TELTONIKA | Networks

CONNECTIVITY BROUGHT TO LIFE

Use case catalog 2023/2024

A WORLD OF INTERCONNECTIVITY

At the heart of technological innovation is the interconnection of all things. An Internet of Things. Teltonika Networks is proud to expertly facilitate this robust connectivity in every industry and sector, creating the landscape of IoT and M2M communication via the ingenuity of our partners' networking solutions.

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INDUSTRIAL & AUTOMATION

Industry 4.0 is inseparable from IoT. Manufacturers, integrators, and engineers worldwide choose Teltonika Networks devices to enable Industrial solution, encompassing automation, AI, robotics, M2M communication, and predictive maintenance.
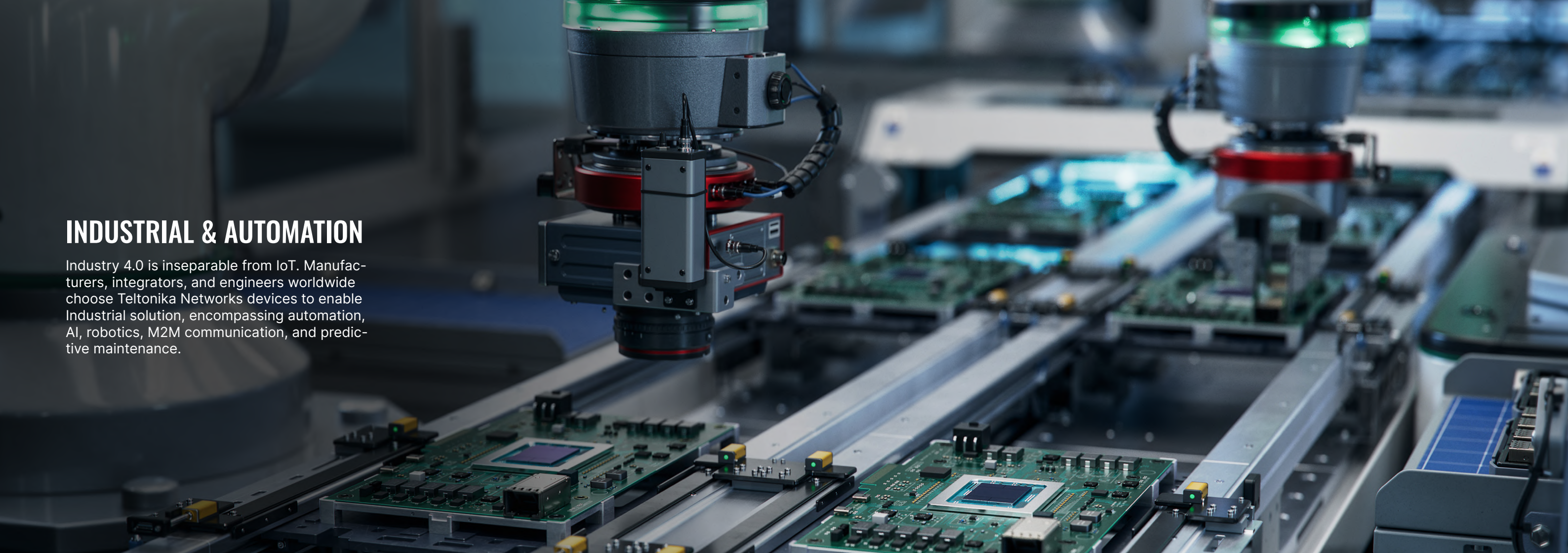
AUTOMATING & REMOTE MANAGING MINE EQUIPMENT ACROSS AUSTRALIA

Product

RUT956 is a dual SIM cellular router with auto-failover and a wide range of protocol support, including RS232 and RS485.

In partnership with

TERRAVISION

Highlights

– **TerraVision** is an Australian industry leader in real-time fleet management tracking, reporting, and information systems.

– Its mine equipment automation and remote management solution, the BluePipe Smart Mine system, requires robust, dependable, and customisable cellular connectivity in remote areas.

– Providing this connectivity is the RUT955 industrial cellular router of Teltonika Networks. By allowing TerraVision to install custom software on the device, RUT955 helps automate mining operations by enabling the remote management and control of on-site equipment and proactive maintenance.

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION

REMOTE SUPERVISOR

INTERNET

BLUEPIPE SMART MINE APPLICATION

4G LTE   4G LTE

RUT956   RUT956   RUT956   RUT956   RUT956

SMARTMINE HUB   SMARTMINE HUB   SMARTMINE HUB   SMARTMINE HUB   SMARTMINE HUB

IP SURVEILLANCE CAMERAS

GENERATOR

BOOM GATES

WATER PUMP TRAILER

LIGHTING TRAILER

CROSS-INDUSTRY MONITORING CLOUD SOLUTION

Product

RUT241 is a compact cellular router, providing Cat 4 connectivity with WAN failover and 2 Ethernet ports.

In partnership with

AXIMA SOLUTIONS

WERMA®

Highlights

– **Werma** is a German leader in intelligent signal technology, providing advanced signal solutions that optimise work processes and ensure their effectiveness.

– **Axima** is its distributor in the Czech Republic, specialising in industrial automation supplies for the advancement of industrial development.

– Their solution, WeAssist, is a cross-industry cloud solution for aggregating signals and establishing a comprehensive automated monitoring system.

– Stability and adaptability are key factors in this solution, so RUT241 was chosen to provide reliable connectivity with expertise and help WeAssist realise its full potential.

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION

RUT241 · 4G LTE · INTERNET · CLOUD PLATFORM · MAINTENANCE ALERTS

GATEWAY · ANDON-BOX · IO-BOX · SIGNAL LIGHTS · SIGNAL LIGHTS · MACHINE · CONVEYOR BELT · MACHINE · WORKER

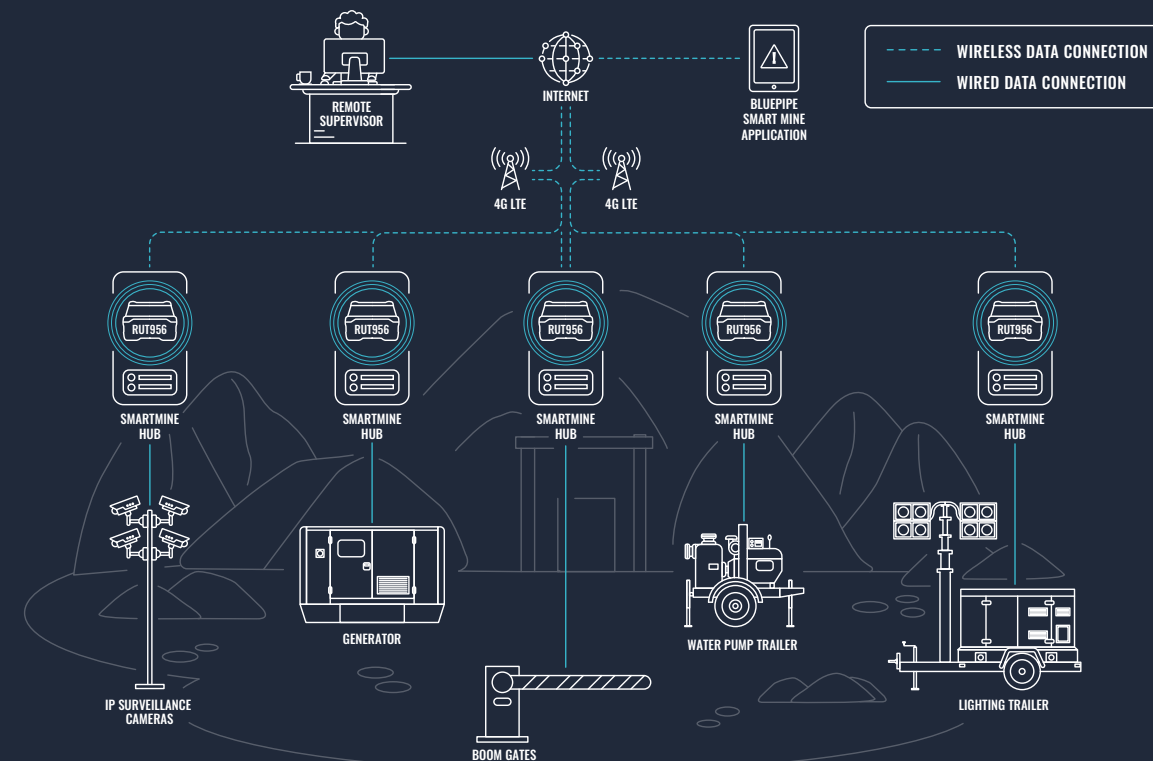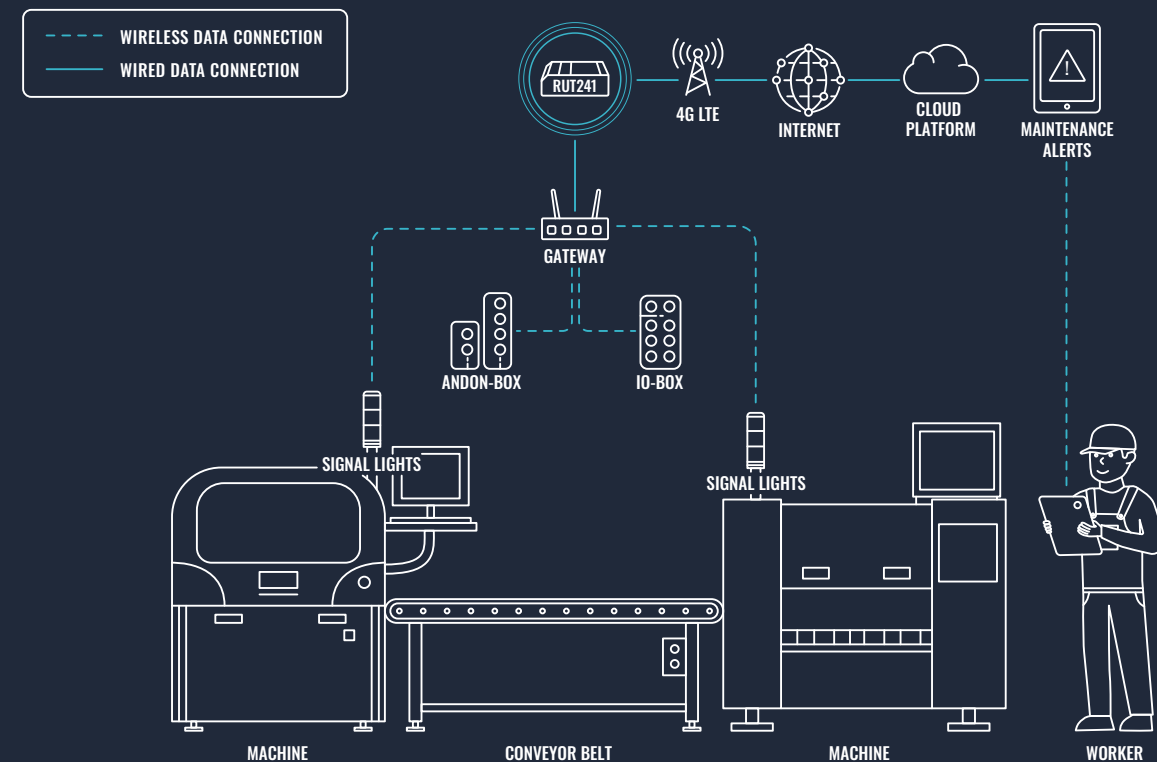# EASY & CUSTOMISABLE REMOTE CAPABILITIES FOR SIEMENS PLCS

Product

RUT956 is a dual SIM cellular router with auto-failover and a wide range of protocol support, including RS232 and RS485.

In partnership with

MASTER CHIPS

Highlights

– **Master Chips** is a distributor of electronic components in the Belgian and Dutch markets with over 30 years of market experience. It maintains a strong focus on IoT and M2M communication and connectivity.

– Enabling remote capabilities to Siemens PLCs requires costly licenses. Seeing this growing market need, Master Chips set out to create a solution that would bypass this restriction.

– With some help from our R&D team, Master Chips developed a customised Python code for our RUT955 that provides end clients with easy, direct, and fully-customisable remote access to and management capabilities of Siemens PLCs.

VPN — RMS VPN

RMS

CUSTOM PYTHON CODE

4G LTE

SIEMENS — SIEMENS PLC

RUT956

4G LTE

INTERNET

PROGRAMMABLE REAL-TIME ALERTS

MANUFACTURING LINE

WIRED DATA CONNECTION
WIRELESS DATA CONNECTION
RMS VPN CONNECTION
CUSTOM PYTHON CODE
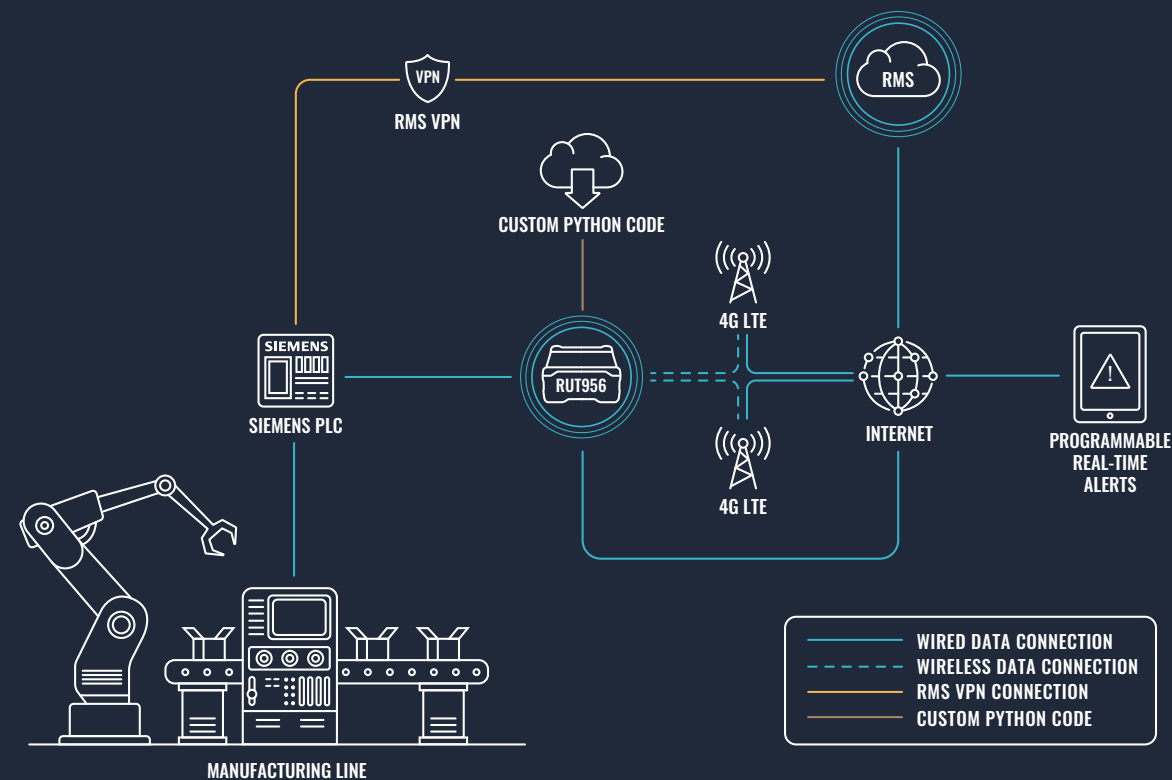
MANAGED SWITCH FOR SUPERIOR CAR MANUFACTURING PRECISION

Product

TSW212 is an L2 managed switch with 8 Ethernet ports, 2 SFP ports, and protocol support including Profinet, MRP, and more.

Highlights

– Car manufacturing facilities can achieve utmost performance primarily through automation. Their equipment demands robust network connectivity, but must also be continuously and precisely controlled and monitored at all times.

– The TSW212 managed switch is the puzzle piece completing this challenge, seamlessly integrating all facility equipment into one cohesive system and providing granular network management through its port management and QoS features.

– With support of protocols like EtherNet/IP, Profinet, and MRP, this managed switch facilitates automated data processing and supports MRP systems for establishing ring topologies between devices, which are essential for reducing the risk of production delays to the minimum.
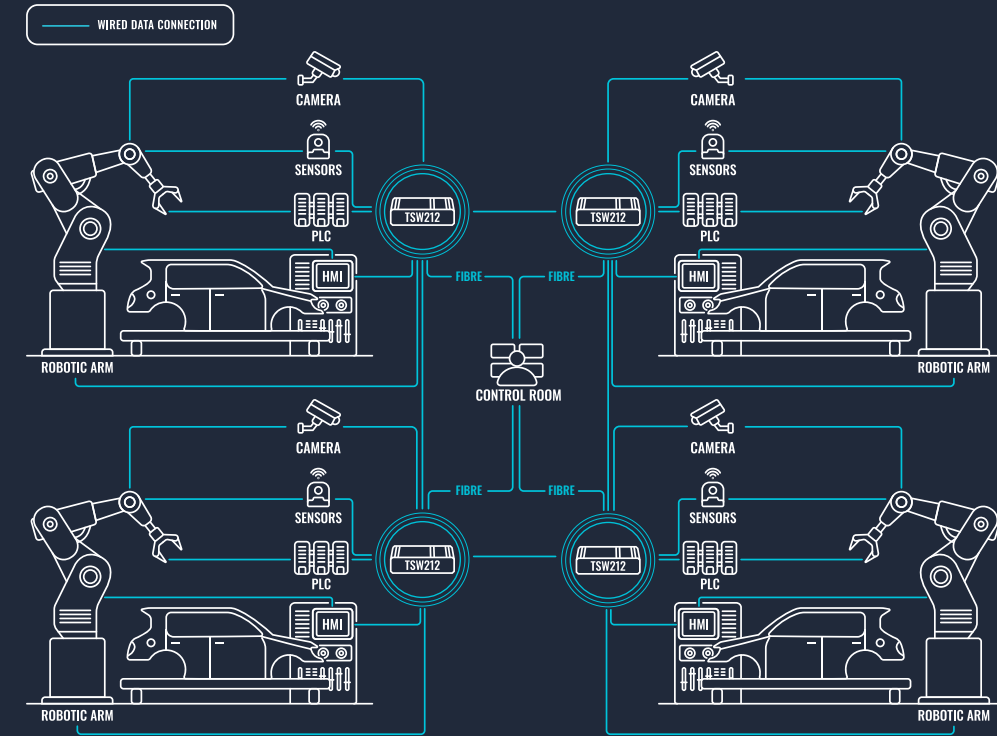
GLOBAL PREDICTIVE MAINTENANCE BY PREMAS

Product

RUT241 is a compact cellular router, providing Cat 4 connectivity with WAN failover and 2 Ethernet ports.

In partnership with

PREMAS
Progress matters.

Highlights

– **Premas** is a Swiss start-up with a dedicated predictive maintenance solution set to adapt to a wide range of manufacturing machines and help manufacturers distinguish themselves in a saturated and stagnating market.

– For its solution to work seamlessly and on a global scale, a stable Internet connection is a must. To that end, it chose to incorporate our RUT241 industrial cellular router in the solution.

– RUT241 enables this solution by delivering a stable Internet connection on top of a bevy of added features. Safe from hiccups and interruptions, Premas's solution successfully enhances and optimises the manufacturing maintenance process while reducing costs.

ANALYTICAL SYSTEM — PREMAS CLOUD — INTERNET — RMS

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION

RUT241
IoT GATEWAY
IO MODULE
SENSOR
PLC

THE LARGE HADRON COLLIDER'S SPY BUG

Product

RUT956 is a dual SIM cellular router with auto-failover and a wide range of protocol support, including RS232 and RS485.

In partnership with

CERN

supplier

Highlights

– **The European Organisation for Nuclear Research** (CERN) is the world's top physics research organisation, working tire-lessly to uncover the mechanics of the universe while creating and implementing cutting-edge technologies in pursuit of that goal.

– In order to provide real-time monitoring of environmental conditions within its Large Hadron Collider, CERN needed a connectivity device to be part of its innovative Train Inspection Monorail (TIM).

– CERN chose our RUT956 cellular router for this important role. Its combination of low power consumption, connection stability with added security features, and a versatile array of I/Os make the RUT956 the perfect fit to be added to TIM's core.

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION

CAMERA
RUT956
SENSOR SENSOR SENSOR
4G LTE
4G LTE
INTERNET
CERN INTERNAL SYSTEM
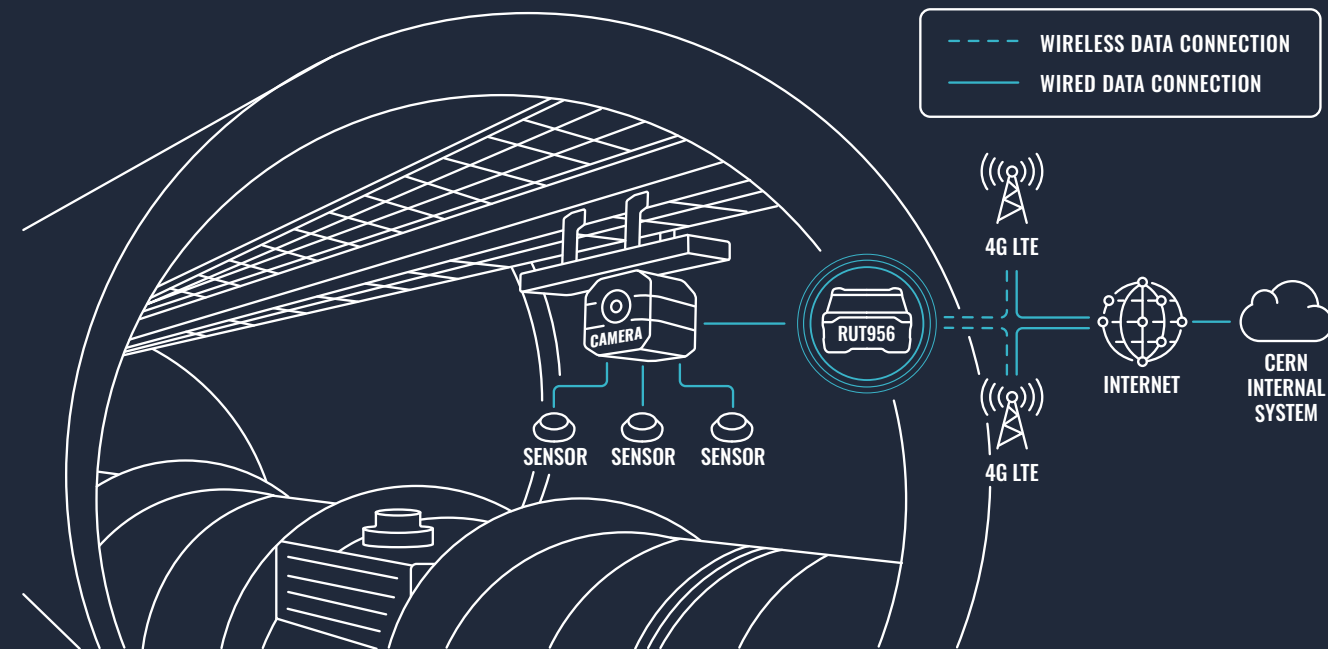
ENERGY & UTILITIES

Energy efficiency is the infrastructure of the future. From fleets of submetering systems and lift stations to far-reaching wind and solar farms, Teltonika Networks products are the connectivity lifeblood of efficient energy and utility operations.

CONNECTIVITY FOR CIRCULAR BATTERY ENERGY STORAGE SYSTEMS

Product

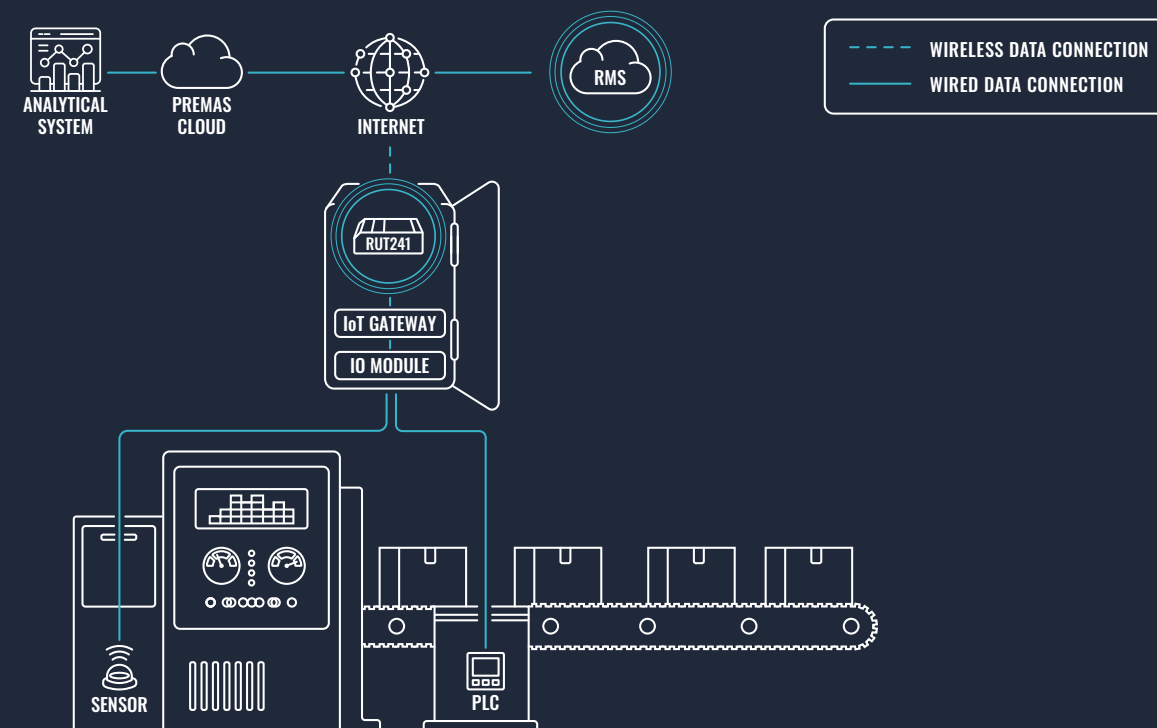RUT241 is a compact cellular router, providing Cat 4 connectivity with WAN failover and 2 Ethernet ports.

In partnership with

WATT4EVER
BATTERIES FOR LIFE

Highlights

– **Watt4Ever** is a Belgian provider of affordable, sustainable, and local battery energy storage systems driven by a circular economy.

– To maintain the optimal safety and security of these systems, a network connectivity device must be included in the solution.

– Accomplishing this goal is the combination of our RUT241 cellular router and TSW110 Ethernet switch – guaranteeing seamless, uninterrupted data flow between solution and control centre.

WIRED DATA CONNECTION
WIRELESS DATA CONNECTION

CONTROL CABINET

RASPBERRY PI

PLC

TSW110

RUT241

4G LTE

INTERNET

SENSOR

INVERTER   HMI

SENSOR

REAL-TIME ALERTS

WATT4EVER REMOTE MONITORING AND CONTROL PLATFORM

DATA ANALYTICS

CONNECTIVITY FOR ENERGY STORAGE SYSTEMS ACROSS AUSTRALIA

Product

RUT241 is a compact cellular router, providing Cat 4 connectivity with WAN failover and 2 Ethernet ports.

In partnership with
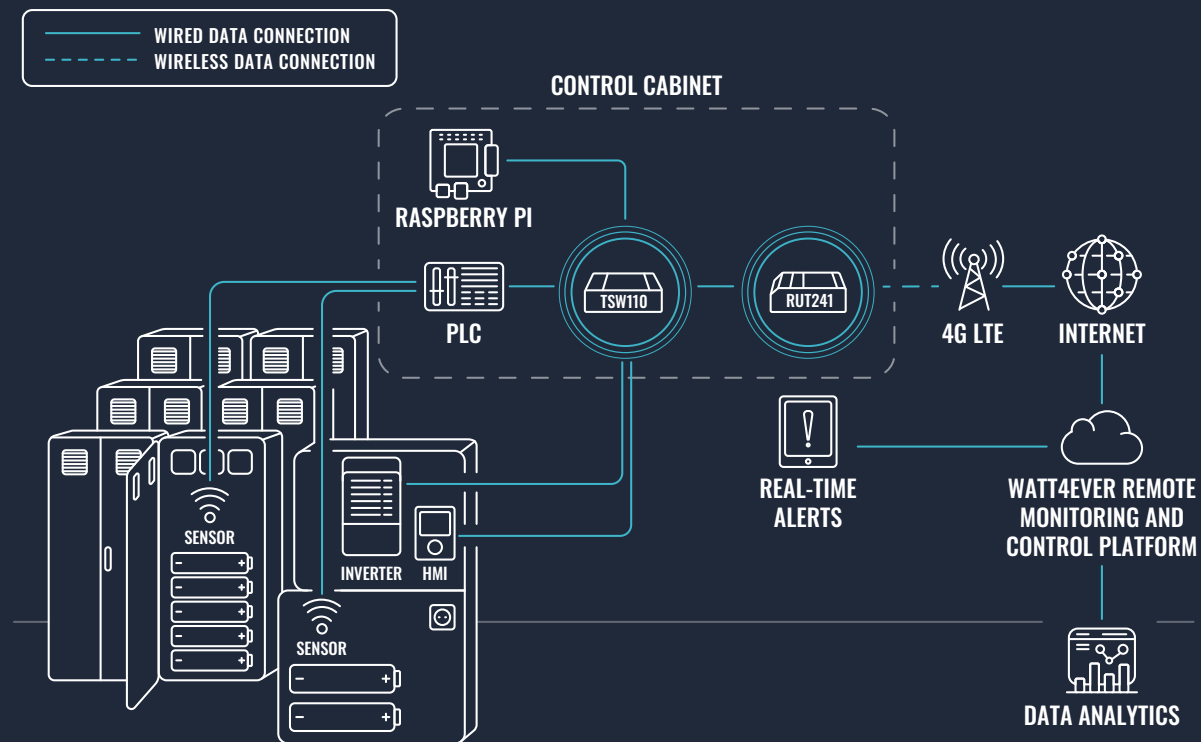
RedEarth
ENERGY STORAGE

Highlights

– **RedEarth** is an Australian manufacturer of on and off-grid energy storage systems and batteries, providing electricity to residential and business clients throughout Australia.

– In order to ensure remote management and automated data tracking and analysis, its storage systems needed reliable connectivity. The problem was – reliable connectivity is scarce in rural Australia.

– RUT241 was chosen to enable this solution with uninterrupted 4G connectivity, alongside RMS Connect for remotely reaching and updating end devices easily and securely.

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION
RMS MANAGEMENT CONNECTION
RMS CONNECT CONNECTION

SOLAR PANEL
REDEARTH APP
REDEARTH CLOUD
DATA ANALYTICS
4G LTE
INTERNET
RMS
REDEARTH BATTERY SYSTEM
MODBUS RTU
REDPI DEVICE
LAN
RUT241
REDEARTH ENGINEER
RMS CONNECT
RMS MANAGEMENT
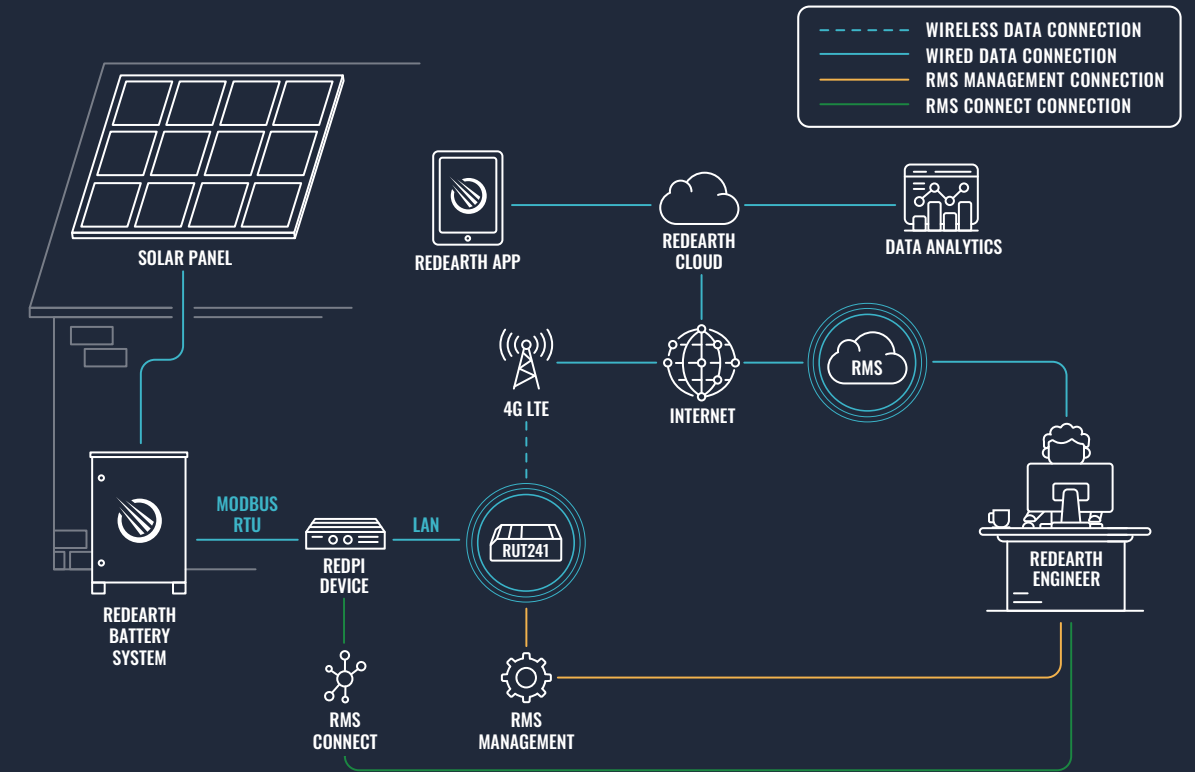
CONTINIOUS MONITORING OF WIND TURBINE NACELLE MECHANISM

Product

RUT360 is a compact cellular router with WAN failover and Cat 6 speeds of up to 300Mbps with carrier aggregation.

Highlights

– Wind turbines are an environmentally friendly and profitable way to harvest wind energy, but monitoring them isn't the easiest. Due to their extraordinary height and remote locations, their management demands automation.

– Creating a solution that enables remote and uninterrupted monitoring is the answer, but it calls for robust and reliable network connectivity that's difficult to promise in rural or offshore locations.

– Our RUT360 cellular router fits this solution like a glove, with data throughput speeds of up to 300 Mbps and 4G LTE Cat 6 network connectivity that ensures smooth monitoring and management processes of the nacelle mechanism.

RUT360 | 4G LTE | INTERNET | RMS

SENSOR

MONITORING CENTER | PHONE

WIRED DATA CONNECTION
WIRELESS DATA CONNECTION
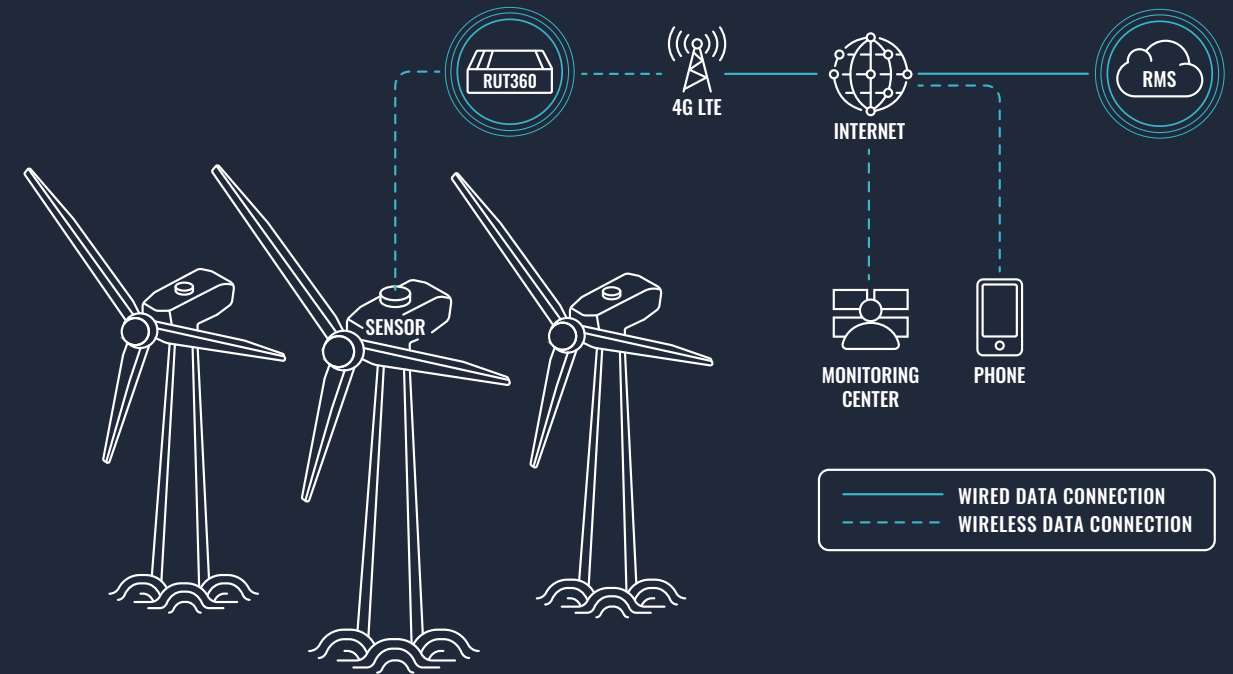
M-BUS SMART SUBMETERING FOR PROPERTY UTILITIES

Product

TRB143 is a compact, telemetry-focused cellular gateway with M-Bus support, 2 digital I/Os, and a Gigabit Ethernet port.

Highlights

– In the world of Industry 4.0 property utilities, keeping an IoT solution simple can be difficult. Multiple parameters must be measured separately and transferred to multiple cloud servers of multiple utility suppliers, such as electricity, water, and gas.

– Difficult, but far from impossible. Our TRB143 gateway features the M-Bus interface, allowing it to transfer telemetry data from up to 250 self-powered meters over a 4G network, and it can power up to 6 meters over M-Bus as well.

– This industrial gateway offers efficient telemetry and scalability without sacrificing reliability, security, or durability. When it comes to smart submetering, the TRB143 is the perfect fit!
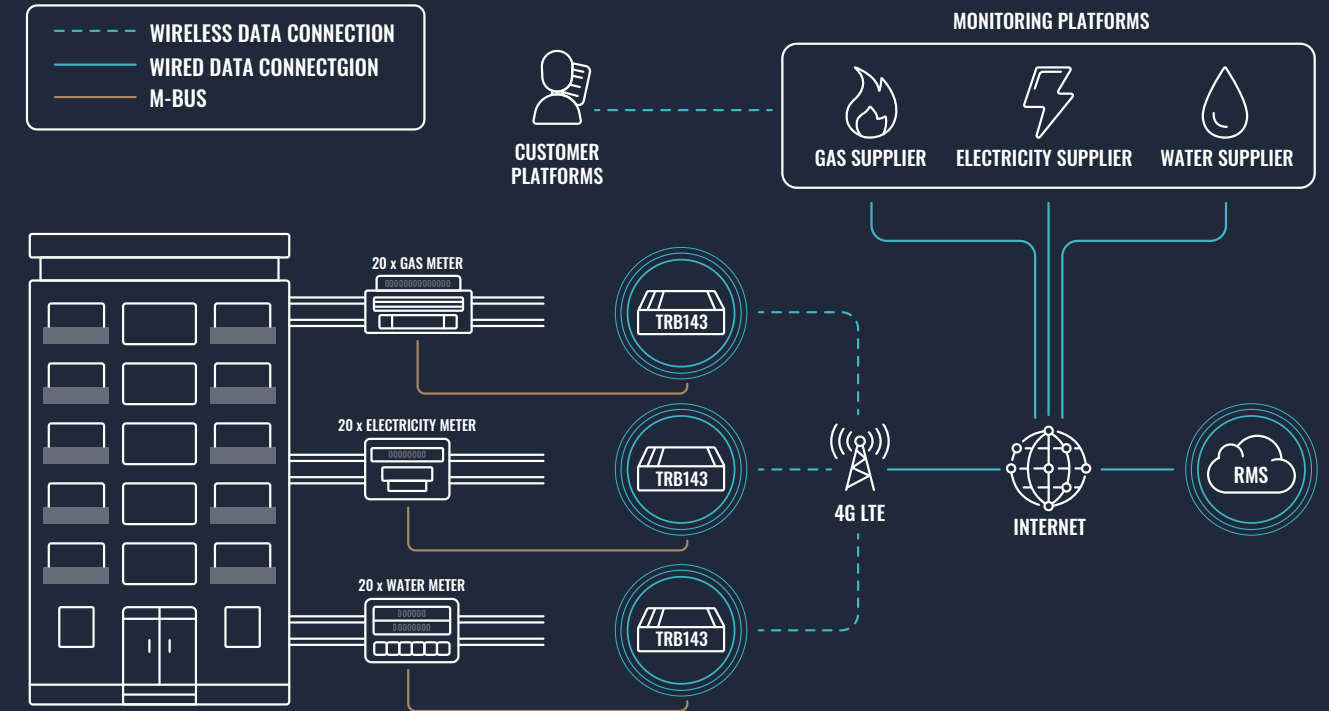
CELLULAR ROUTER FOR FIRSTNET LIFT STATION REMOTE MONITORING

Product

RUT956 is a dual SIM cellular router with auto-failover and a wide range of protocol support, including RS232 and RS485.

In partnership with

Highlights

– **LEC** is a U.S.-based automation and integration specialist dedicated to providing its clients with industrial automation, control engineering, and industrial IoT enablement and cloud platform services of the highest quality.

– Its iQ2 remote management tool provides IoT remote monitoring and management capabilities to lift stations across the U.S. by transmitting critical data through the FirstNet cellular network to the iQ2 platform, allowing for quick response to alarms.

– This data transmission requires a reliable, FirstNet-certified 4G LTE router – the RUT956. This cellular router checks all the boxes by providing this solution with seamless, uninterrupted connectivity, interface versatility, and support of a wide range of industrial protocols.

- - - - WIRELESS DATA CONNECTION
—— WIRED DATA CONNECTION

INTERNET

DATA

MONITORING CENTRE

B14 BAND   B14 BAND

RUT956

IQ2 CONTROL PANEL

LIFT STATION BUILDING

WET WELL

PUMP

FLOAT-LEVEL SWTICHES
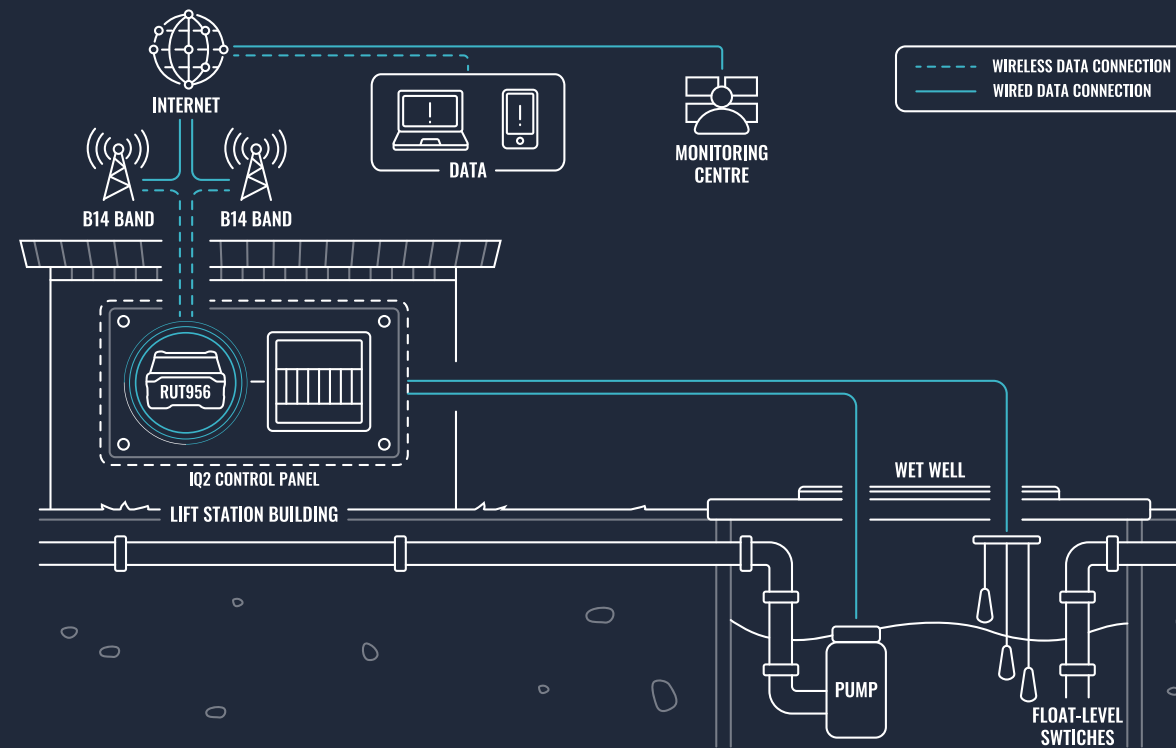
UNINTERRUPTED MONITORING OF INDUSTRIAL BOILER ROOMS

Product

TRB142 is an ultra-small, lightweight, and energy-efficient IoT gateway equipped with mission-critical LTE connectivity.
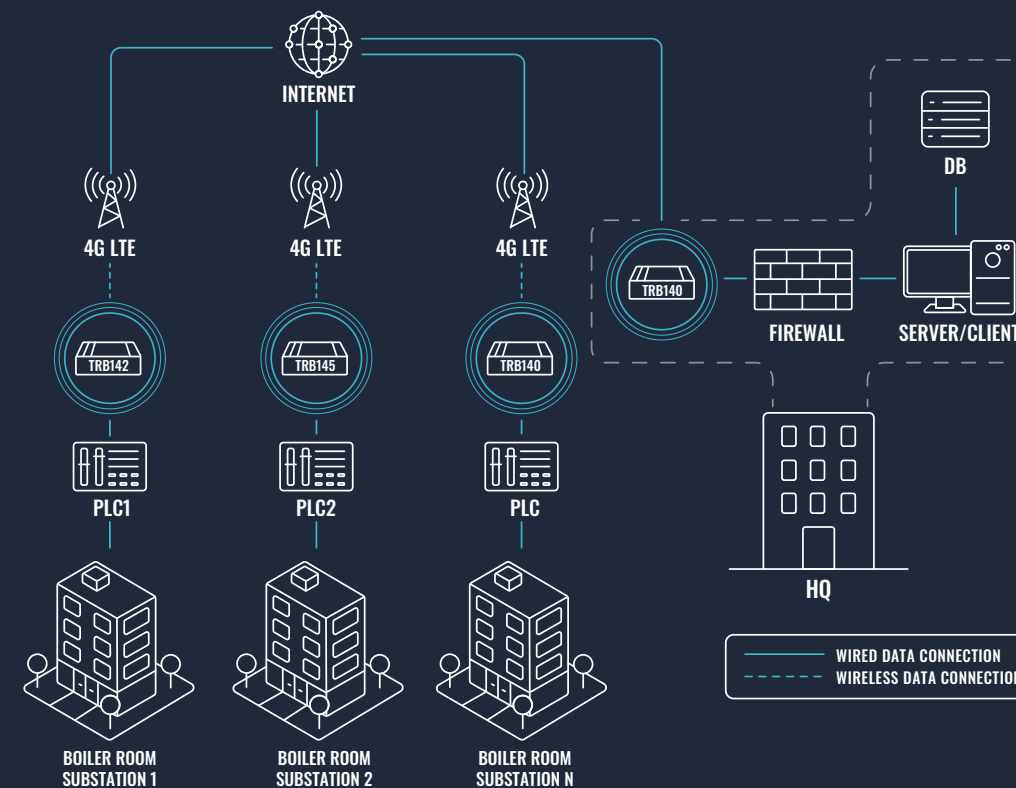
In partnership with

Highlights

– Industrial boiler rooms are known for their complexity and need for continuous remote monitoring. However, since boiler rooms are most commonly in basements, strong and reliable network connectivity is hard to guarantee.

– **NS Koncept** creates automation solutions revolving around industrial and thermal power processes. For this challenge, it put its trust in our TRB gateways for creating an automated monitoring and control solution.

– TRB140, TRB142, and TRB145 ensure robust and uninterrupted network connectivity alongside key features like ping reboot and SMS configuration, making them irreplaceable for this demanding solution.

INTERNET

4G LTE   4G LTE   4G LTE

TRB140

DB

FIREWALL   SERVER/CLIENT

TRB142   TRB145   TRB140

PLC1   PLC2   PLC

HQ

BOILER ROOM SUBSTATION 1   BOILER ROOM SUBSTATION 2   BOILER ROOM SUBSTATION N

WIRED DATA CONNECTION
WIRELESS DATA CONNECTION

SMART CITY

Modern life is an orchestra of smart devices. Teltonika Networks devices facilitate steadfast communication between connected sensors and machines, creating the infrastructure for maximising efficiency and safety while minimising costs.

CONNECTIVITY FOR GREENBOX FARMS SUSTAINABLE FARMING ENVIRONMENTS

Product

RUT241 is a compact cellular router, providing Cat 4 connectivity with WAN failover and 2 Ethernet ports.

In partnership with

Highlights

– **Greenbox Farms** is a Dutch innovator dedicated to revolutionising the way we grow our food, turning underutilised spaces into thriving, sustainable farming environments.

– Its container farms rely on advanced technology, such as climate control systems and cloud-based crop management software, to grow crops efficiently and precisely.

– Ensuring continuous, uninterrupted operation is the RUT241 industrial cellular router by Teltonika Networks, providing reliable LTE Cat 4 connectivity, WAN failover, MQTT support, I/O customisability, and remote management capabilities.
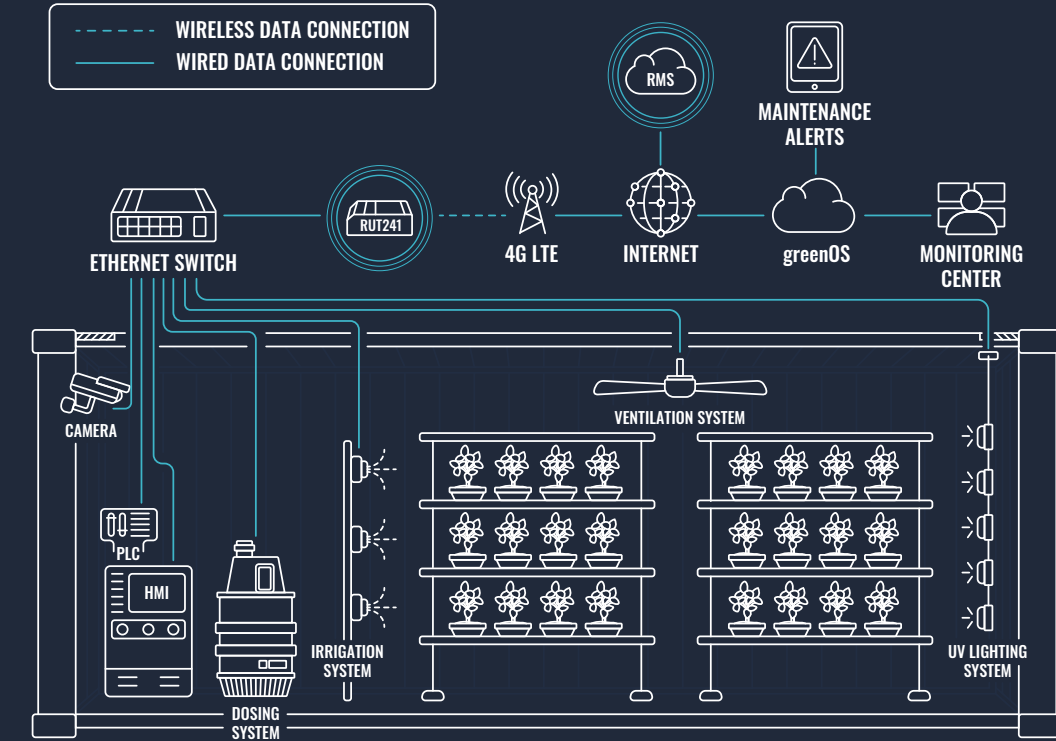
EFFICIENT PARCEL TERMINAL MANAGEMENT WITH RMS

Product

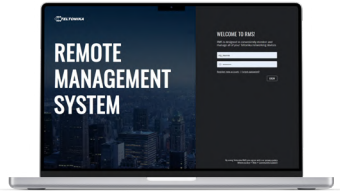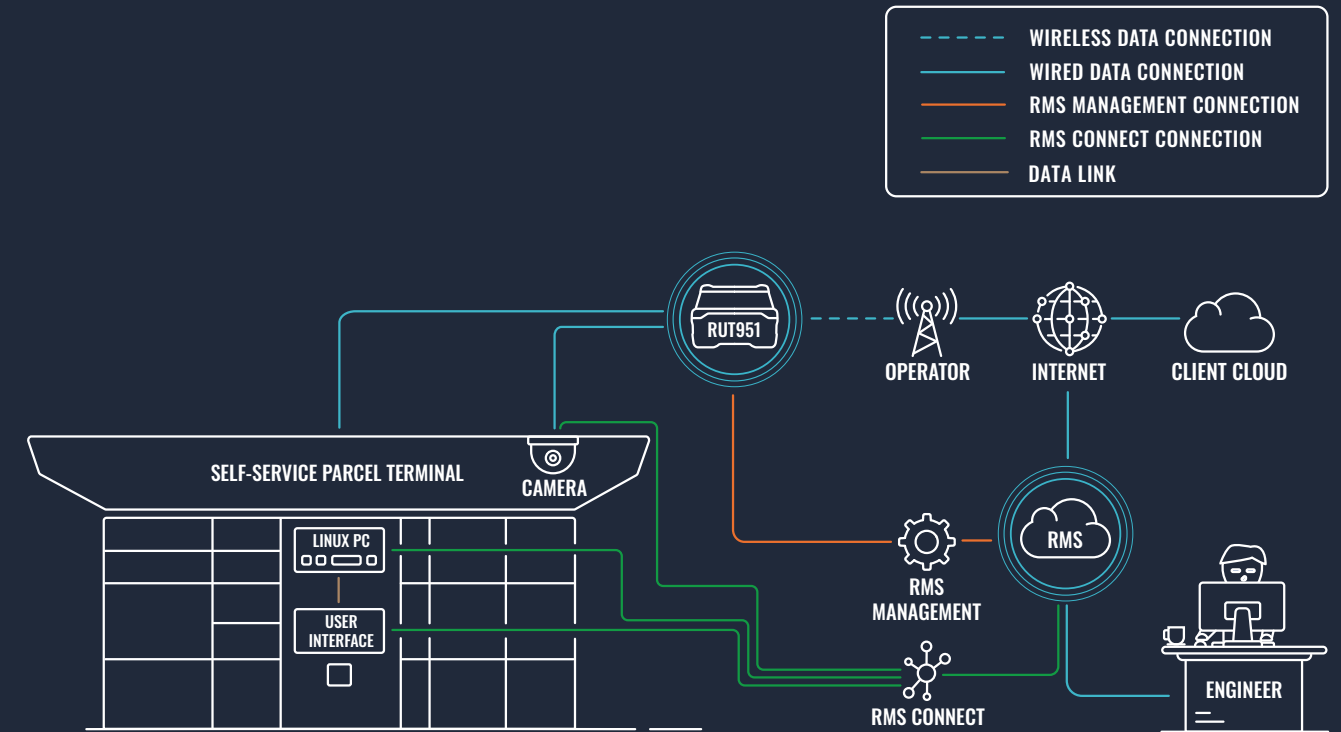RMS is a user-friendly platform for remotely accessing and controlling your fleet of networking devices.

Highlights

– Parcel terminals are the golden standard of modern-day consumerism – you pick up your order when you want to, where you want to. This is only possible thanks to the sheer number of such terminals spread across as wide an area as possible.

– This is a recurring headache when it comes to routinely updating the terminals' firmware and providing them with troubleshooting support. Doing so manually is incredibly expensive, time-consuming, and inefficient.

– Using RMS, the entire process can be done remotely, easily, and securely. RMS Connect allows you to access and control the PC of any of your terminals via SSH, and to view its screen via VNC. With RMS, it's as though you were right in front of it!

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION
RMS MANAGEMENT CONNECTION
RMS CONNECT CONNECTION
DATA LINK

RUT951
OPERATOR
INTERNET
CLIENT CLOUD
SELF-SERVICE PARCEL TERMINAL
CAMERA
LINUX PC
USER INTERFACE
RMS MANAGEMENT
RMS
RMS CONNECT
ENGINEER

KEEPING ROAD TRAFFIC FLOW SAFE AND CONNECTED

Product

RUTX11 is a dual SIM, dual-band Wi-Fi cellular router with Cat 6 connectivity and 4 Gigabit Ethernet ports.

In partnership with

Highlights

– **The Pereira Mobility Institute** is a Colombian governmental Institute that's responsible for supervising the Pereira municipality region and integrating mobility improvements that adhere to national laws, with one of the focuses of the Institute being traffic control.

– The Institute got a request to implement a cohesive traffic light system for the capital city of Pereira, which would enable remote monitoring and control. However, that's only half of the request. It also needed to ensure the entire system is safe and immune to cyberattacks.

– For this solution, it chose the trio of our RUT241, RUTX11, and OpenVPN, which enabled robust and uninterrupted network connectivity for seamless M2M communication with great security as a cherry on top.
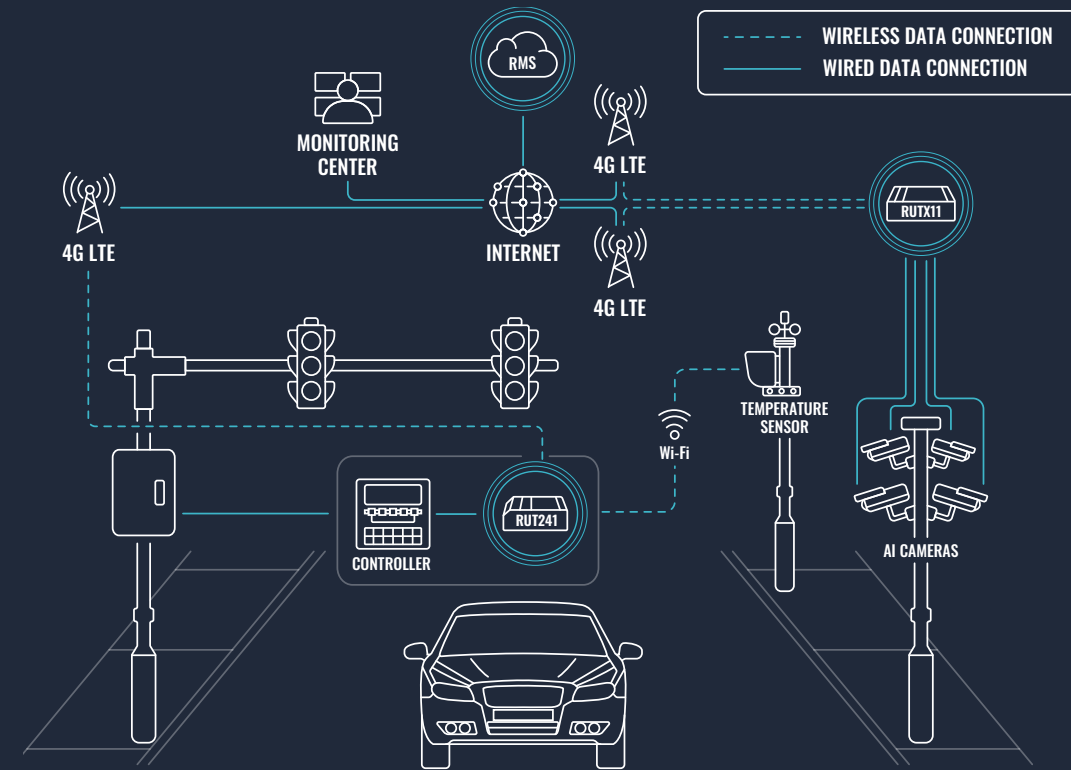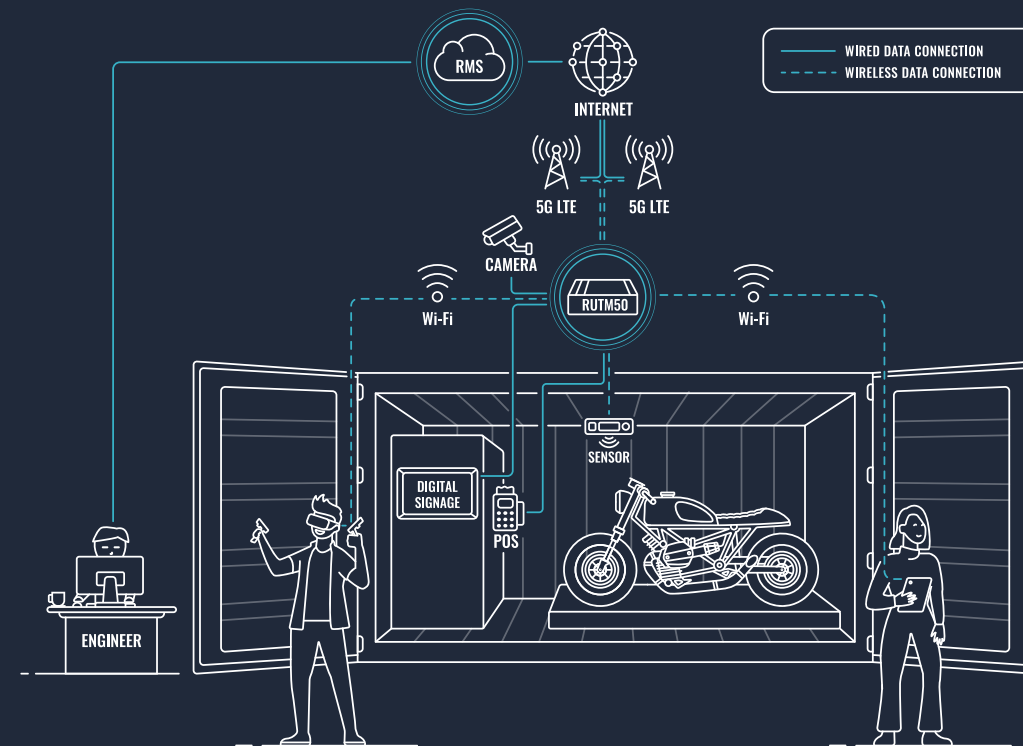
5G ROUTER FOR POP-UP EVENT CONNECTIVITY

Product

RUTM50 is a 5G dual-band cellular router, providing ultra-high speeds of up to 3.4 Gbps with auto-failover redundancy.

Highlights

– Pop-up events are the new commercial hotness, offering great returns for a low investment. However, their mobile nature does present some challenges when it comes to connectivity – ones which restrict what a pop-up shop can do and accomplish.

– Single-handedly solving this issue is the RUTM50 5G router by Teltonika Networks, an FCC-certified device capable of ultra-high cellular speeds of up to 3.4 Gbps.

– The RUTM50 cellular router is a cost-effective way to ensure high throughput video streaming and virtual technologies, and equally high client engagement to get the most out of your pop-up ventures.

WIRED DATA CONNECTION
WIRELESS DATA CONNECTION

RMS
INTERNET
5G LTE 5G LTE
CAMERA
RUTM50
Wi-Fi Wi-Fi
SENSOR
DIGITAL SIGNAGE
POS
ENGINEER

WATER SKI LIVE STREAMING WITH BONDIX INTELLIGENCE

Product

RUTX12 is a dual SIM, Cat 6 cellular router with load balancing and 2 modems for dual simultaneous connections.
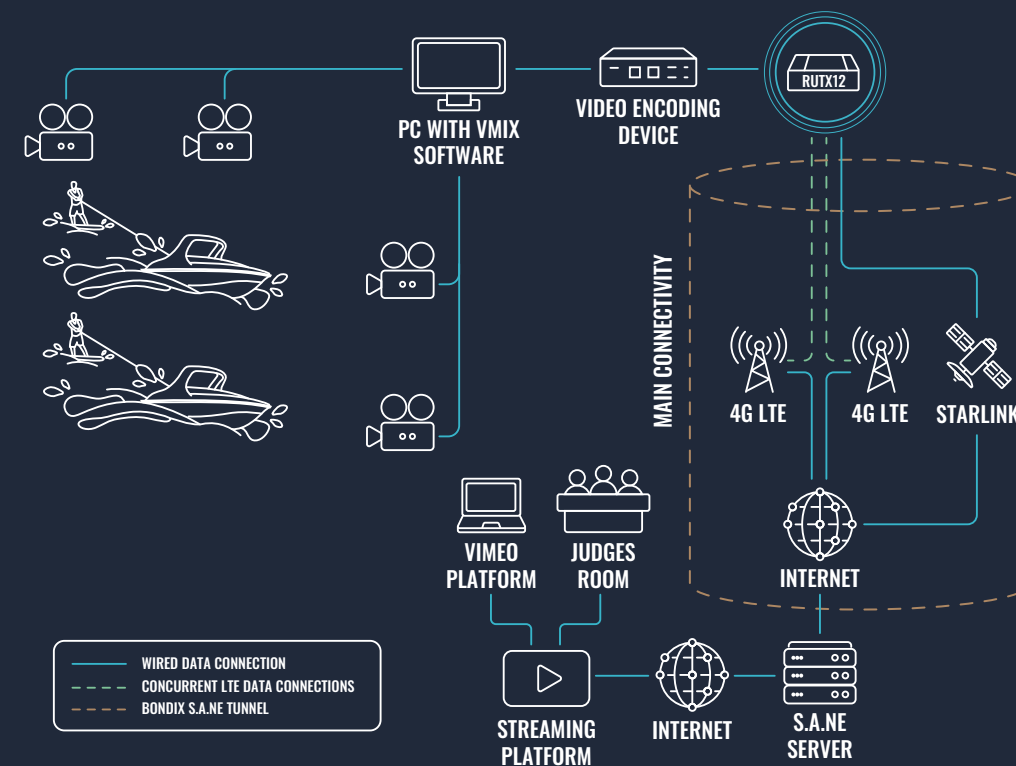
In partnership with

Highlights

– **LTP Streaming** is a streaming service provider responsible for ensuring smooth and uninterrupted, multi-camera live streams for all types of events and industries.

– **Bondix Intelligence** provides network bonding services by establishing extremely-high bandwidths that are especially useful when you need network connectivity in rural areas.

– LTP Streaming chose our RUTX12 and Bondix Intelligence services to establish a successful live stream of "The Ultimate DUEL Waterski Battle" in a rural countryside area with subpar Internet capabilities.

PC WITH VMIX SOFTWARE — VIDEO ENCODING DEVICE — RUTX12

MAIN CONNECTIVITY — 4G LTE — 4G LTE — STARLINK

VIMEO PLATFORM — JUDGES ROOM — INTERNET

STREAMING PLATFORM — INTERNET — S.A.NE SERVER

— WIRED DATA CONNECTION
-- CONCURRENT LTE DATA CONNECTIONS
-- BONDIX S.A.NE TUNNEL

CONNECTIVITY FOR MOBILE AGRICULTURAL MACHINES

Product

RUT956 is a dual SIM cellular router with auto-failover and a wide range of protocol support, including RS232 and RS485.
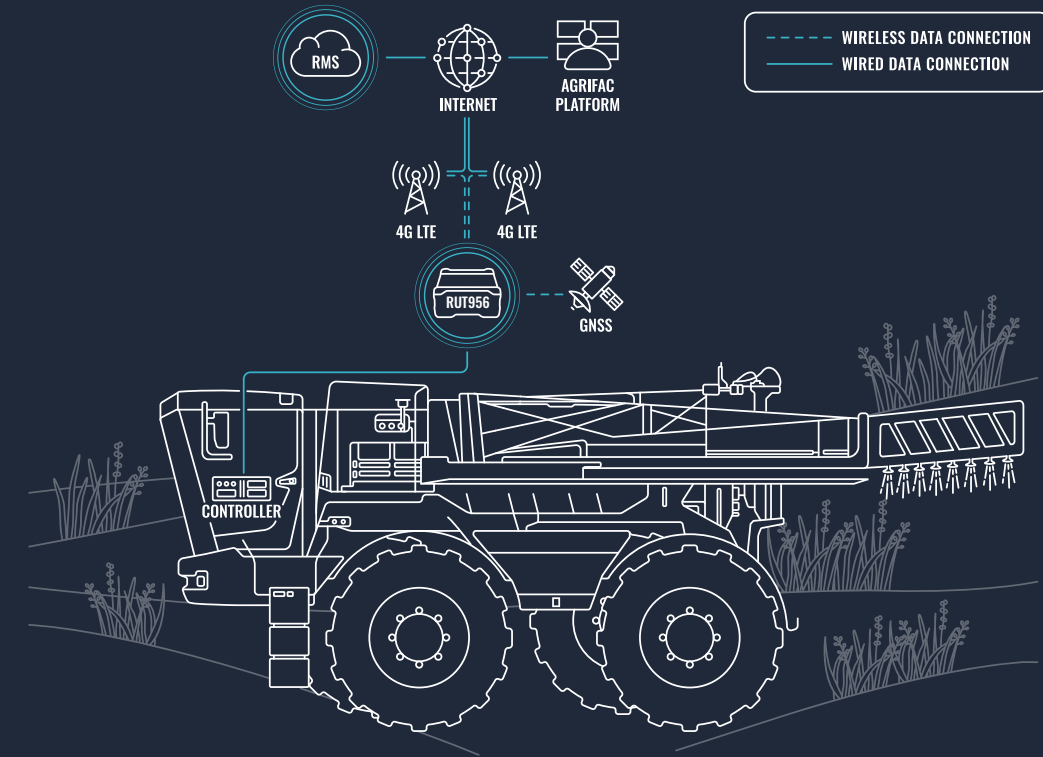
In partnership with

capestone
brings IoT together

agrifac

Highlights

– **Agrifac** is a Dutch manufacturer of innovative crop sprayers, spearheading smart and sustainable agriculture solutions based on the '4Es for growers' concept.

– **Capestone** is a distributor of mobile Internet solutions, IoT networks, and critical communications, providing solutions to telecom and IT resellers, system integrators, service providers, and manufacturers worldwide.

– Their joint solution provides Agrifac's mobile machines with stable connectivity and GNSS capabilities thanks to our RUT956 router, bringing with it numerous control, security, and reliability features.

– Importantly, RUT956 was designed to withstand adverse industrial conditions, ensuring that no environmental or weather condition fit for growing crops would disrupt the device in any way.

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION

RMS
INTERNET
AGRIFAC PLATFORM
4G LTE   4G LTE
RUT956
GNSS
CONTROLLER

TRANSPORTATION

By air, sea, and land, the mobile world of transportation is constantly moving towards greater efficiency. From simple in-vehicle Wi-Fi to reliable communication systems, Teltonika Networks products enable innovation and new revenue systems.

AUTONOMOUS RACING CAR CONNECTIVITY POWERED BY A CELLULAR ROUTER

Product

RUTX11 is a dual SIM, dual-band Wi-Fi cellular router with Cat 6 connectivity and 4 Gigabit Ethernet ports.
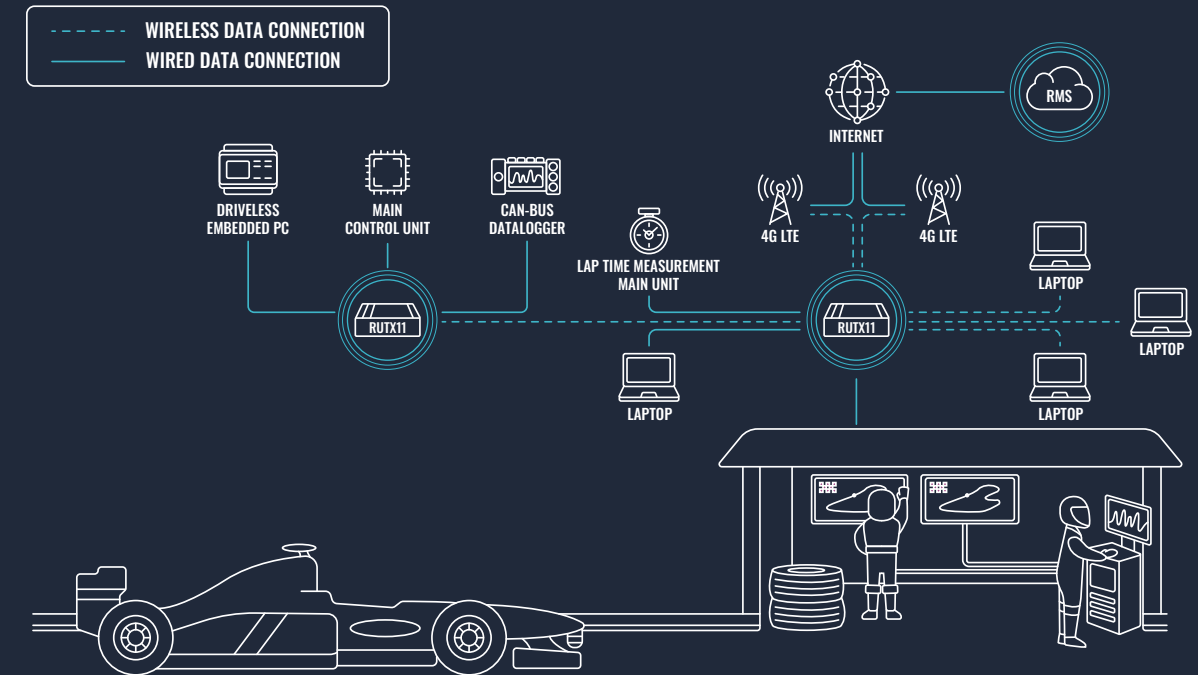
RUTX11

In partnership with

starkstrom AUGSBURG

Highlights

– **StarkStrom Augsburg** e. V. is a non-profit organisation that encourages engineering, business, IT, and design students to develop formulas for racing events. This development process incorporates tasks from daily tech sector tasks, such as electromobility and automation testing on driverless vehicles.

– Every driverless car needs a stable wireless Internet connection to receive commands, which can be easily attained with the Teltonika Networks RUTX11 cellular router. Integrating the router in the Formula circuit allows all control units and PCs embedded in the formula to be accessed remotely via Wi-Fi.

– The RUTX11 cellular router equips the student teams with robust connectivity and provides many other great features, like GNSS, top VPN support, and load balancing functionality for even greater connectivity speeds that eliminate latency.

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION

RMS

INTERNET

DRIVELESS EMBEDDED PC
MAIN CONTROL UNIT
CAN-BUS DATALOGGER
LAP TIME MEASUREMENT MAIN UNIT
4G LTE
4G LTE
LAPTOP
LAPTOP
RUTX11
RUTX11
LAPTOP
LAPTOP
LAPTOP

# CONNECTIVITY FOR PASSENGER TRAINS ACROSS EUROPE

Product

RUTX11 is a dual SIM, dual-band Wi-Fi cellular router with Cat 6 connectivity and 4 Gigabit Ethernet ports.

Highlights

– Passenger trains, as a lower-emissions means of transportation, are growing in popularity in Europe. This increases the demand for railway connectivity for both passenger and operational benefits.

– RUTX11 has recently become EN 45545-2-certified, meaning it is safe and approved for use in passenger trains.

– This powerful, LTE Cat 6 networking device has a long list of features that help it excel in its new role of providing passenger train connectivity, including Wave-2 802.11ac Dual Band Wi-Fi, four Gigabit Ethernet ports, Dual SIM, and easy remote management capabilities.
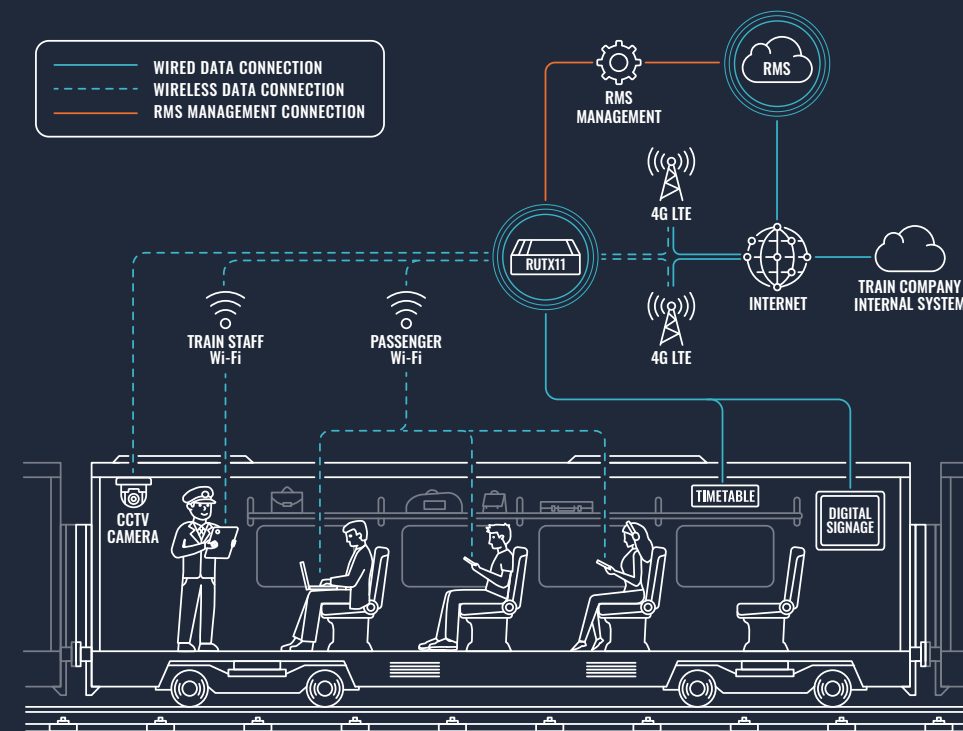
# EFFICIENT PLANNING OF URBAN PUBLIC TRANSPORT SYSTEMS

Product

RUT956 is a dual SIM cellular router with auto-failover and a wide range of protocol support, including RS232 and RS485.

Highlights

– When a city is planning its public transport system, the efficiency of that system lives and dies on the quality of its usage and demand data.

– To automate on-bus data collection, our versatile RUT955 joined forces with the FMB125 vehicle GPS tracker by Teltonika Telematics for optimal accuracy and connectivity.

– Relying on the router's reliable inter-device connectivity and the tracker's positioning precision, this solution ensures seamless, real-time data flow from the moving bus to the control room server.

52

53
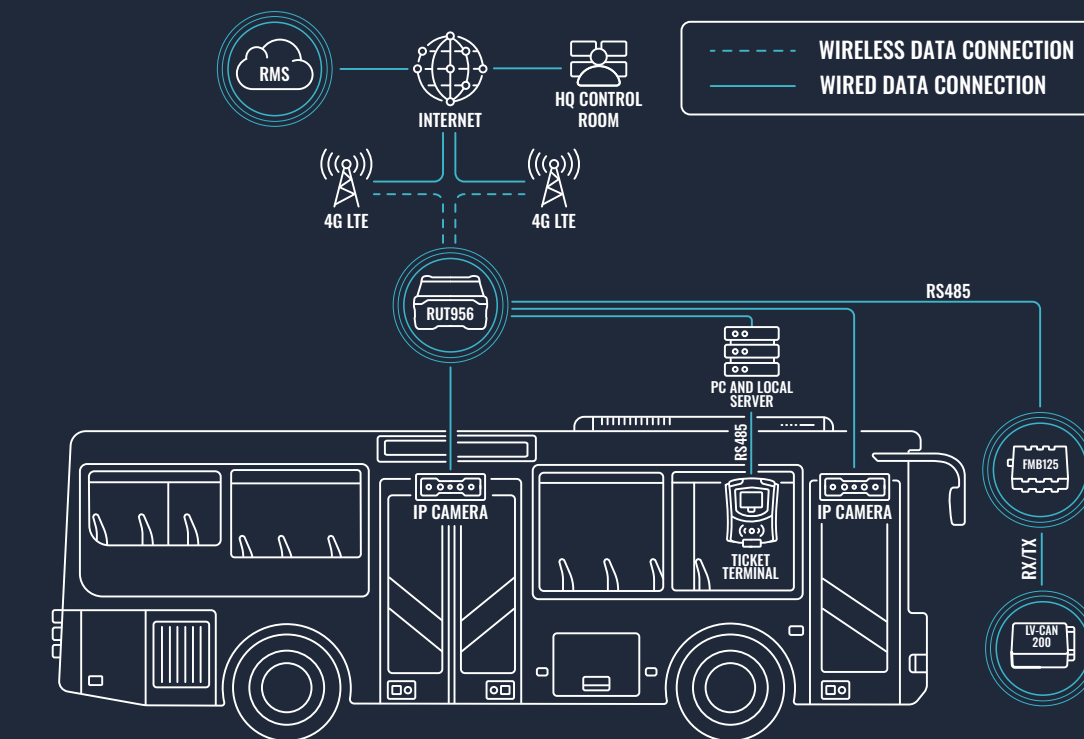
# 5G ROUTER FOR RV INTERNET & CAMPING WI-FI

Product

RUTX50 is a 5G dual-band cellular router, providing ultra-high speeds of up to 3.3 Gbps with auto-failover redundancy.

Highlights

– Establishing robust and reliable Internet for an RV can be a challenge, but the RUTX50 5G router by Teltonika Networks more than meets your camping Wi-Fi needs.

– This 5G router can reach cellular speeds of up to 3.3 Gbps and Wi-Fi 5 with data transmission rates of up to 867 Mbps, allowing for stellar RV Internet as though you were right at home.

– The RUTX50 is also packed with reliability features to keep your Wi-Fi for RV uninterrupted and seamless, such as dual SIM with failover. A tailor-made 5G combo MIMO antenna is also available for this device.
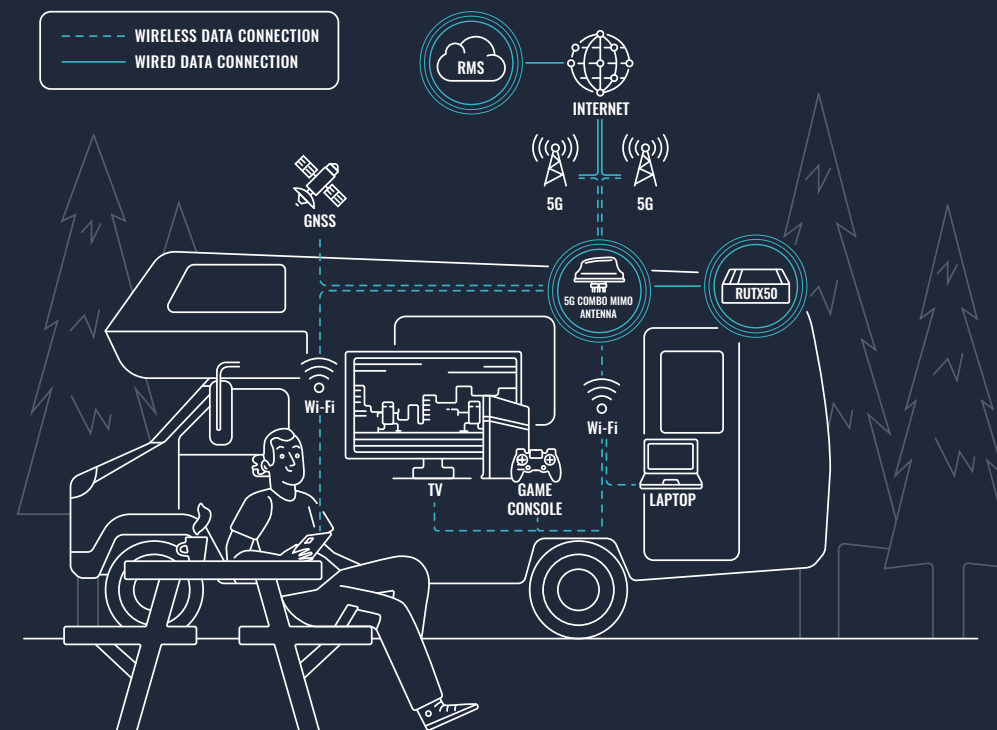
DUAL BAND WI-FI ROUTER CONNECTIVITY FOR FERRY PASSENGERS

Product

RUTX12 is a dual SIM, Cat 6 cellular router with load balancing and 2 modems for dual simultaneous connections.
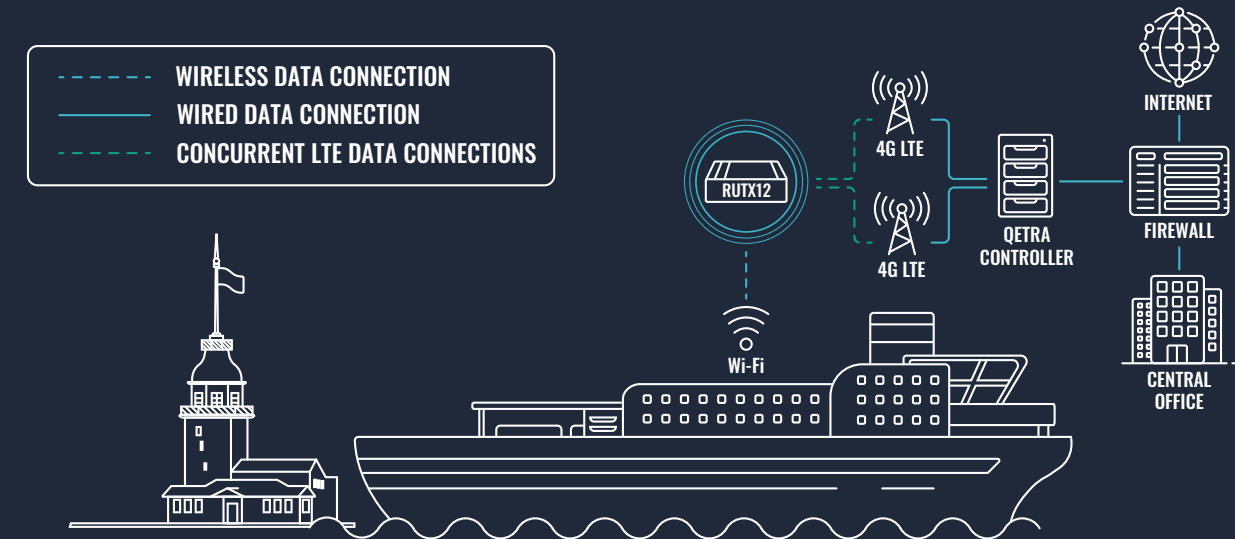

In partnership with

Highlights

– **ISTTELKOM**, an Istanbul-based software engineering and distribution company, undertook a challenge to enhance the weak Internet signals within ferries in Istanbul, Turkey. This initiative was crucial, as water entertainment ventures in Turkey increasingly rely on good network infrastructure.

– The challenge was overcome by employing the company's Qetra SDWAN Suite software in combination with the Teltonika Networks RUTX12 Wi-Fi router. The solution ensured consistent network connectivity for ferry equipment and passengers, regardless of their distance from the shore.

– Equipped with SD-WAN capabilities, the 4G router handles heavy data traffic with ease. Thanks to its failover functionality and dual cellular modems, the device can switch between mobile services seamlessly, facilitating dual-band Wi-Fi connections to boost data throughput and resilience to network disturbances.

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION
CONCURRENT LTE DATA CONNECTIONS

RUTX12
4G LTE
4G LTE
Wi-Fi
QETRA CONTROLLER
INTERNET
FIREWALL
CENTRAL OFFICE

SIMPLIFYING BORDER CONTROL WITH A VEHICLE LICENSE READER

Product

TSW100 is an unmanaged switch with 5 Gigabit Ethernet ports and 4 PoE ports providing up to 30 W per port.
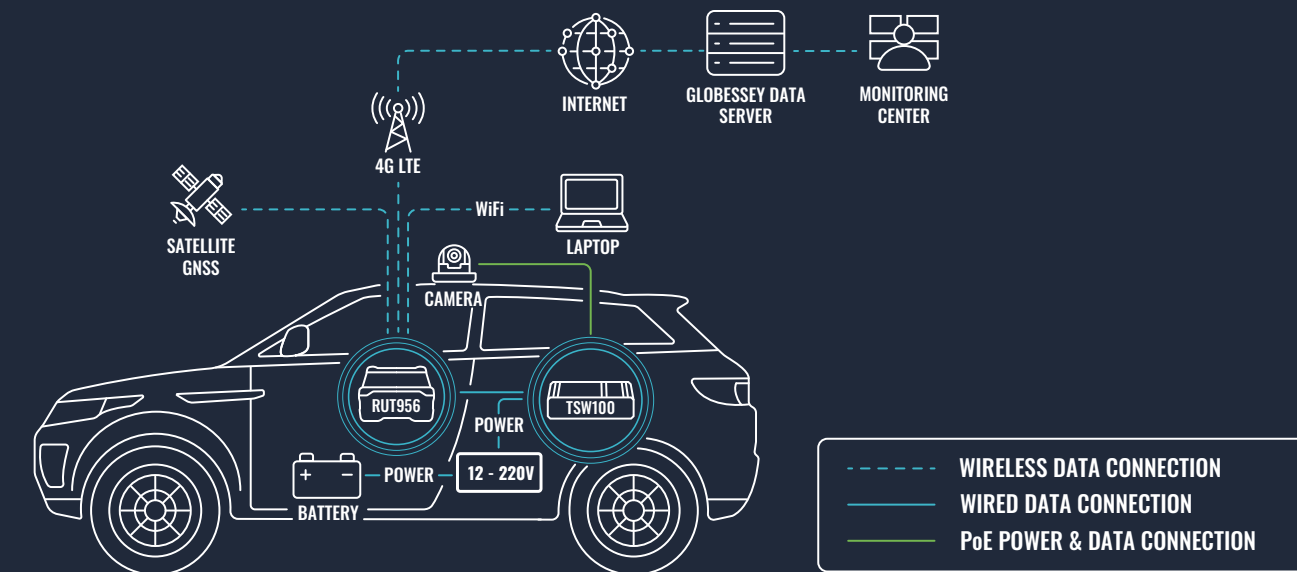
In partnership with

ADAPTIVE RECOGNITION

Highlights

– **Adaptive Recognition** is a Hungarian developer and manufacturer specialising in AI-based image processing technologies. Among their numerous innovations is a technology designed for the police transportation sector, facilitating traffic recognition via cameras through automated license plate checking.

– Given that transportation systems, just like police vehicles, are constantly mobile, it's essential to integrate a solution that supports this mobility. This is why Adaptive Recognition selected the Teltonika Networks TSW100 PoE+ network switch to join the solution.

– This PoE+ switch, plugged into a power converter via an Ethernet cable, receives power and thus distributes it to other devices plugged into it. Of course, with that power comes network connectivity, enabling the entire system's infrastructure to work in tandem.

INTERNET GLOBESSEY DATA SERVER MONITORING CENTER

4G LTE

SATELLITE GNSS

WiFi

LAPTOP

CAMERA

RUT956 POWER TSW100

BATTERY POWER 12 - 220V

- - - - WIRELESS DATA CONNECTION
——— WIRED DATA CONNECTION
——— PoE POWER & DATA CONNECTION

ENTERPRISE

Security, scalability, and backup connectivity are the building blocks of enterprise growth and success. Teltonika Networks devices enable a reliable networking infrastructure for enterprise applications – anywhere, anytime.
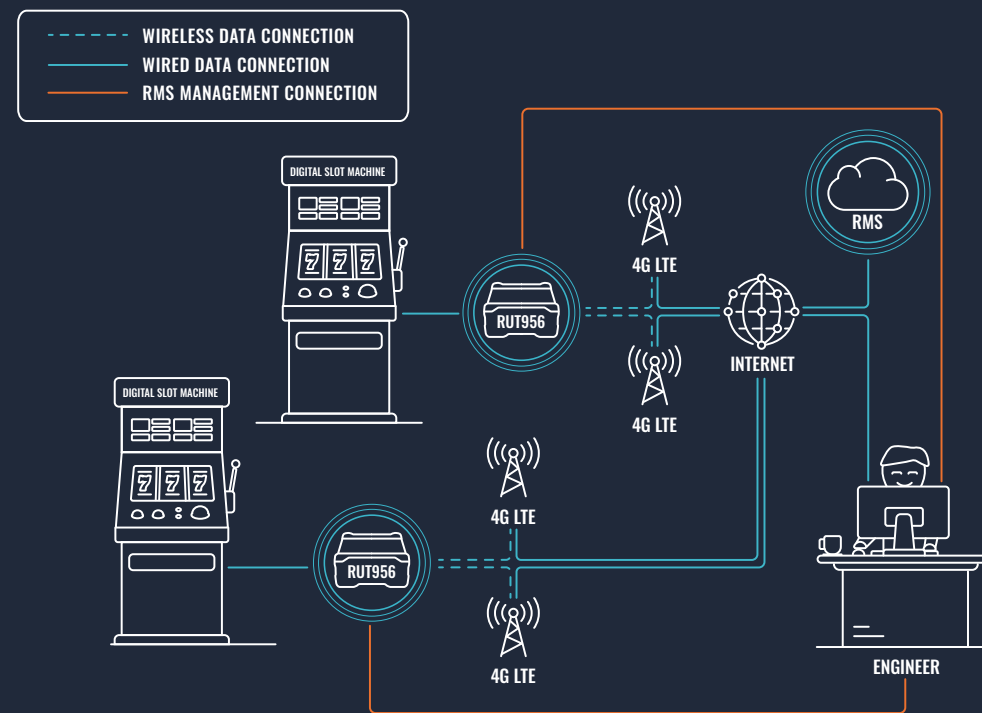
ACCELERATED PASSWORD MANAGEMENT WITH RMS

Product

RMS is a user-friendly platform for remotely accessing and controlling your fleet of networking devices.

REMOTE MANAGEMENT SYSTEM

WELCOME TO RMS
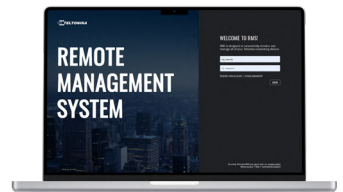
Highlights

– Manual password-changing in networks consisting of thousands of connectivity devices is costly, inefficient, and prone to human error. Luckily, there is a simple way to expedite this process.

– Using the streamlined password management function of our Remote Management System (RMS) allows changing the password of thousands of devices to be accomplished in a matter of seconds.

– Additional features like device monitoring, performance analysis, and full control over updates and configurations further help RMS reduce human error potential and save time and money.

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION
RMS MANAGEMENT CONNECTION

DIGITAL SLOT MACHINE

RUT956

4G LTE

4G LTE

INTERNET

RMS

DIGITAL SLOT MACHINE

RUT956

4G LTE

4G LTE

ENGINEER

IMPROVING CAFÉ WI-FI COVERAGE WITH THE FIRST-EVER TELTONIKA NETWORKS ACCESS POINT
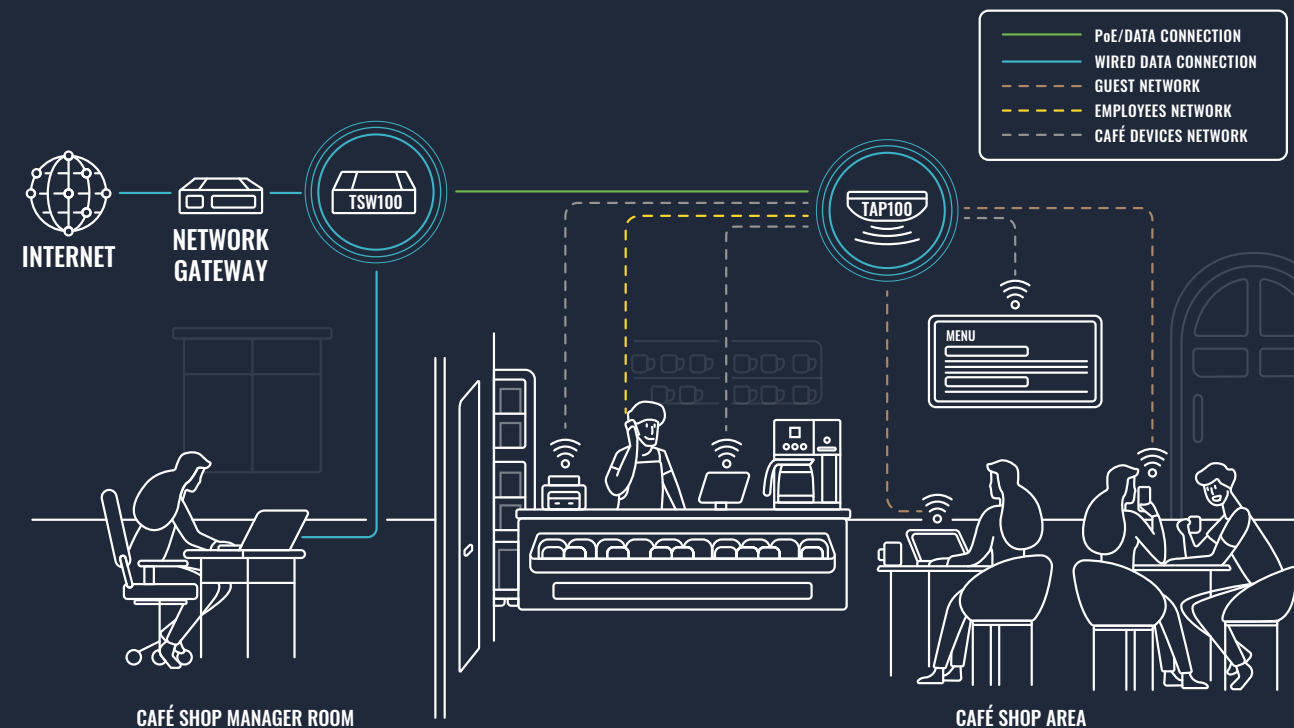
Product

TAP100 is a PoE-in access point with an integrated mounting bracket, UV-stabilised plastic housing, and an RJ45 port.

Highlights

– Every café needs reliable Wi-Fi to deliver the best client experience and be successful, but ensuring full wireless coverage in all spaces of a café can often be complex and expensive.

– The new Teltonika Networks TAP100 access point improves Wi-Fi coverage by projecting a wireless signal onto a designated area.

– Additional value features of this access point include PoE-in functionality, simple traffic rules configuration and multi-SSIDs, and a specialised design dedicated for the needs of enterprise and commercial spaces.

PoE/DATA CONNECTION
WIRED DATA CONNECTION
GUEST NETWORK
EMPLOYEES NETWORK
CAFÉ DEVICES NETWORK

INTERNET   NETWORK GATEWAY   TSW100   TAP100   MENU

CAFÉ SHOP MANAGER ROOM   CAFÉ SHOP AREA

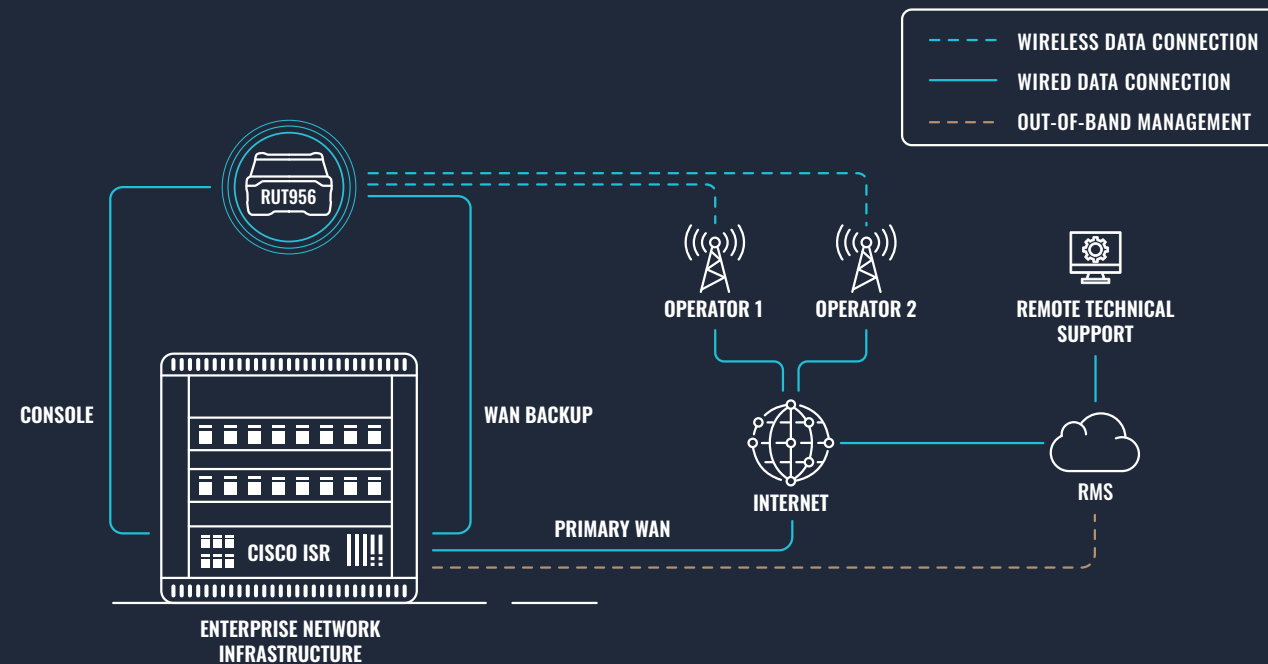# UPGRADING OUT-OF-BAND MANAGEMENT WITH A CELLULAR ROUTER

Product

RUT956 is a dual SIM cellular router with auto-failover and a wide range of protocol support, including RS232 and RS485.

Highlights

– Out-of-band management is a common method of remotely accessing a network or device. However, OOB solutions are subject to slow connection speeds and high recurring charges.

– Deploying the Teltonika Networks RUT956 cellular router allows you to keep your existing legacy infrastructure but make OOB faster and more reliable while reducing costs.

– This is thanks to the RUT956 being easy and fast to deploy, its LTE Cat 4 connectivity enhanced by a myriad of network reliability features, and compatibility with RMS.

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION
OUT-OF-BAND MANAGEMENT

RUT956

OPERATOR 1   OPERATOR 2   REMOTE TECHNICAL SUPPORT

CONSOLE   WAN BACKUP

INTERNET   RMS

CISCO ISR   PRIMARY WAN

ENTERPRISE NETWORK INFRASTRUCTURE

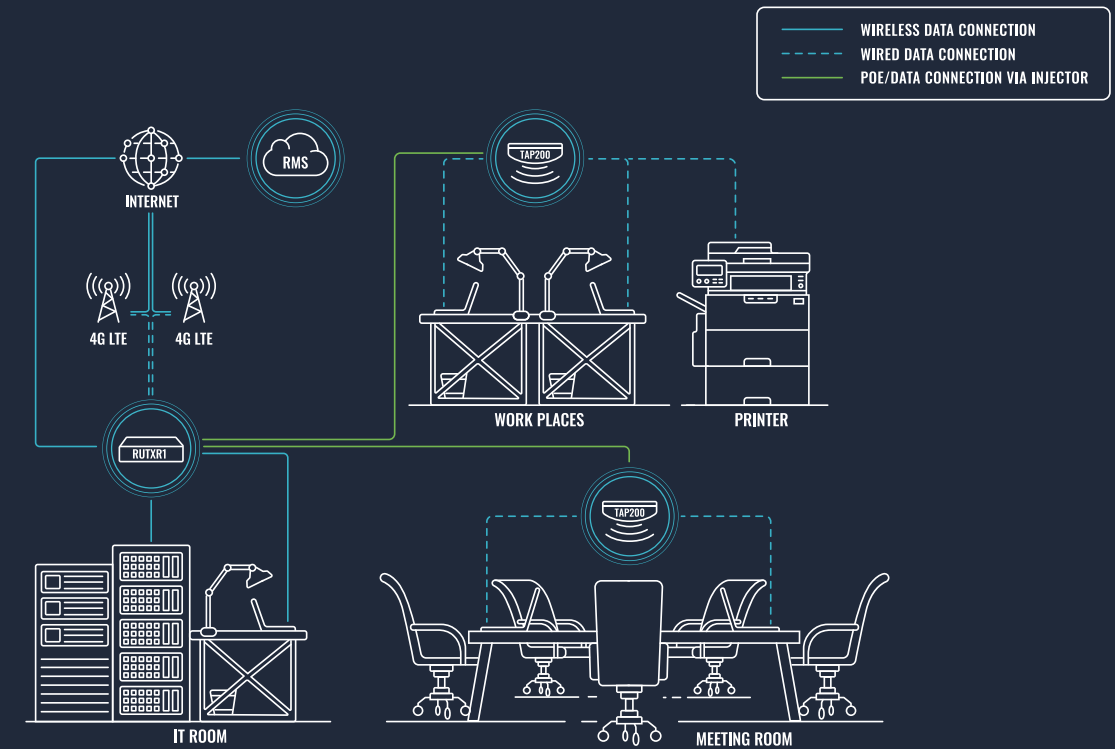# ENTERPRISE ROUTER WITH SFP PORT FOR SEAMLESS CONNECTIVITY

Product

RUTXR1 is a rack-mountable, dual SIM enterprise router with Cat 6 connectivity, SFP, and dedicated console ports.

Highlights

– The downtime costs of enterprises are a serious risk that can be avoided by choosing the right enterprise router and ensuring backup connectivity and power sources for maximum redundancy.

– The RUTXR1 cellular router was designed with enterprise needs in mind and features multiple levels of redundancy, including an SFP port, console port, two SIM slots with WAN failover, and two 4-pin DC connectors.

– This rackmount router ensures robust and uninterrupted enterprise Wi-Fi while being easy to deploy, making it the ideal choice for your office space.

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION
POE/DATA CONNECTION VIA INJECTOR

INTERNET — RMS — TAP200
4G LTE   4G LTE
RUTXR1
WORK PLACES — PRINTER
TAP200
IT ROOM
MEETING ROOM

# SECURE NETWORK INFRASTRUCTURE FOR BANK BRANCHES

Product

RUT300 is an industrial Ethernet router boasting configurable digital I/Os, 5 Ethernet ports, and USB 2.0.

Highlights

– Nowadays, banks must provide more than just traditional banking services over networks; they must also prioritise exceptional data security. At the centre of this mandate is a solid and secure network infrastructure that meets all criteria, with the added advantages of scalability and easy management.

– For a solution embodying security, efficacy, and additional features like remote monitoring, Teltonika Networks' RUT300 Ethernet router, coupled with RMS and its Connect and VPN services, emerge as an unparalleled choice.

– The RUT300 Ethernet router fortifies bank branches with reliable network connectivity while RMS grants exceptional remote monitoring and management capabilities, further amplified by its ability to offer secure access to third-party devices. This guarantees seamless overseeing of the entire network infrastructure of bank branches, ensuring unmatched convenience and security.
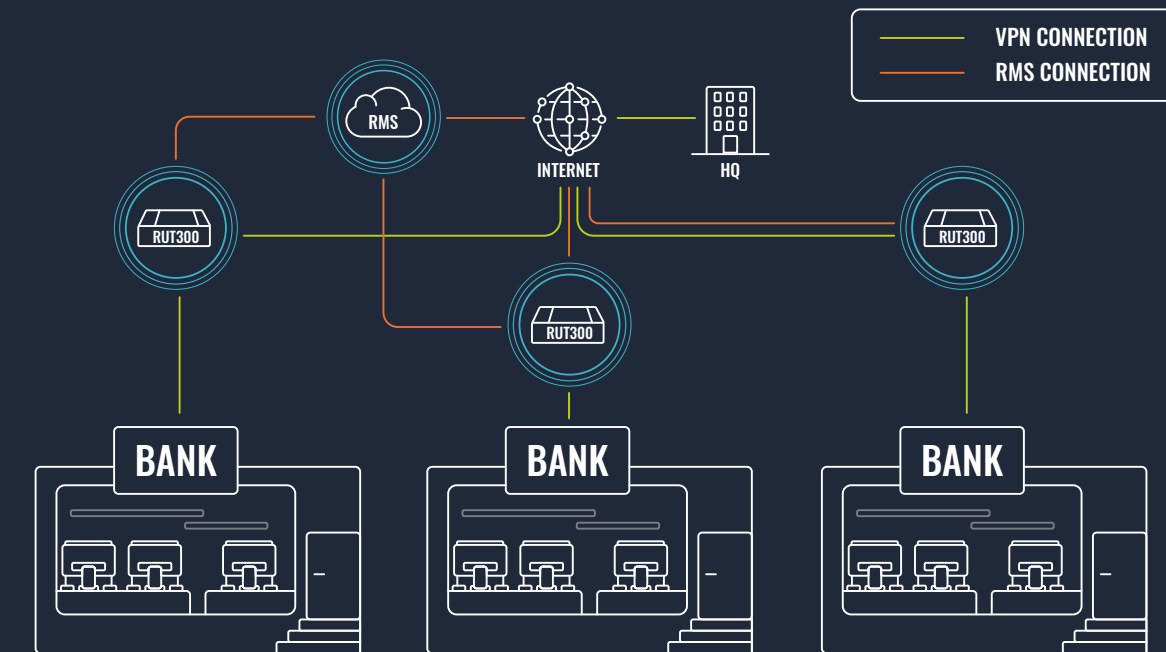
# SECURING NETWORKS WITH VLAN TAGGING IN MANAGED SWITCHES

Product

TSW212 is an L2 managed switch with 8 Ethernet ports, 2 SFP ports, and protocol support including Profinet, MRP, and more.

Highlights

– Many organisations establish VLANs for greater security of their network infrastructure. However, this requires advanced network switches capable of providing granular control that extends even to endpoint devices.

– Managed switches are the ideal solution for these challenges. They enable network administrators to establish multiple VLANs, effectively segregating company departments while having utmost reachability over each end device.

– Beyond VLAN tagging, managed switches like the TSW202 and TSW212 offer QoS and scheduling features that allow for prioritised data flow management from multiple endpoints and automate tasks such as periodic port shutdown for even greater network management.
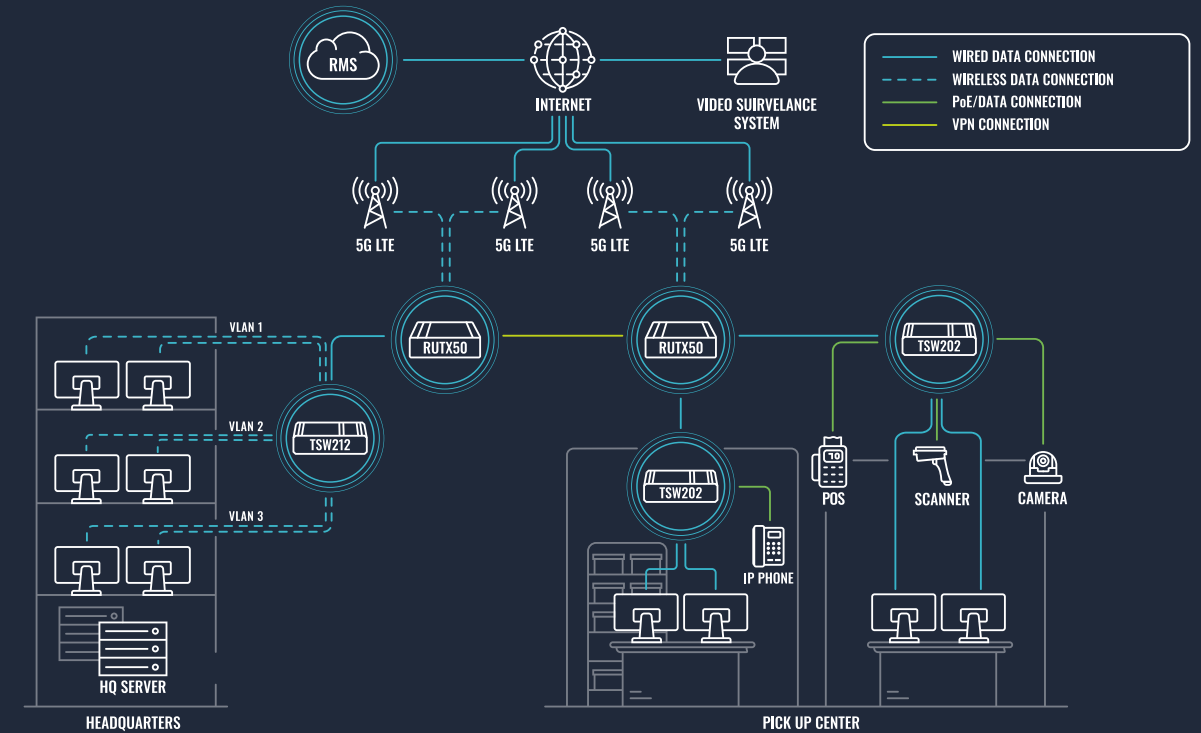
RETAIL

In the age of information, data is everything. As rapid adoption of IoT in the retail sector facilitates innovative data collection for optimal decision-making, Teltonika Networks devices help businesses stay competitive in an ever-smarter market.

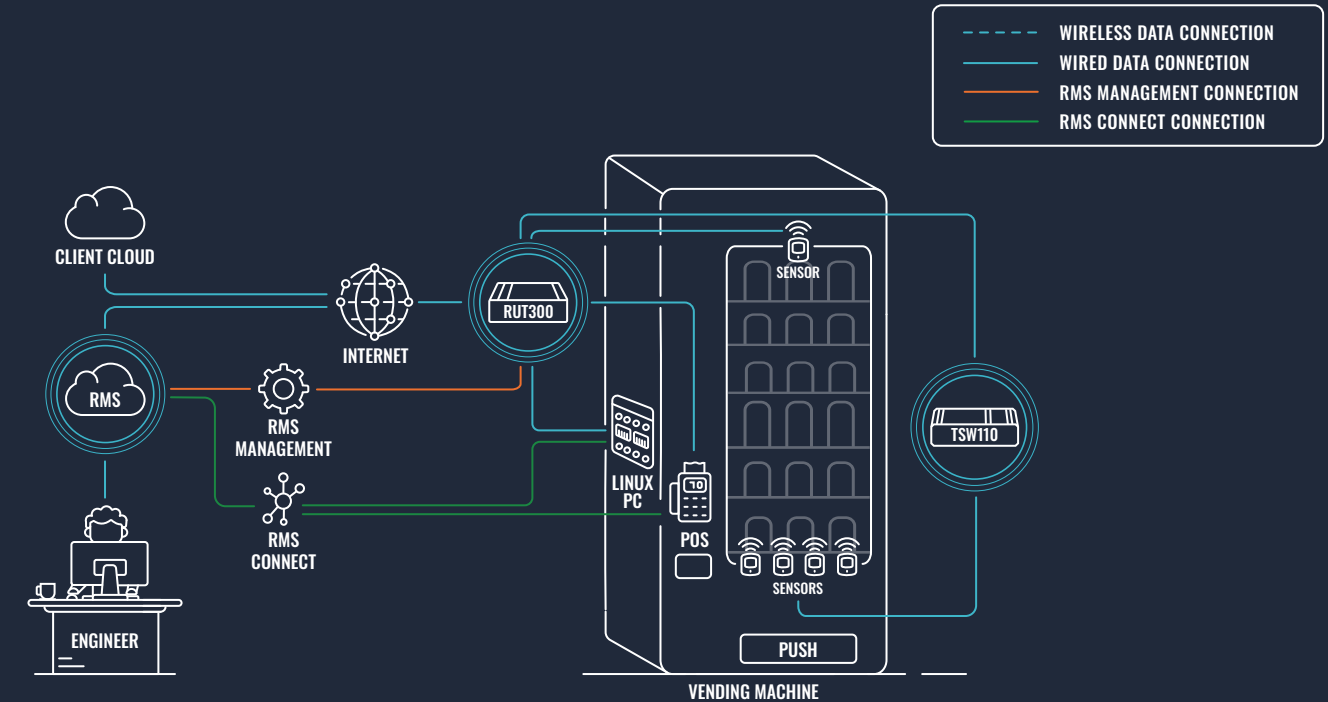# CENTRALISED REMOTE VENDING MACHINE POS SYSTEM MANAGEMENT

Product

RMS is a user-friendly platform for remotely accessing and controlling your fleet of networking devices.
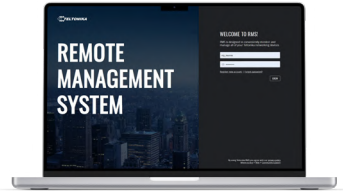
Highlights

– With shifting consumer behaviour, coin-operated vending machines are now a thing of the past and new machine models are manufactured to accept card payments only via POS terminals. While this digitalisation meets client needs, it inevitably becomes a new niche for hackers to compromise client card data and money.

– Instead of having engineers manually update the firmware of those POS terminals individually for safety reasons, it can be easily done using Teltonika Networks RMS. This allows for simultaneous updates to multiple POS terminals, ensuring secure remote access from anywhere, any time.

– Additionally, RMS can be used for remote management of connectivity devices and remote control of third-party devices, like sensors. This enables device configuration and establishing functions, like data tracking or real-time alerts in case of machine shutdown or connectivity loss.

- - - - WIRELESS DATA CONNECTION
——— WIRED DATA CONNECTION
——— RMS MANAGEMENT CONNECTION
——— RMS CONNECT CONNECTION

CLIENT CLOUD

RMS

INTERNET

RUT300

RMS MANAGEMENT

RMS CONNECT

ENGINEER

LINUX PC

POS

SENSOR

SENSORS

TSW110

PUSH

VENDING MACHINE

CONNECTIVITY FOR TEMPERATURE SENSORS IN INSULATED INDUSTRIAL REFRIGERATORS
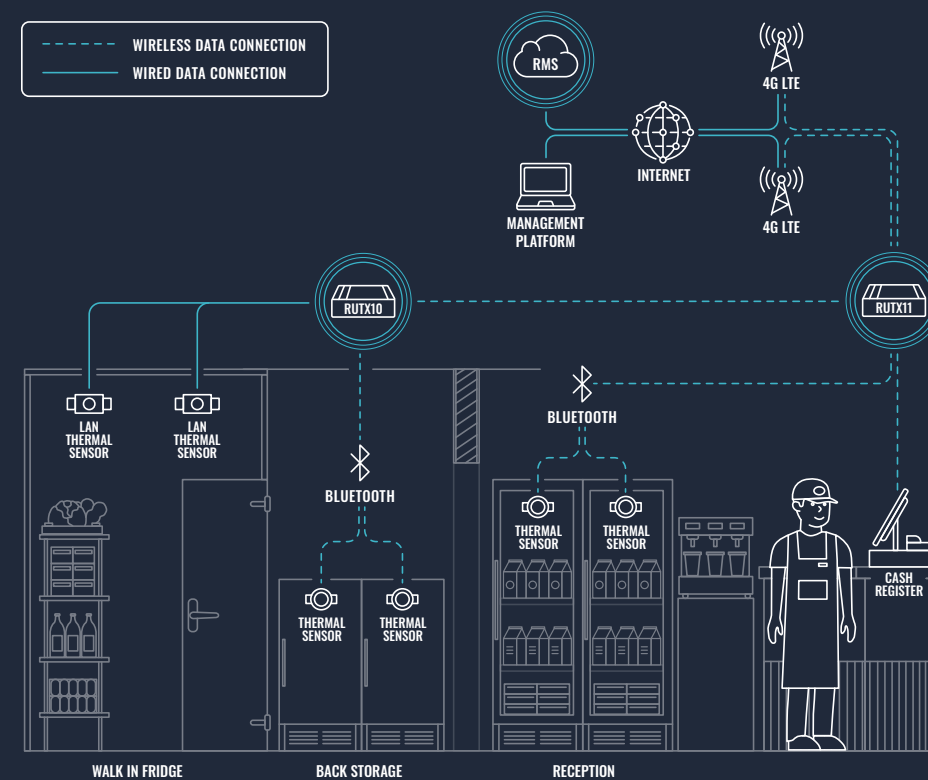
Product

RUTX11 is a dual SIM, dual-band Wi-Fi cellular router with Cat 6 connectivity and 4 Gigabit Ethernet ports.

Highlights

– Food venues must maintain their stock in stable tempera-tures to avoid the financial losses resulting from spoiled ingredients. To prevent this from happening, industrial refrigerators must be equipped with thermal sensors.

– However, these sensors use Bluetooth to communicate, the signal of which is blocked by the thick metal walls of these refrigerators.

– The combination of our RUTX11 cellular router and RUTX10 Ethernet router provides a stable 4G connection to the sensors while also making for efficient use of data.

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION

RMS

4G LTE

INTERNET

MANAGEMENT PLATFORM

4G LTE

RUTX10

RUTX11

LAN THERMAL SENSOR

LAN THERMAL SENSOR

BLUETOOTH

BLUETOOTH

THERMAL SENSOR

THERMAL SENSOR

THERMAL SENSOR

THERMAL SENSOR

CASH REGISTER

WALK IN FRIDGE

BACK STORAGE

RECEPTION

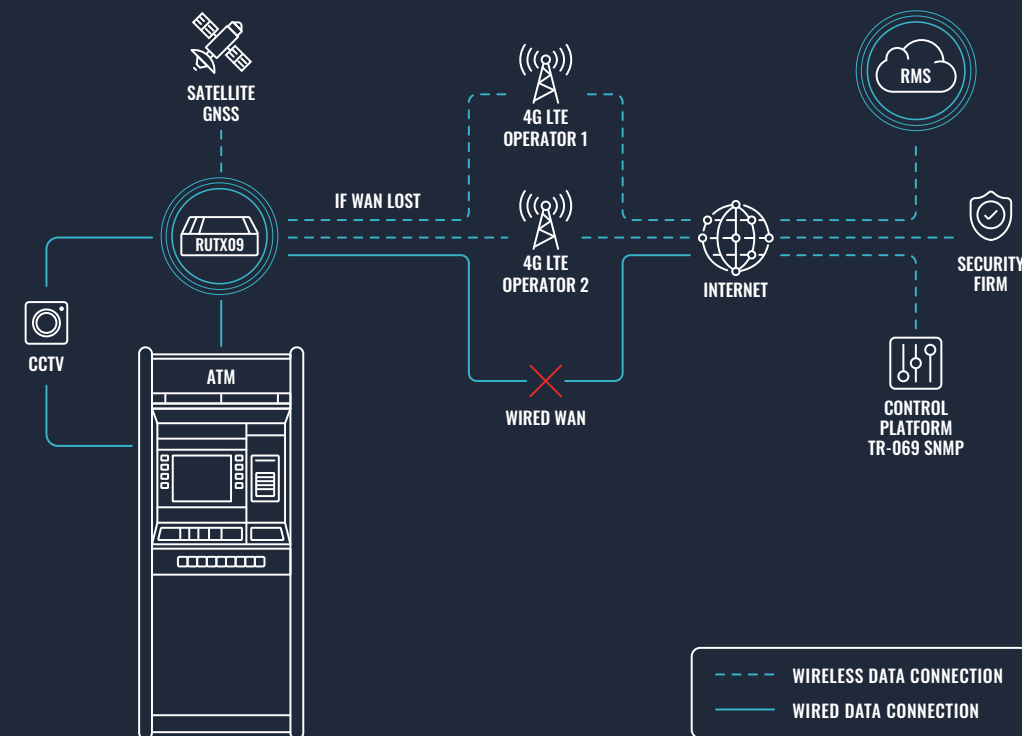# CELLULAR ROUTER FOR FAIL-SAFE ATM NETWORKS

Product

RUTX09 is a reliable, dual SIM cellular router with auto-failover, 4 Gigabit Ethernet ports, and Cat 6 connectivity.

Highlights

– With the number of ATMs worldwide being on a steady rise year after year, ensuring a fail-safe backup connection to your ATM network, regardless of location, is critical.

– The RUTX09 industrial cellular router by Teltonika Networks comes ready for deployment with two SIM card slots, auto-failover, backup WAN, and other switching scenarios for your ATM networks.

– This 4G router boasts cellular speeds of up to 300 Mbps with carrier aggregation, 4 Gigabit Ethernet ports with up to 128 port/tag-based supported VLANs, and robust remote access and management capabilities, making the RUTX09 perfect for your ATM network solutions.

SATELLITE GNSS

4G LTE OPERATOR 1

RMS

IF WAN LOST

4G LTE OPERATOR 2

RUTX09

INTERNET

SECURITY FIRM

CCTV

ATM

WIRED WAN

CONTROL PLATFORM TR-069 SNMP

- - - - WIRELESS DATA CONNECTION
───── WIRED DATA CONNECTION

# CELLULAR ROUTER FOR NONSTOP CONNECTIVITY IN POS TERMINALS

Product

RUTX12 is a dual SIM, Cat 6 cellular router with load balancing and 2 modems for dual simultaneous connections.

Highlights

– The retail market is filled to the brim with a myriad of components, including POS terminals, cameras, and scanners. Each component, as you might have guessed, demands excellent network connectivity to ensure operation at peak efficiency. However, this is difficult to achieve in rural areas, where coverage is often limited.

– To the rescue comes the Teltonika Networks RUTX12 cellular router, equipped with a dual SIM module for enhanced connectivity speeds. This feature is particularly beneficial for remote locations like rural markets, as it ensures redundancy while eliminating the risk of losing connection at crucial moments.

– Besides that, this 4G LTE router can split traffic between the two mobile connections with a load balancing feature. This cellular router allows you to prioritise connectivity for essential equipment like scanners, ensuring they maintain a consistent and reliable connection for smooth operations.

WIRED DATA CONNECTION
WIRELESS DATA CONNECTION
CONCURRENT LTE DATA CONNECTIONS
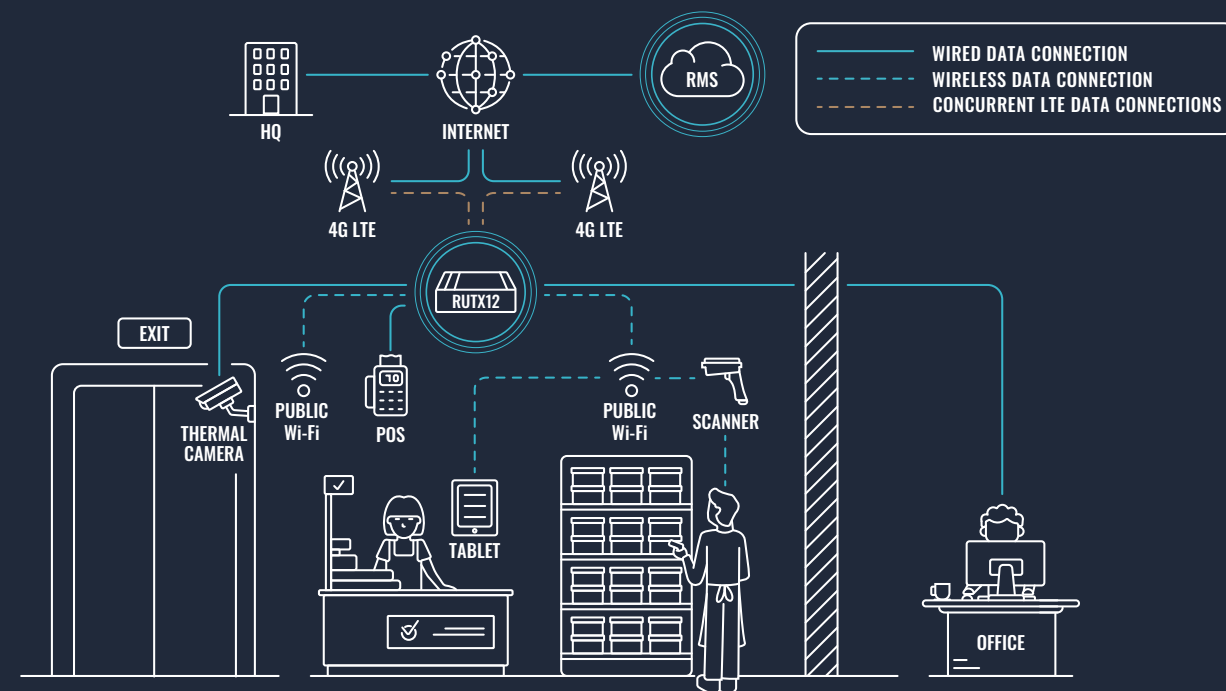
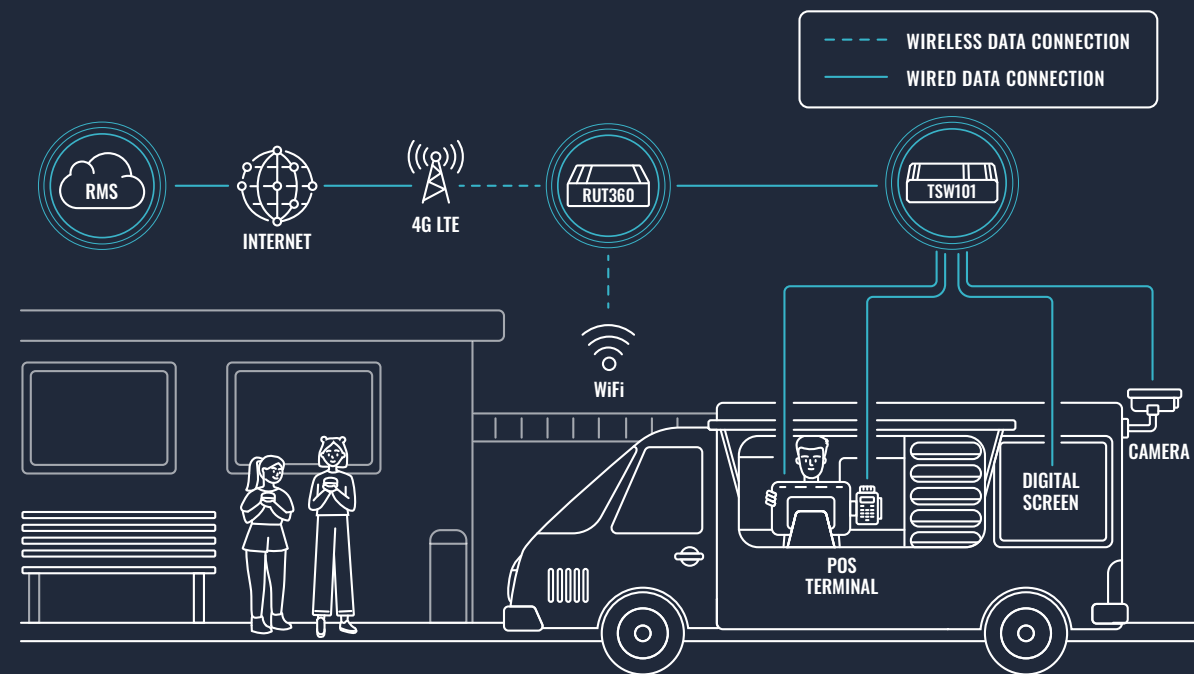# OPTIMISED POWER AND NETWORK SUPPORT FOR IN-VEHICLE DEVICES

Product

TSW101 is an unmanaged switch for in-vehicle applications, equipped with 4 PoE+ ports and 5 Gigabit Ethernet ports.

Highlights

– Besides cooking appliances, a food truck is filled with network-dependent equipment that needs reliable network connectivity. Since the truck already has limited space, making sure the solution doesn't consist of pools of wires is also considered.

– The solution was accomplished by using two Teltonika Networks products: the new TSW101 automotive switch and a RUT360 cellular router. While the RUT360 gives robust network connectivity, the TSW101 switch is the one to provide it to all in-vehicle equipment, like CCTV cameras and POS terminals, while keeping them powered with PoE+.

– With the standard vehicle power supply of 12V and 24V, the TSW101 is a two-in-one switch that can transmit both Internet and power simultaneously.

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION

RMS · INTERNET · 4G LTE · RUT360 · TSW101 · WiFi · POS TERMINAL · DIGITAL SCREEN · CAMERA

THE CONNECTIVITY CORE OF THE SMYZE ROBOBARISTA

Product

RUT360 is a compact cellular router with WAN failover and Cat 6 speeds of up to 300Mbps with carrier aggregation.
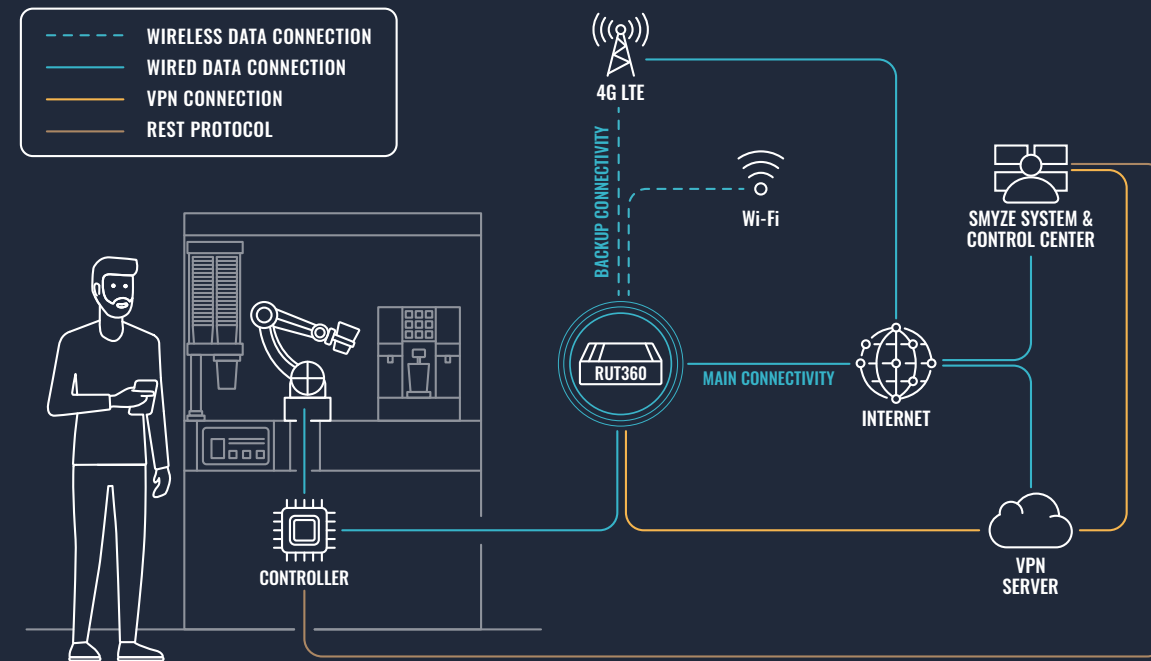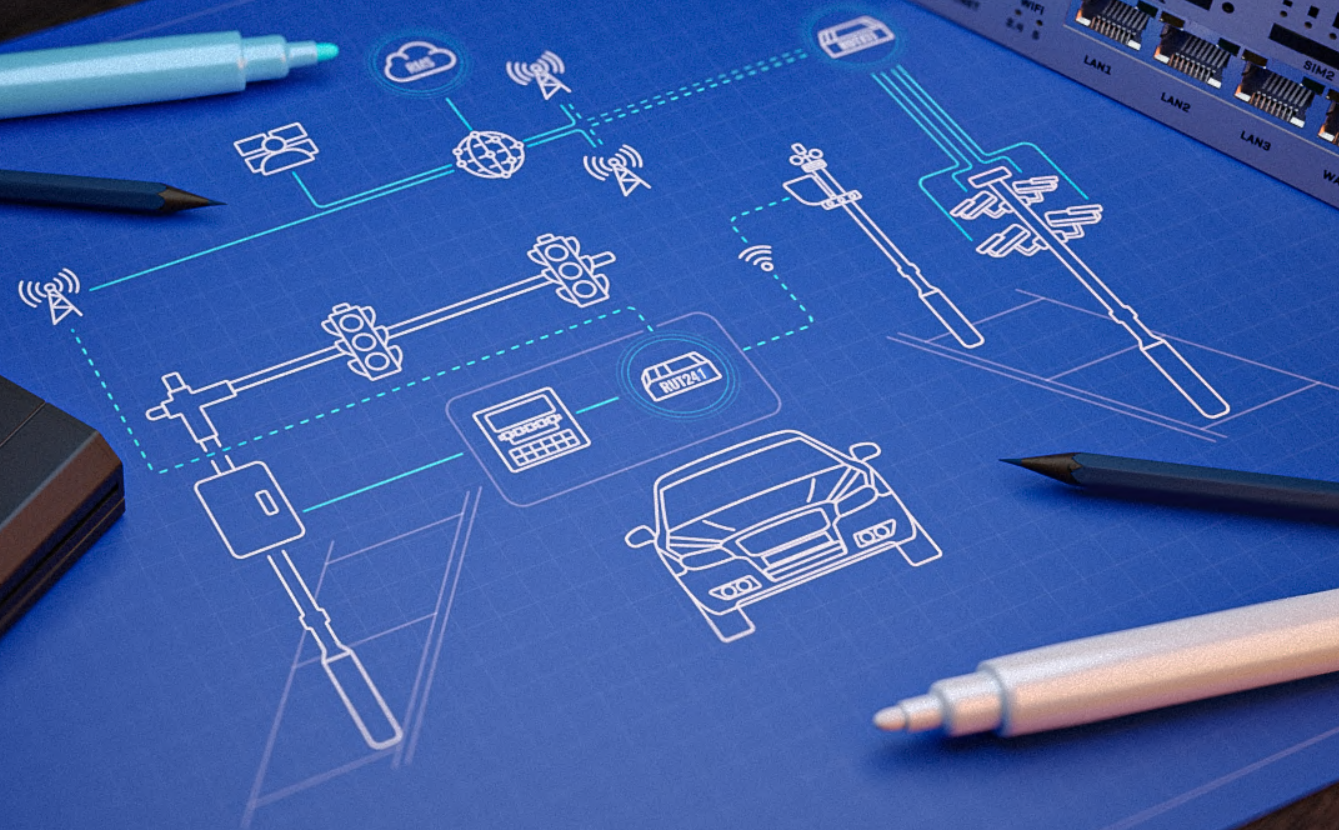
In partnership with

SMYZE

Highlights

– **Smyze** is a Switzerland-based international team of engineers revolutionising B2C beverage sales by combining robotics, IT, and beverage technologies.

– Its Smyze Robobarista is a fully-independent robot that rivals the quality of human baristas when it comes to making beverages – but with maximised, automation-enhanced efficiency.

– Connecting the robot's orchestra of hundreds of industrial-grade components is the RUT360 industrial cellular router by Teltonika Networks, bringing LTE Cat 6 connectivity with extra flexibility, reliability, and remote management capabilities.

WIRELESS DATA CONNECTION
WIRED DATA CONNECTION
VPN CONNECTION
REST PROTOCOL

4G LTE

BACKUP CONNECTIVITY

Wi-Fi

SMYZE SYSTEM & CONTROL CENTER

RUT360

MAIN CONNECTIVITY

INTERNET

CONTROLLER

VPN SERVER

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