# RLPAT

Realtime Asset Tracking Solutions

Features

- Real-time Monitoring
- Immediate Threshold & Alarm
- Notification
- Analytics Engine
- Custom Reports with the ability to schedule
- Inventory Management
- Custom Views
- Search Capabilities
- Third-party Device Support
- Scalable
- Space Management
- Intuitive, Graphical Interface
- Key Performance Indicators
- Import/Export Capabilities
- Control Capabilities

General Overview

Asset Tracking is a comprehensive solution encompassing both hardware and software tools designed to facilitate real-time monitoring and tracking of data center assets. It empowers data center operators to enhance operational efficiency and optimize asset planning with detailed visualizations.
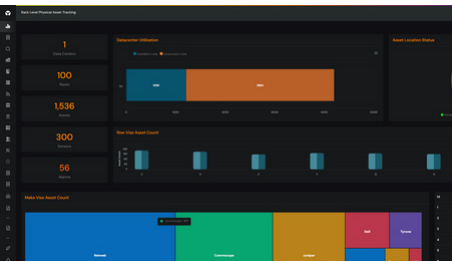
Benefits

- Maximize data center runtime
- Improve efficiency
- Do more with less
- Proactive monitoring
- Make decisions fast
- Visibility to past, present
- Confidence in data accuracy

Implementation

Asset Tracking interface is webaccessible and user configurable, allowing you to create new sites, add devices. Asset Tracking is also backed by a qualified services team that is ready to design and build your system—from turnkey solutions to starter packs, our service team has flexible options to choose from.

How it Works

Asset Tracking uses various protocols to communicate with its hardware to obtain critical data and device location statuses. These values provide alarm notifications and are stored for historic reporting. All statuses and values are displayed within a web browser with HTML graphics, so you can visualize the physical positions of your assets in the datacenter infrastructure.

Solving Problems

Visibility into your data center is often challenging. Effective management requires understanding device health, receiving immediate notifications, monitoring space capacity, collecting accurate data, and reporting key metrics to management. Performing these tasks manually is time-consuming, resourceintensive, and prone to human error. Asset Tracking offers a software and hardware solution to track real-time device locations and streamline these essential functions, ensuring efficient data center management.
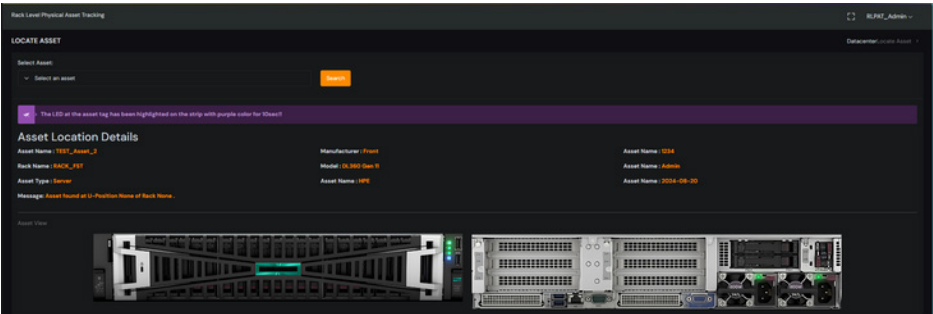
The owner shall furnish the following system components:

- Dedicated server (virtual or standalone) meeting the following requirements:

Requirements	Minimum	Recommended
Operating System	Windows Server 2008 R2 Windows Server 2012 R2 Windows Server 2016 Windows Server 2022	Windows Server 2022
CPU	(Intel or AMD) 2 CPU 2.0 GHz or Higher	(Intel or AMD) ≥4 CPU ≥2.2 GHz or Higher
RAM	4 GB	16 GB
Disk Space	100 GB	≥300 GB
Disk I/)	15 MBps read/write speed	≥200 MBps read/write speed
Network	10/100 MBps	≥1 GBps

- Server may be virtual environment compatible.
- Client access PCs meeting the following minimum requirements:
    - One or more of the following web browsers:
    - Microsoft Edge
    - Mozilla Firefox
    - Google Chrome

Asset Strips

Rack Level Physical Asset Tracking System

Features

- Easy to Program.

- Easy to install.

- Lightweight.

- Communica on is faster.

- Compactable and flexible.

- Led color on the Strip indicates whether the Asset Tag is connected or not.

Applications

- Connect Asset Tag to Rack Monitor.

Description

Asset Strips plays a pivotal role as the intermediary link between the asset tag and the wider system, enabling a smooth and cohesive integration process. With each strip boasting 6 U-levels, there's generous space allocated for accommodating multiple asset tags, ensuring a streamlined and organized setup.
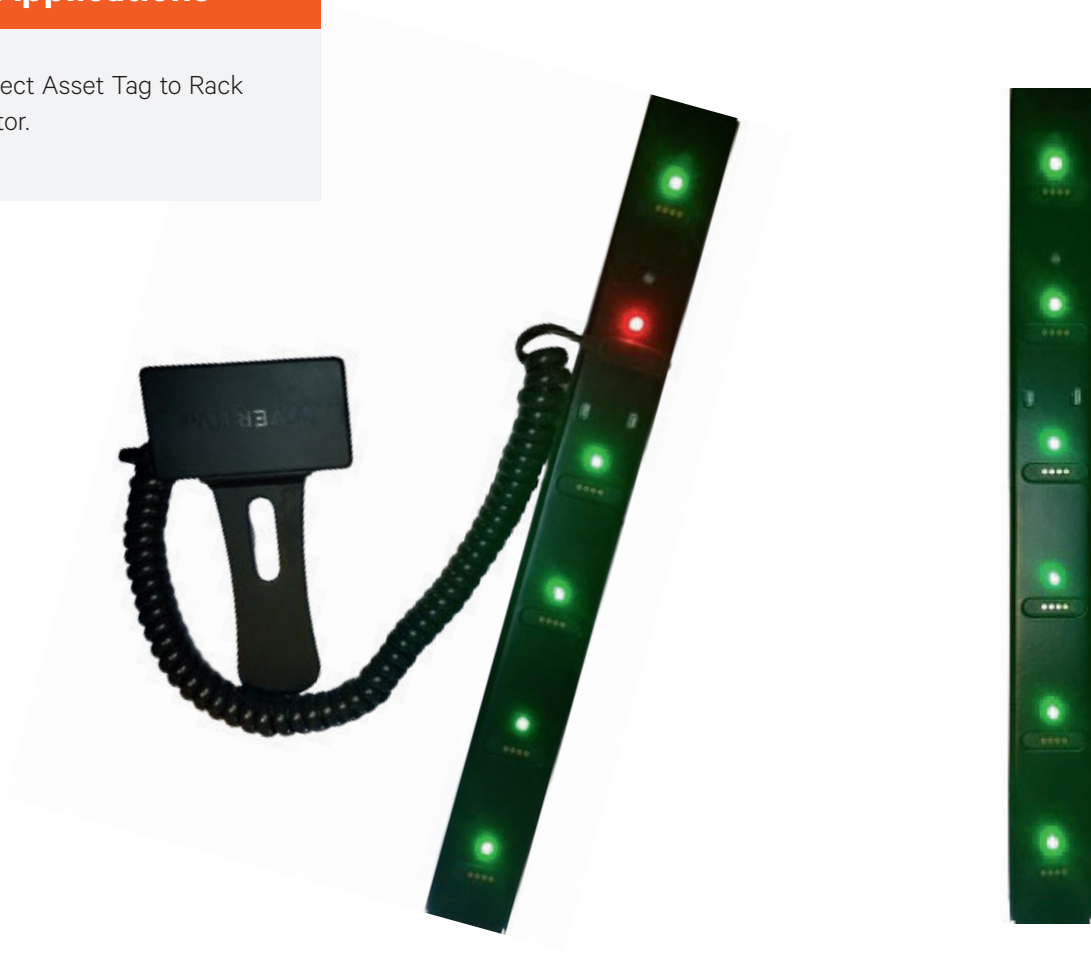
Operating at a voltage of 12V, the strip aligns with common power supply standards, facilitating hassle-free deployment across various infrastructures. Its compatibility ensures seamless integration without the need for additional modifications or power source adaptations.

The communication architecture is intelligently designed to optimize data exchange efficiency. Utilizing the I2C protocol, the asset tag seamlessly interacts with the strip, enabling swift and accurate transfer of vital information. Furthermore, the strip effectively relays this data to the rack monitor using the RS-485 protocol, ensuring reliable and robust transmission over longer distances.

Overall, **Asset Strips** serves as a reliable and efficient connector, equipped with features tailored to enhance the functionality and performance of the asset tracking system within the organization.

Technical document prepared only for qualified integrator's reference

Operating Specifications

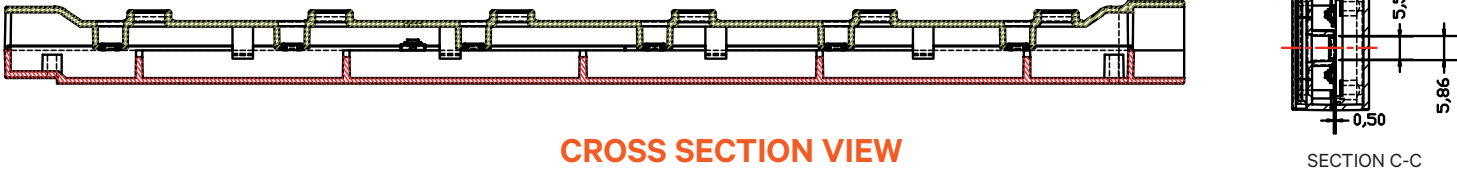|	
Working voltage	12Vdc
Power Consumption	150mA
Temperature	0^0C-25^0C
Communication to Asset Tag	I2C
Communication to Rack Monitor	RS-485
Inter Connection between Strip Connectors	10 pin FRC
Inter Connection with Rack Monitor	Cat 6 CABLE

Asset Strips

Rack Level Physical Asset Tracking System

SIDE VIEW
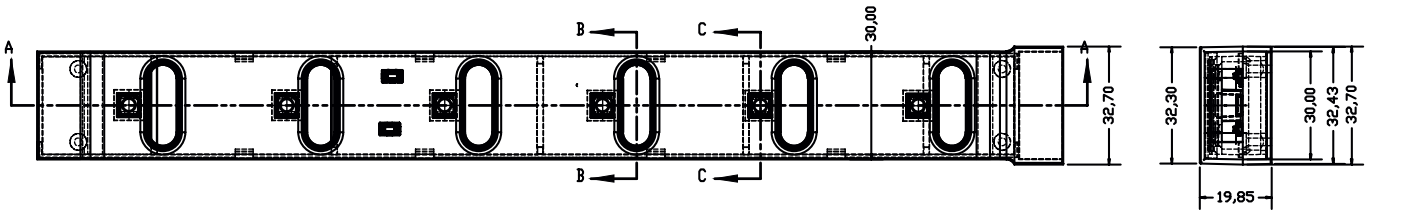
SECTION A-A
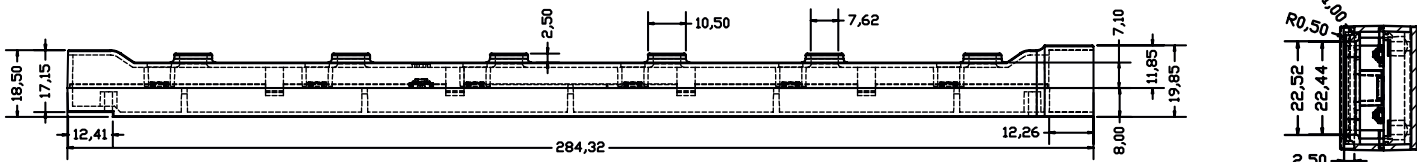
FRONT VIEW

SECTION B-B

CROSS SECTION VIEW

SECTION C-C

ISOMETRIC VIEW

VERTIV
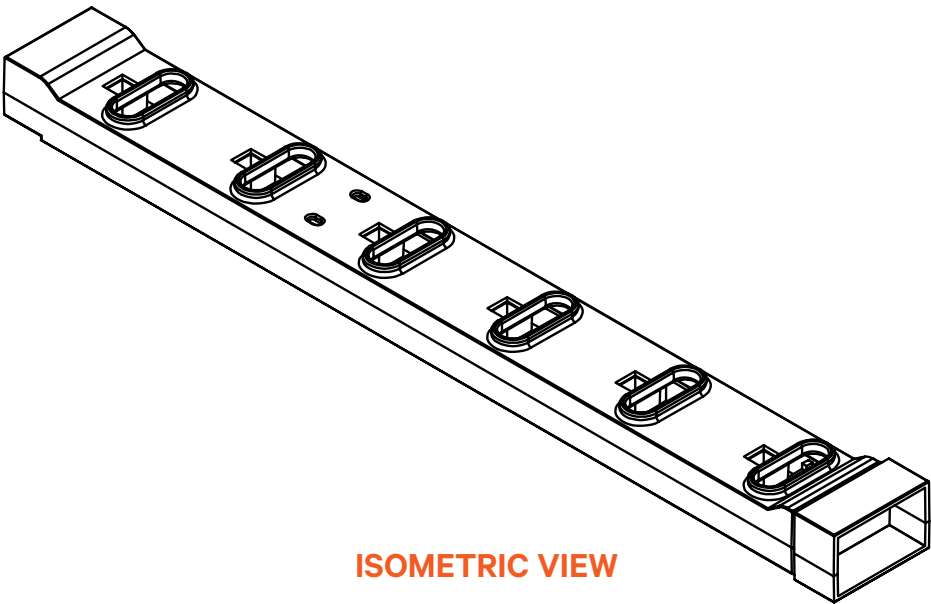
Features

- Flexible and Compact design.

- Easy to use and install.

- Communication is faster.

- Easy to program.

- Easy to power up.

- Lightweight.

Applications

- Data is taken from the Strip.

Description

Rack Monitor, serves as a vital component in the realm of data centre management, server rooms, and other similar environments where efficient monitoring and control of equipment are paramount. Acting as the central hub within the rack infrastructure, it plays a pivotal role in aggregating and managing data from various sensors and peripherals.

The rack monitor orchestrates the seamless flow of information within the rack environment. Data collected from the strip, which includes vital details about connected assets, is relayed to the network through the rack monitor. This centralized data management ensures streamlined communication and enables comprehensive oversight of the entire rack ecosystem.

RACK MONITOR

Notably, the communication protocol employed by the rack monitor varies depending on the connected peripherals. While communication with the strip is typically wired, ensuring robust and reliable data transmission, the temperature sensor communicates wirelessly. This hybrid approach optimizes connectivity, leveraging the strengths of both wired and wireless communication technologies to ensure efficient data transfer while minimizing infrastructure complexity.

Furthermore, the rack monitor's operational requirements include a +12V power supply, ensuring consistent and reliable performance. This voltage specification aligns with standard power configurations commonly found in rack environments, simplifying integration and deployment processes.

In summary, Rack Monitor serves as the central nerve of rack management systems, facilitating efficient data aggregation, communication, and control. With its ability to manage both wired and wireless peripherals and its compatibility with standard power supplies, it stands as a cornerstone of reliability and functionality in modern rack infrastructure
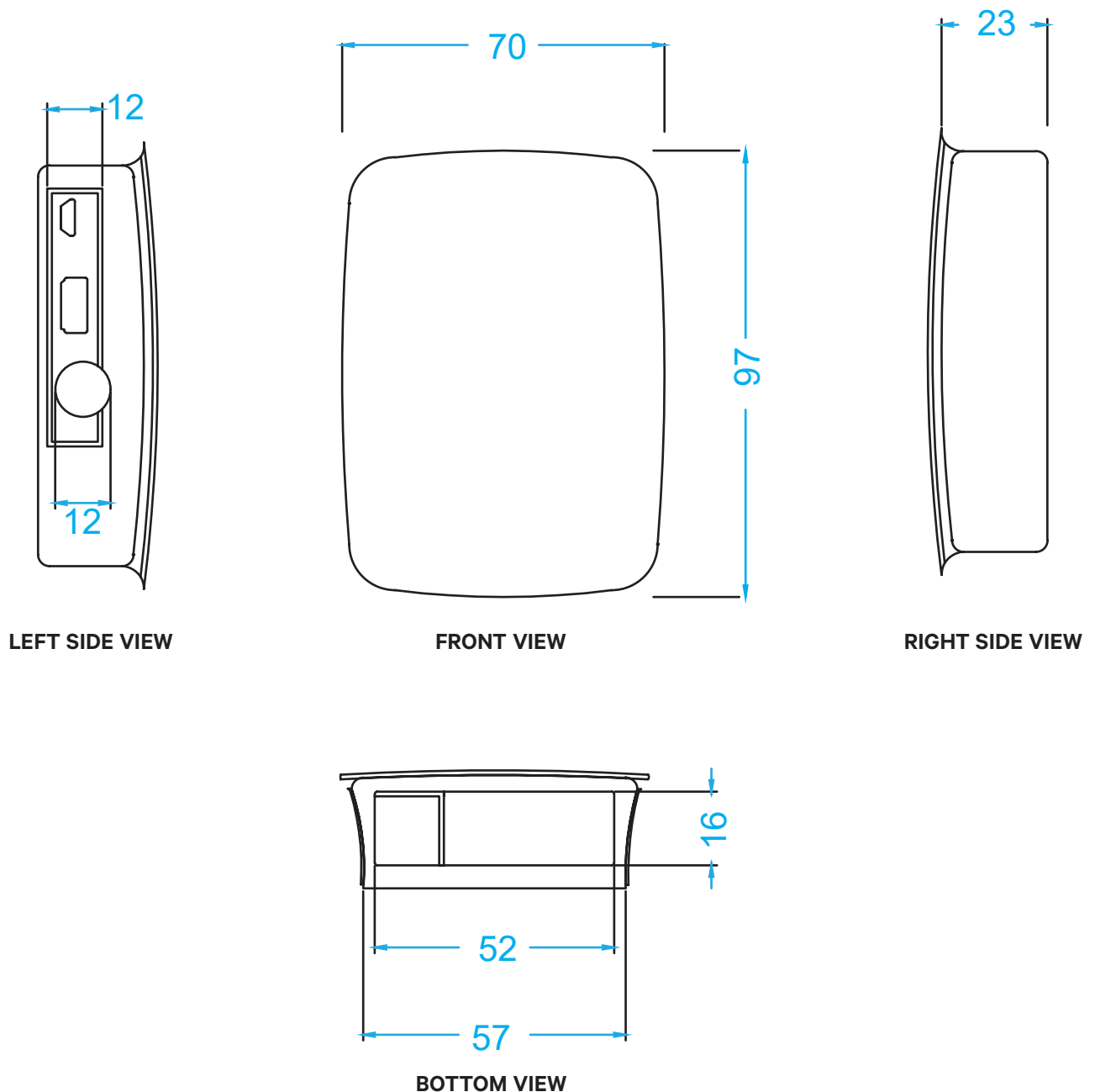
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Rack Monitor

Rack Level Physical Asset Tracking System

Operating Specifications	
Working voltage	+12Vdc
Power Consumption	300mA
Temperature	0^0C-25^0C
Communication to Asset Tag	Cat 6 Cable
Communication to Rack Monitor	12v AC Adapter

Mechanical Information:

LEFT SIDE VIEW

FRONT VIEW

RIGHT SIDE VIEW

BOTTOM VIEW

Typical Application Diagram

Network

Wired MQTT

Wired MQTT

MQTT

RMC

RMC

Tag

Tag

Tag

Tag

Tag

Tag

Strip

Strip
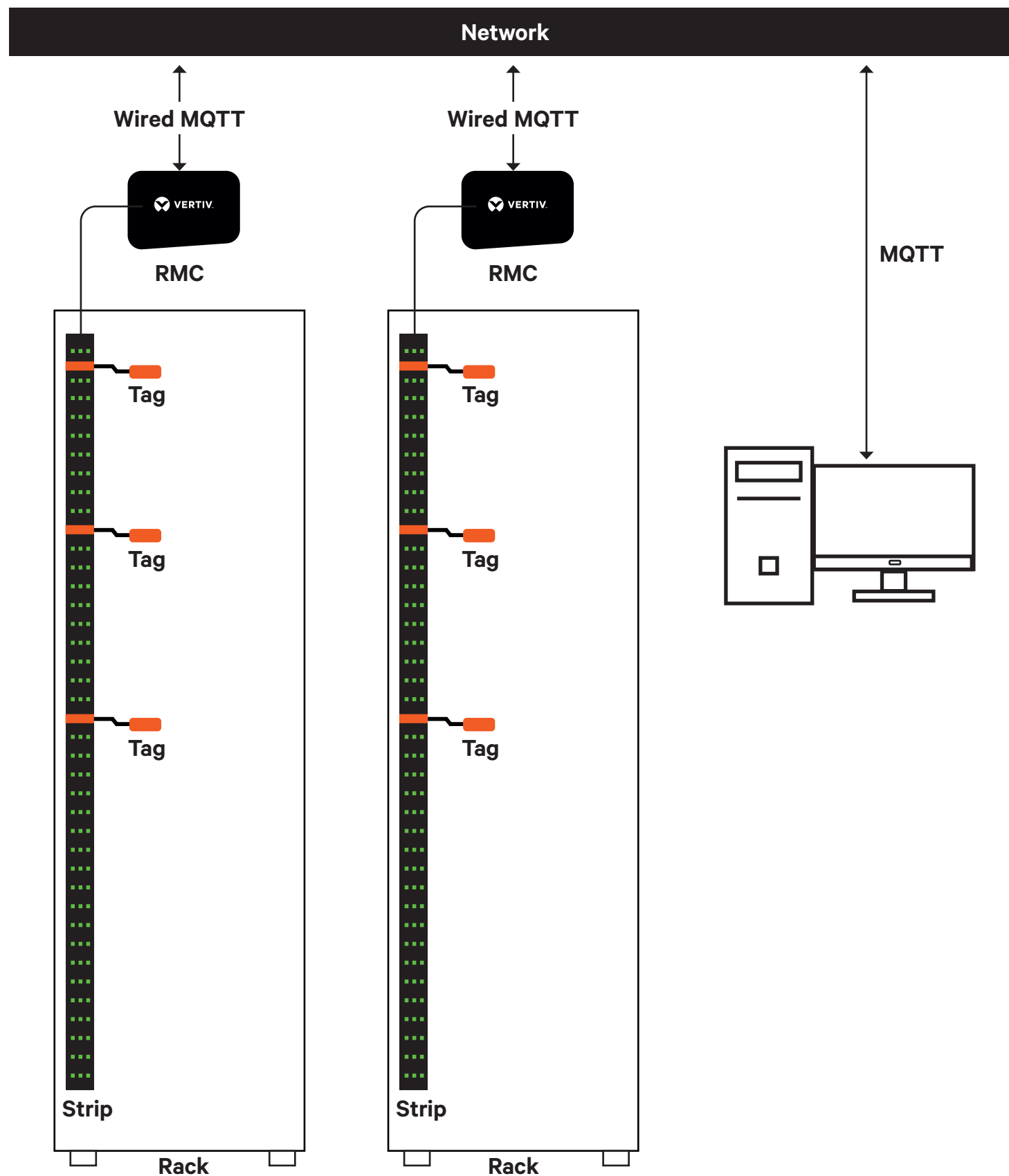
Rack

Rack

Asset Tag
Rack Level Physical Asset Tracking System

Features

- Easy to Program.
- Easy to install.
- Lightweight.
- Communica

Applications

- Identify the Physical Asset

Connector Details

Connector name J3

·+Ve	-	+5V
·A	-	Data
·B	-	Clock
·-Ve	-	Ground

Description

An asset tag serves as a distinctive identifier allocated to physical assets within an organization, aiding in their efficient management and tracking. These tags commonly manifest as labels or stickers, meticulously crafted to encapsulate pertinent information about the associated asset, such as its serial number, location, or usage history.

Noteworthy is the operational voltage of the asset tag, set at 5V ensuring compatibility with standard power supplies commonly found in organizational settings. Moreover, the asset tag seamlessly communicates with Strip via the I2C protocol, facilitating streamlined integration with existing systems and enhancing data exchange efficiency.

Furthermore, one of the standout features of the asset tag is its lightweight design, which not only simplifies installation but also minimizes any additional burden on the asset it is affixed to. This characteristic, coupled with its user-friendly nature, renders the asset tag easy to handle, thereby optimizing the overall asset management process within the organization.
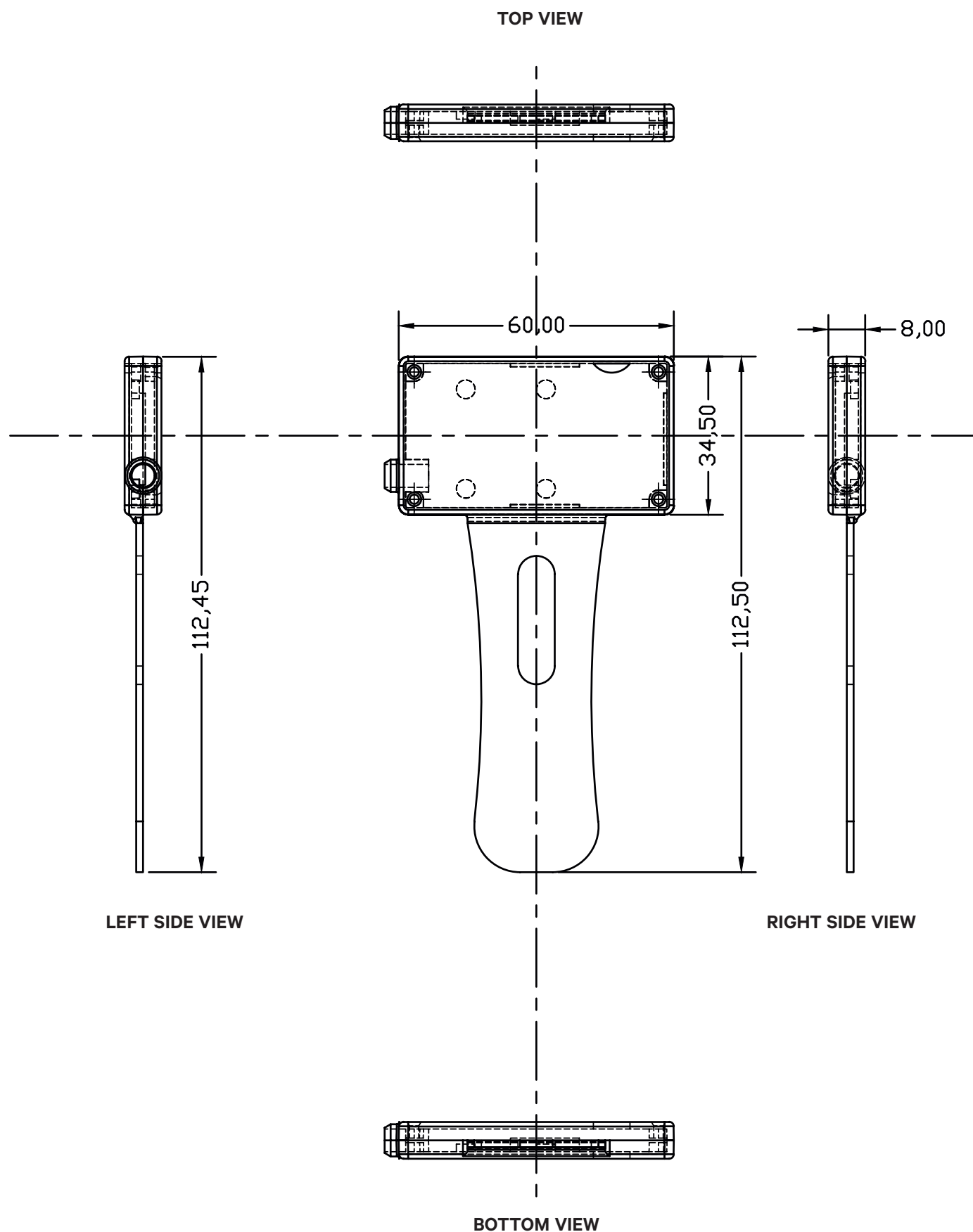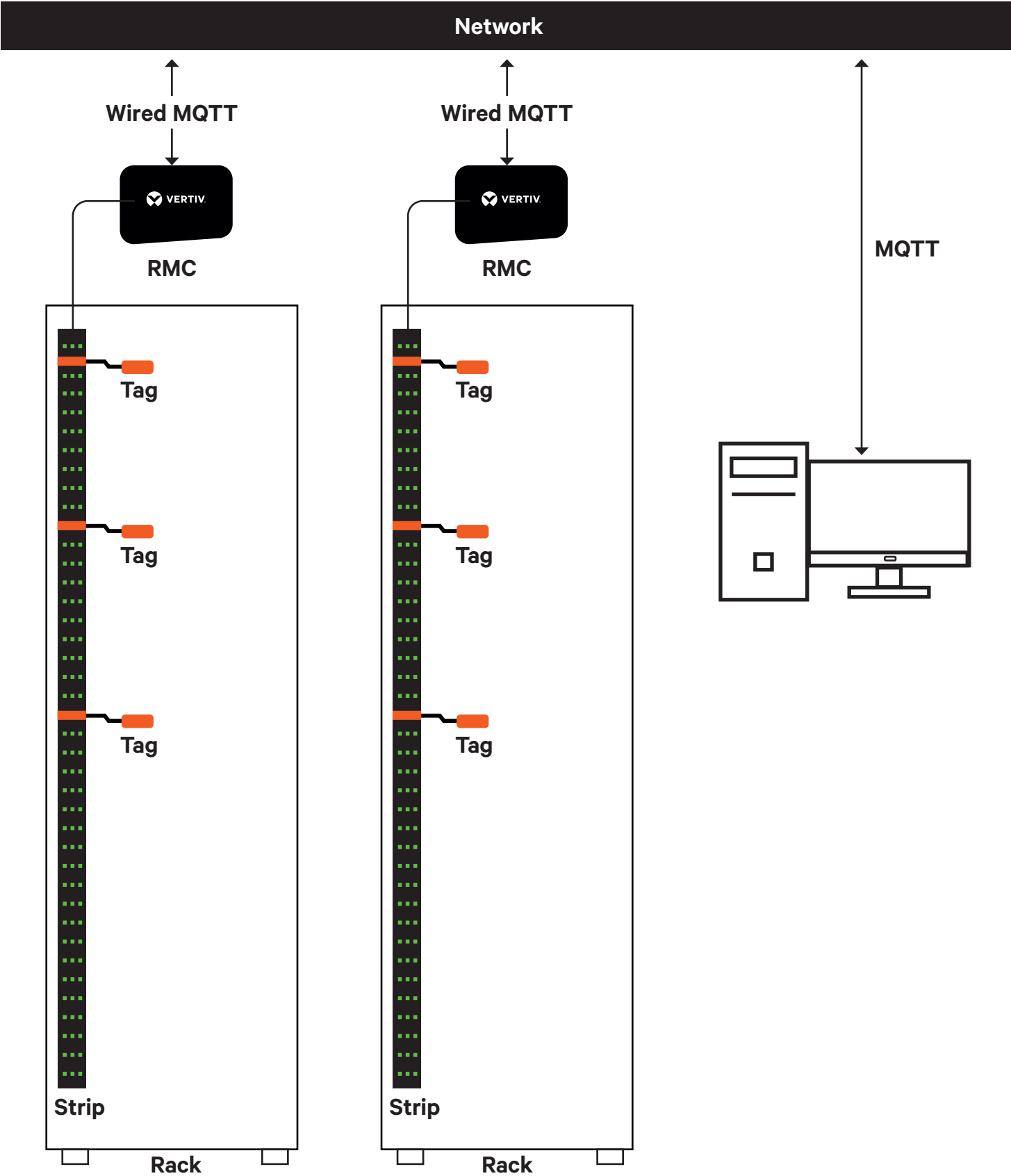
RACK MONITOR

Operating Specifications	
Working voltage	5Vdc
Power Consumption	3mA
Temperature	0⁰C-25⁰C
Communication	I2C
Inter Connection	Spiral Cable with Magnetic Connector

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Mechanical Information:

TOP VIEW

60,00

8,00

34,50

112,45

112,50

LEFT SIDE VIEW

RIGHT SIDE VIEW

BOTTOM VIEW

Typical Application Diagram

Network

Wired MQTT   Wired MQTT   MQTT

VERTIV   VERTIV

RMC   RMC

Tag   Tag

Tag   Tag

Tag   Tag

Strip   Strip

Rack   Rack

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