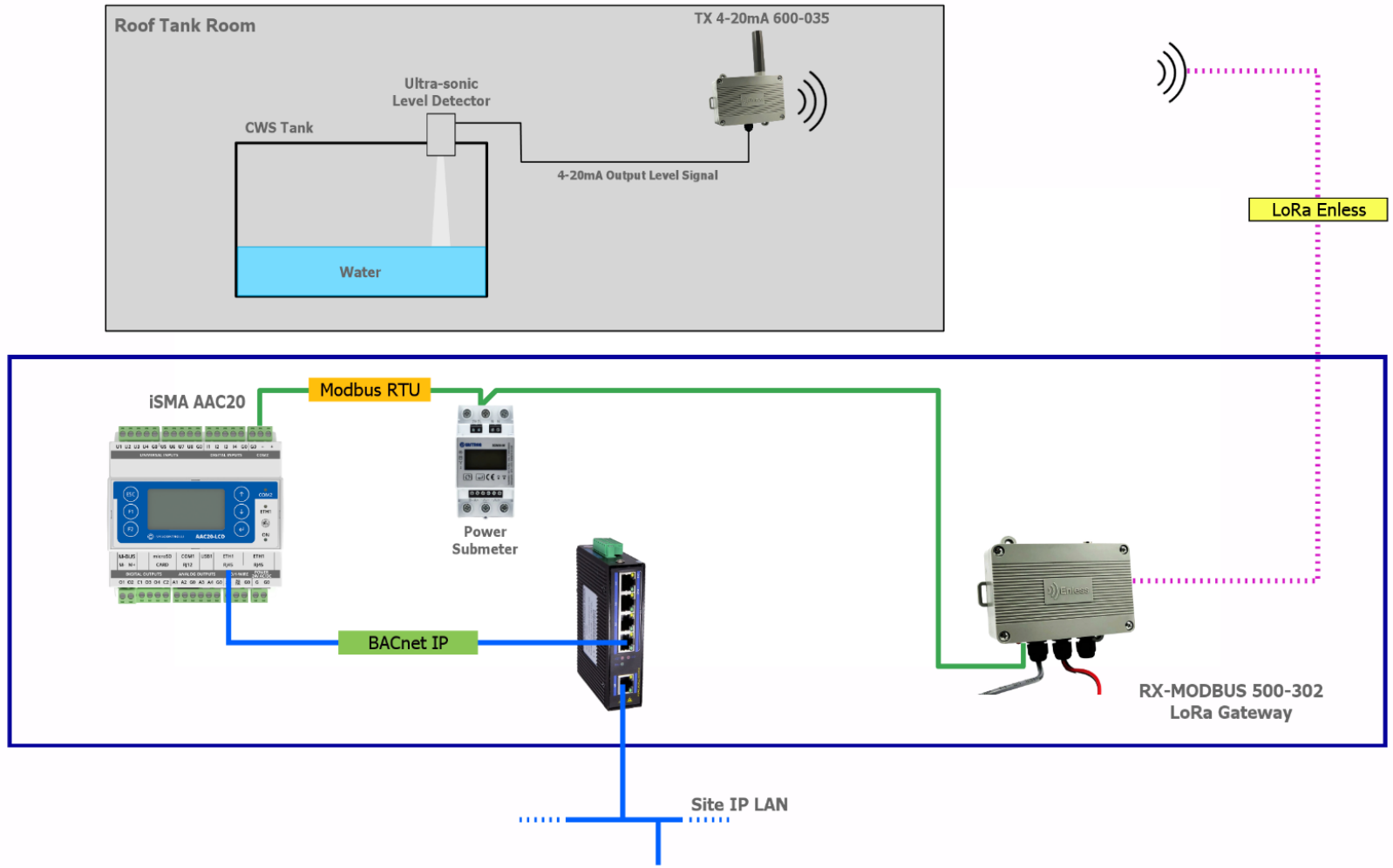
Application Example 4 – Tank Level Monitoring



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Thank you!

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