



JULY, 2022

# ETHERNET & WIRELESS

## PRODUCT CATALOG





# TABLE OF CONTENTS / V1.0

Who We Are?	4
Our Team	5
Holistic Approach	6
Portfolio	8
Our Focus	9

<b>RMS</b>	
RMS - REMOTE MANAGEMENT SYSTEM	12
Use Case: Centralized remote vending machine POS system management	14
Use case: Remote calibration and control of smart traffic lights	15

<b>SWITCHES</b>	
TSW100	18
TSW101	20
TSW110	22
TSW200	24
TSW210	26
TSW304	28
Use case: Remotely managed surveillance solution for logistics center	30
Use case: Voip connectivity across branches and home offices	31

<b>ROUTERS</b>	
RUT300	34
RUTX08	36
RUTX10	38
Use Case: Mesh network enabling smart factory connectivity	40
Use Case: Secure connectivity for bank branches	41

<b>UPCOMING DEVICE</b>	
TSW010	44
TSW202	45
TAP100/TAP200	46
ETHERNET & WIRELESS device comparison	47

<b>ACCESSORIES</b>	
Powering Options	48
Antennas Options	49
Mounting Options	49
Our Worldwide Offices	50



# WHO WE ARE?

**24 YEARS  
OF IoT BUSINESS**

We are a rapidly growing technology company, manufacturing professional network connectivity equipment for international markets. Through long-term experience and research and development of industrial network devices for IoT and M2M communication, we have developed a wide portfolio of products for the most complex areas, such as Industry 4.0, Smart City, and Green Energy.



## OUR MISSION IS

to be a fast and flexible partner and be closer to our clients in every world region. Longstanding experience, reliable supply chain, and highest technology process models enable us to produce millions of IoT devices to our clients.

## OUR VISION IS

to become one of the global leaders providing unique IoT solutions that contribute to making people's lives easier. We are open-minded to establish the environment for the creative and ambitious work professionals in Lithuania and the rest of the world to grow and contribute towards our Mission.

## OUR VALUES ARE

not only working but also living to help and sharing kindness to people, especially those who need our help the most. We are keeping our values by continuously and courageously creating synergy between Teltonika IoT Group and business partners as well as clients.

**30  
OFFICES  
IN 19  
COUNTRIES**

# OUR TEAM

## BIGGEST STRENGTH!

Teltonika Networks has a proven track record of rapid growth within professional and industrial cellular connectivity market segments. It would not be possible without a strong, ambitious, and continuously growing team.

**640+**

employees world wide

**58%**

overall team growth in 2021

**67%**

RND team growth in 2021

**21+**

nationalities

**B2B TELTONIKA  
ACADEMY**

**TELTONIKA  
ACADEMY**

**MORE THAN 330  
COMPLETED INTERNSHIPS**

## GROWING TALENT

We have established IoT and B2B academies that closely collaborate with local universities by hosting guest lectures and supporting them with custom scholarships. However, the biggest gain of these academies is the student internships. During them, we share all of our know-how and experience. This practice is also beneficial to us as it helps to attract the best talent to join our young but already experienced team.



# HOLISTIC APPROACH



From concept to the finished product – we develop everything in-house to ensure maximum quality and efficiency. It enables us to move much faster because we do not rely on any externalities.

Over the years, we have implemented hundreds of customized projects, from the smallest firmware changes to full-scale hardware alterations. This experience helped our partners capture more opportunities in the fast-paced technology environment - together.

We make all of our products in the state-of-the-art Teltonika IoT Group manufacturing facility in Vilnius, Lithuania. Full control over our production allows us to ensure that we deliver only the best and most reliable devices.

**6 MODERN  
SMT LINES**

**100+ ROBOTS FOR  
AUTOMATION**

**ECOFRIENDLY PACKAGING  
AND LASER ENGRAVING**

# FROM CONCEPT TO THE FINISHED PRODUCT

## EXPERIENCE

For more than 24 years we have been providing reliable Industrial IoT & M2M connectivity solutions that are secure and easy to use.

## FLEXIBILITY

We have implemented hundreds of customized projects from the smallest firmware changes to full-scale hardware alterations.

## ALL IN ONE

From concept to the finished product – we develop everything in-house to ensure maximum quality and efficiency.





# PORTFOLIO

## WE HELP YOU CONNECT

We designed our product portfolio to help our partners access opportunities within the rapidly growing IoT and Industrial IoT space. It consists of modems, gateways, routers, switches, and IoT platforms. We have grown to be one of the leaders of cellular IoT devices for industrial and professional applications. From automation, smart grid, to public transport connectivity – hundreds of thousands of our networking products are currently at the heart of our partners' solutions.

## GROWING PORTFOLIO

+2	+3	+5	+5	+5	+8
2017	2018	2019	2020	2021	2022 Q1-Q2

## 31 DEVICES - UNLIMITED USE CASES



### INDUSTRIAL & AUTOMATION

Global adoption of automation demands the ability to monitor and manage equipment remotely to increase productivity.



### ENERGY & UTILITIES

Reducing power consumption and maintenance costs by building wired and wireless IoT connectivity solutions.



### SMART CITY

Connected sensors, infrastructure, vehicles, and devices require secure and reliable IoT connectivity products.



### TRANSPORTATION

Networking devices transport operators to optimize their businesses and create new revenue streams.



### ENTERPRISE

Enterprise applications require primary and backup connectivity solutions that are secure, reliable, and easy to use.



### RETAIL

IoT connectivity solutions offer new ways to interact with clients and collect valuable data to make strategic decisions.

# OUR FOCUS

## INSPIRE

At Teltonika Networks, we have a clearly defined product development philosophy which we use at every stage of product development decision-making. We know that security and reliability are the two core factors in industrial networking device selection. However, we thrive on offering complex and capable devices without sacrificing ease of use. We wish to make IoT accessible to every enthusiast and inspire creativity in solving real-life problems with technology.

## RELIABLE

We have long-standing experience manufacturing industrial devices that can withstand the most rigorous environments and offer connection continuity with multiple backup scenarios.

## SECURE

We assure the highest level of security for all Teltonika Networks products by performing regular safety tests and releasing periodical firmware updates to eliminate any risks of breaches.

## EASY TO USE

Industrial Teltonika Networks devices are designed mainly for professional applications, yet they are still easy to use. Offering products that do not require any special training is one of our strengths.

# RUTOS

## OPERATING SYSTEM FOR NETWORKING PRODUCTS

RutOS is our unified router operating system and the core component of all Teltonika Networks products. 10+ years of development made RutOS grow to the highest industry standards. Security, stability, and user experience are the key values that our platform is built around. Intuitive Web interface and constantly growing Wiki/Crowd-Support platforms help our partners cut costs on engineer training while implementing new devices or migrating from other systems.

Teltonika Networks products stand out as easily manageable devices on the market. Multiple remote monitoring and control functions are an inseparable part of RutOS. This Open-source OpenWrt-based operating system and complete software documentation enable easy development of custom software solutions or new functionality and fast integration with third-party platforms.

# COMPLETE SOLUTION





# RMS

## REMOTE MANAGEMENT SYSTEM

RMS is a cloud-based IoT platform designed for intuitive and convenient remote monitoring, configuration, and control of compatible Teltonika Networks products and third-party devices. We offer four different services that allow for extensive management and advanced analytics. Choose a service that meets the needs of your current solution infrastructure and incorporate it into a familiar system environment using RMS API.



# RMS

## REMOTE MANAGEMENT SYSTEM

The Remote Management System (RMS) by Teltonika Networks allows you to control your whole connected IoT solution from anywhere in the world. RMS offers remote access to all devices from a single user-friendly platform. We tailored RMS to meet the requirements of various clients with four available RMS services.

### NO PUBLIC IP

Access your devices anywhere, without public IP

### SECURE

Protect your data with encrypted communication

### CUSTOMIZABLE

Adapt the interface and functionality to your needs

### EFFICIENT

Optimize time and resources with remote access

### TRY RMS FOR FREE

Explore the potential of any available RMS service with a [30-day trial](#)!



# MANAGEMENT

RMS MANAGEMENT enables complete control over your fleet of Teltonika Networks routers and gateways, assuring their security and availability. Enjoy the flexibility of remote configurations, monitoring, and updates of your connectivity device ecosystem even without a public IP!

- // MULTI-CONFIGURATION & FOTA
- // HISTORICAL DATA AND REPORTS
- // USER-FRIENDLY INTERFACE
- // TASK MANAGER FOR CUSTOM FUNCTIONS
- // 24/7 MONITORING AND ALARMS
- // LIMITED TIME THIRD-PARTY ACCESS

# CONNECT

RMS CONNECT is a unified access system that allows remotely reaching and controlling smart devices. If your PLC, Industrial PC, CCTV camera, POS system, or other intelligent device is reachable by one of the RMS-compatible routers or gateways, you can access it with RMS CONNECT.



Reach any device's WEB interface using HTTP(S)



No GUI, no problem!  
Access any device terminal via SSH or Telnet



Access remote PC, HMI, or any desktop with RDP and VNC protocols

# API

What could be more efficient than having a single software system for your whole connected solution infrastructure? RMS API allows your IoT Platform to directly interact with RMS and get all the needed functionality and data.

## FAMILIAR INTERFACE

## OPENAPI STANDARD

## TESTING SANDBOX

## DEVELOPER PORTAL

# VPN

Managing large-scale networks containing various devices can be tricky! RMS VPN offers the easiest way of setting up VPN connections to your whole infrastructure. Now you may remotely, simply, and securely reach multiple endpoints without configuring different protocols or setting up servers. We will take care of all this for you in the background!

// We use a top-trusted world-renowned OpenVPN protocol to establish secure connections with your devices.

// Use our on-demand service for an unlimited number of VPN clients. Pay only for the amount of data you use!



# CENTRALIZED REMOTE VENDING MACHINE POS SYSTEM MANAGEMENT



## RETAIL

Vending machines have been around for centuries. Their popularity is still on the rise for several reasons. First, they do not require any human presence and save time in fast-paced environments. Also, they offer 24/7 availability and do not need much space, hence lower upkeep costs.

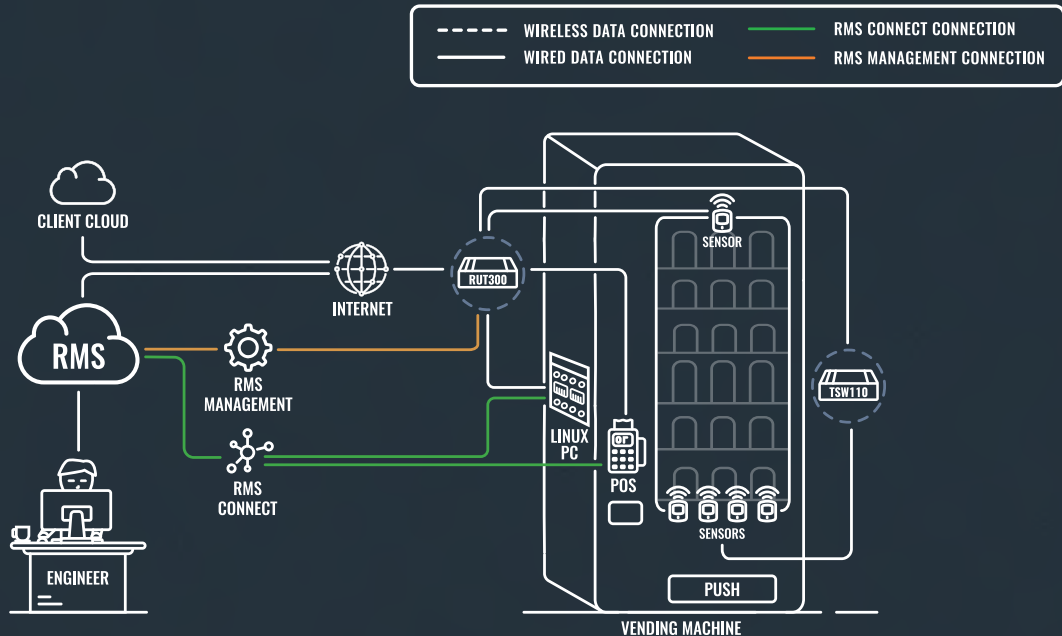
**SOLUTION**  
Usually, vending machines use third-party cashless payment terminals. An essential element for these systems is having uninterrupted, secure internet connectivity. In this case, the RUT300 Ethernet router connects the POS, Linux PC, and various sensors to the network using five Gigabit Ethernet ports. TSW110 gateway enables connecting more sensors for a plug-n-play ecosystem expansion.

Another vital element in such solutions is remote management capability. Vending machine operators look after hundreds of machines in varied distanced locations. Due to stringent security policies, they require frequent firmware updates. Here RMS comes in to save the day of engineers and support specialists. Not only may they connect to Teltonika Networks routers for diagnostics, updates, and troubleshooting via RMS Management, but they can also reach

third-party devices, including the POS terminal, via RMS Connect to carry out whatever tasks they require.

To better illustrate the gain of RMS, let's multiply the number of vending machines by the hourly rate of an engineer and the fuel consumption needed to visit multiple remote locations. With RMS Connect, users can update thousands of POS terminals simultaneously from anywhere they are.

- BENEFITS**
- /Remote management of Teltonika Networks devices via RMS Management for diagnostics, maintenance, and troubleshooting.
  - /Remote accessibility of third-party devices via RMS Connect.
  - /Real-time alerts to stay on top of your solution and prevent costly downtime.
  - /Periodical or on-demand activity reports for optimization.
  - /Compatible with various OS, including Linux, Windows, and Mac.
  - /Hosted on AWS, RMS complies with rigorous security requirements and aligns with the latest cyber threat data.
  - /Friendly payment plans: pay only for the services you need and the amount of data you use.



# REMOTE CALIBRATION AND CONTROL OF SMART TRAFFIC LIGHTS



## SMART CITY

One of the essential elements to combat heavy traffic is city planning. Our client received a project to install the first Microprocessor Optimized Vehicle Actuation and place it in one of the busiest roundabouts. Yet, the system had to be calibrated by a manufacturer expert. Thus, due to Covid-19 travel restrictions, meeting project delivery dates was a massive challenge.

**SOLUTION**  
Our client decided to redesign their solution by adding Teltonika Networks connectivity products to meet the deadlines. They chose to establish remote communication by using the RUT240 industrial cellular router so that the engineer could calibrate the system while staying abroad.

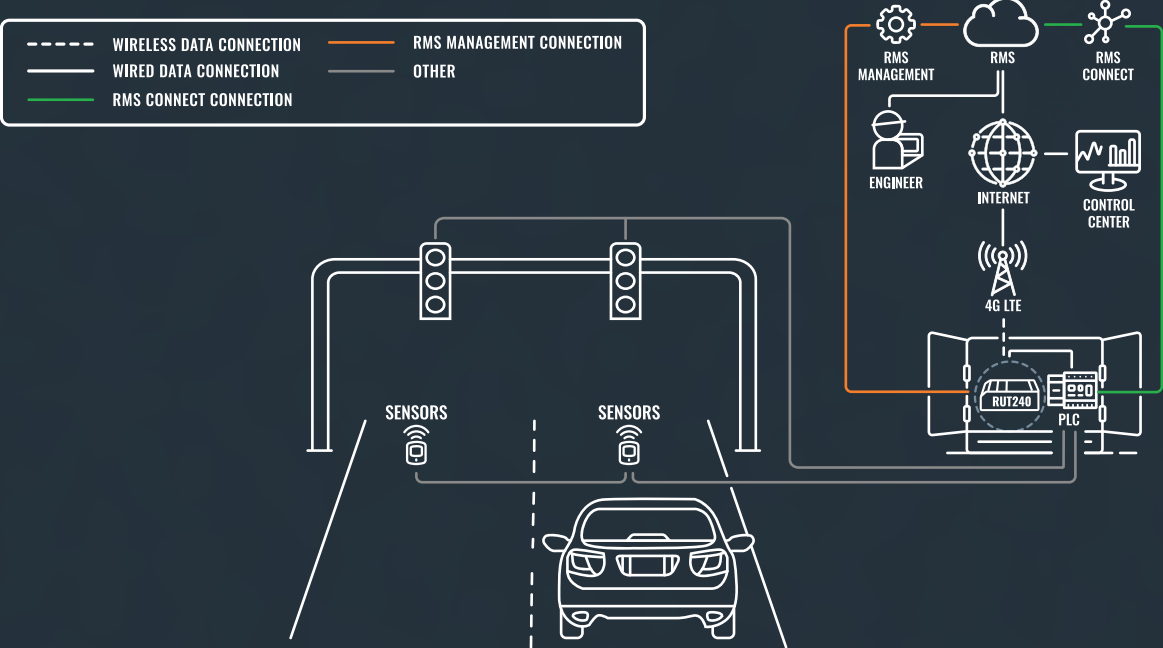
First, the RUT240 router provides an internet connection to this IoT solution. A traffic signal controller connects with the router via an Ethernet cable. Then the PLC can accommodate all of the traffic signals and sensor connections. The PLC can regulate traffic green light time with the data from induction loops installed on the tarmac.

Another part of this solution is the Teltonika Networks RMS. Teltonika RMS Management allows the RUT240 to monitor its temperature,

install firmware updates, or set up alerts. RMS Management can accommodate more compatible Teltonika Networks devices in the future without the need for public IPs.

On the other hand, the RMS Connect can access any other third-party equipment. With its help, you can then remotely manage any settings of the connected devices as if you were there physically. That is also how the engineer was able to calibrate the PLC remotely.

- BENEFITS**
- /The RUT240 offers easy integration due to its 4G connectivity and small size.
  - /RUT240 delivers high performance in rigorous environments, a perfect choice for solutions in extreme conditions, for example, near high traffic where you need resistance to vibrations. During the summer, the router's temperature had reached 78°C, and it still worked fine.
  - /Teltonika RMS Connect allows access to any connected smart devices to configure them and extract data.
  - /RMS Management allows access and control for all compatible Teltonika Networks devices without the need for a public IP.





# SWITCHES

Teltonika Networks Ethernet switches feature industrial-grade reliability, network redundancy, top-level security, and simple management. Multiple mounting options and plug-n-play design enable fast and simple installations.





# TSW100

INDUSTRIAL UNMANAGED POE+ SWITCH

TSW100 is an unmanaged Gigabit Ethernet switch supporting Power-over-Ethernet. Classified as power source equipment (PSE), it centralizes the power supply, providing up to 30 watts per port and reducing installation effort. Five Gigabit Ethernet ports provide an economical high-bandwidth solution for a secure industrial Ethernet network.

**PoE**  
4 x PoE+ ports with 802.3af and 802.3at support

**POWER BUDGET**  
Total power budget at PSE up to 120 W

**ETHERNET**  
5 x Gigabit Ethernet with speeds up to 1000 Mbps

**MOUNTING**  
DIN rail and surface mounting options

**STANDARD PACKAGE CONTAINS:**  
TSW100 // 65 W PSU // QSG (Quick Start Guide) // Packaging box

## HARDWARE

Powering option	4pin power socket, 7-58 VDC
Power consumption	Idle: < 2 W, Max: < 9 W (no PoE device connected)
PoE standart	802.3af/at (max 30 W per port, total power budget 120W*)
Ethernet	5 x 10/100/1000 Ethernet ports: 4 x PoE, 1 x Uplink
Status LEDs	10 x Ethernet, 1 x Power
Ingress protection rating	IP30
Operating temperature	-40 °C to 75 °C
Housing	Aluminium housing with wall or DIN rail mounting option and grounding capability
Dimensions	115 x 32 x 95 mm
Weight	340 g

## PERFORMANCE SPECIFICATIONS

Bandwidth	10 Gbps
Packet buffer	128 KB
MAC address table size	2K entries
Auto MDI/MDI-X Cable Detection	Yes

\*Provided power supply only allows 60 W PoE power budget at PSE, to reach maximum 120 W at PSE >130 W power PSU must be used





# TSW101

**AUTOMOTIVE PoE+ SWITCH**

Our first-ever switch for the automotive industry features five Gigabit Ethernet ports with PoE+ support to connect multiple devices to the network and power them up using the same interfaces. Enjoy reliable high bandwidth connectivity in a simple, economical, and easy-to-install solution.

**AUTOMOTIVE SWITCH**

Ideal for in-vehicle solutions

**PoE**

4 x PoE+ ports with 802.3af and 802.3at support

**ETHERNET**

5 x Gigabit Ethernet with speeds of up to 1000 Mbps

**PLUG-N-PLAY**

No need for configuration

**STANDARD PACKAGE CONTAINS:**

TSW101 // QSG (Quick Start Guide) // Packaging box

# HARDWARE

Powering option	2-pin power DC socket, 9-30 VDC
Power consumption	0.64 W / Max: 2.31 W / PoE Max: 112.58 W
PoE standard	802.3af/at (max 30 W per port, total power budget 60W)
Ethernet	5 x 10/100/1000 Ethernet ports: 4 x PoE, 1 x Uplink
Status LEDs	10 x Ethernet, 1 x Power
Ingress protection rating	IP30
Operating temperature	-40 °C to 75 °C
Housing	Aluminum housing with wall or DIN rail mounting option and grounding capability
Dimensions	115 x 32 x 95 mm
Weight	354 g

# PERFORMANCE SPECIFICATIONS

Bandwidth	10 Gbps
Packet buffer	128 KB
Jumbo frame support	9216 bytes
MAC address table size	2K entries
Auto MDI/MDI-X Cable Detection	Yes





# TSW110

## L2 UNMANAGED SWITCH

TSW110 is an unmanaged layer 2 switch. This tiny but rugged professional device enables industrial high bandwidth applications with a reliable data connection. It has five Gigabit Ethernet ports to connect equipment to the network and supports wide power supply voltages (9-30 V).

### GIGABIT ETH

5 x Gigabit Ethernet with speeds up to 1000 Mbps

### DURABILITY

Rugged aluminum housing

### MOUNTING

DIN rail and surface mounting options

### TEMPERATURE

Operating temperature -40 °C to 75 °C

## STANDARD PACKAGE CONTAINS:

TSW110 // 9 W PSU // QSG (Quick Start Guide) // Packaging box

# HARDWARE



Powering option	4pin power socket, 9-30 VDC
Power consumption	Idle: < 0.4 W, Max: < 1.8 W
Ethernet	5 x 10/100/1000 Ethernet ports
Status LEDs	10 x Ethernet, 1 x Power
Ingress protection rating	IP30
Operating temperature	-40 °C to 75 °C
Housing	Aluminium housing with wall or DIN rail mounting option and grounding capability
Dimensions	100 x 30 x 85 mm
Weight	227 g

# PERFORMANCE SPECIFICATIONS

Bandwidth	10 Gbps
Packet buffer	128 KB
MAC address table size	2K entries
Auto MDI/MDI-X Cable Detection	Yes





# TSW200

PoE+ GIGABIT ETHERNET SWITCH

TSW200 is an unmanaged industrial switch with 2 SFP ports for long-range Fiber-optic communication and 8 Gigabit Ethernet ports that support IEEE802.af and IEEE802.3at Power-over-Ethernet standards. Classified as power source equipment (PSE), it enables the centralization of power supply, providing up to 30 watts per port and reducing the effort to install power.

**SFP**

2 x SFP ports for long-range Fiber-optic communication

**PoE**

8 x PoE+ ports with 802.af, 802.3at standard support

**POWER BUDGET**

Total power budget at PSE up to 240 W

**ETHERNET**

8 x Gigabit Ethernet with speeds up to 1000 Mbps

**STANDARD PACKAGE CONTAINS:**  
TSW200 // QSG (Quick Start Guide) // Packaging box

## HARDWARE

Powering option	2 pin, push-in, terminal block
Input voltage range	7-57 VDC
Input voltage range for PoE	44-57 VDC
Power consumption	Idle: < 2 W, Max: < 9 W (no PoE device connected)
PoE standard	802.3af/at (up to 30 W per port, total power budget - 240 W)
Ethernet	8 x 10/100/1000 Mbps Ethernet ports
SFP	2 x SFP port for Optical interface
Status LEDs	16 x Ethernet, 1 x Power, 2 x SFP activity
Ingress protection rating	IP30
Operating temperature	-40 °C to 75 °C
Housing	Aluminium housing with wall or DIN rail mounting option and grounding capability
Dimensions	132 x 44.2 x 95.1 mm
Weight	456 g
Installation	Desktop, wall or DIN Rail mountable (additional kit needed)

## PERFORMANCE SPECIFICATIONS

Bandwidth	20 Gbps
Packet buffer	128 KB
Jumbo frame support	9216 bytes
MAC address table size	2K entries
Auto MDI/MDI-X Cable Detection	Yes



# TSW210

UNMANAGED GIGABIT ETHERNET SWITCH WITH SFP

TSW210 offers a great combination of Gigabit Ethernet and SFP. Eight Ethernet ports enable connecting multiple devices to the network quickly and easily without any further configuration. SFP allows including far apart devices while maintaining high-speed rates and reliability.

ETHERNET

8 x Gigabit Ethernet with speeds up to 1000 Mbps

PLUG-N-PLAY

No additional configuration needed

MOUNTING

DIN rail and surface mounting options

SFP

SFP port for long-range Fiber-optic communication

STANDARD PACKAGE CONTAINS:

TSW210 // QSG (Quick Start Guide) // Packaging box

## HARDWARE



Powering option	2-pin industrial DC power socket
Input voltage range	7-57 VDC
Power consumption	Idle: 1.03 W, Max: 3.71W
Ethernet	8 x 10/100/1000 Mbps Ethernet ports
SFP	2 x SFP ports for Optical interfaces
Status LEDs	16 x Ethernet, 1 x Power, 2 x SFP activity
Ingress protection rating	IP30
Operating temperature	-40 °C to 75 °C
Housing	Aluminum housing with wall or DIN rail mounting options and grounding capability
Dimensions	132 x 44.2 x 95.1 mm
Weight	500 g
Installation	Desktop, wall or DIN rail mountable (additional kit needed)

## PERFORMANCE SPECIFICATIONS

Bandwidth	20 Gbps
Packet buffer	128 KB
Jumbo frame support	9216 bytes
MAC address table size	2K entries
Auto MDI/MDI-X Cable Detection	Yes





# TSW304

DIN RAIL SWITCH

TSW304 is the tiniest switch in the Teltonika Networks portfolio, made with the industrial application scenarios in mind. This ultra-small device comes with an integrated DIN rail mounting option and will easily find its place in any server cabinet. Durable design and shock-resistant casing make it perfect for even the most challenging industrial environments.

**DIN RAIL**  
Built-in, integrated DIN mounting

**COMPACT**  
102 x 25 x 81.5 mm

**ETHERNET**  
4 x Gigabit Ethernet with speeds up to 1000 Mbps

**7-57 V**  
Wide range of supported power supply voltages

**STANDARD PACKAGE CONTAINS:**  
TSW304 // QSG (Quick Start Guide) // Packaging box

## HARDWARE

Powering option	2-pin power DC socket, 7 - 57 VDC / 9 - 40 VAC
Power consumption	Idle: < 0.26 W, Max: < 1.44 W
Ethernet	4 x 10/100/1000 Ethernet ports
Status LEDs	8 x Ethernet, 1 x Power
Ingress protection rating	IP30
Operating temperature	-40 °C to 75 °C
Housing	Aluminium housing with wall or DIN rail mounting option and grounding capability
Dimensions	102 x 25 x 81.5 mm
Weight	210 g
Installation	DIN Rail mountable (no additional kit needed)

## PERFORMANCE SPECIFICATIONS

Bandwidth	8 Gbps
Packet buffer	128 KB
Jumbo frame support	9216 bytes
MAC address table size	2K entries
Auto MDI/MDI-X Cable Detection	Yes



# REMOTELY MANAGED SURVEILLANCE SOLUTION FOR LOGISTICS CENTER



// SMART CITY

According to Statista, the overland freight movement market is worth 791.7 billion in the US alone. When the truck is parked, cargo safety remains crucial on the road. Naturally, such a task requires a high-tech solution.

## SOLUTION

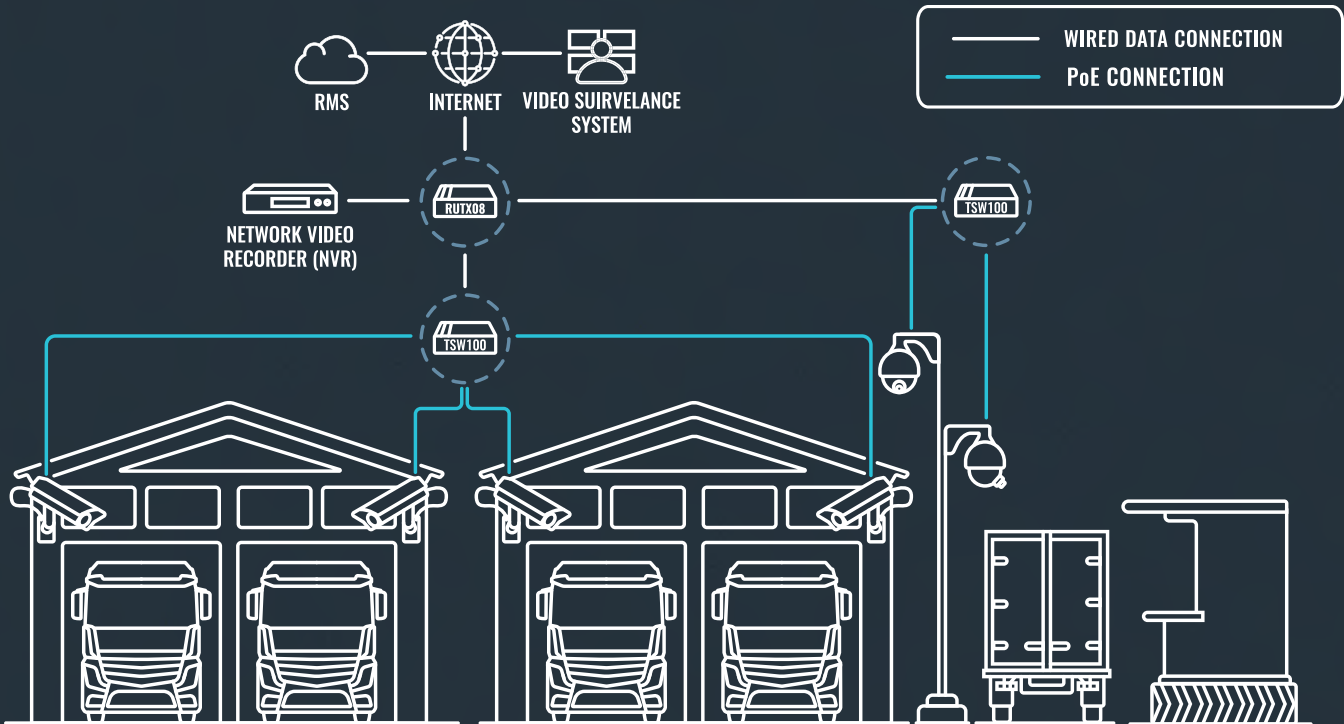
RUTX08 industrial Ethernet router acts as a central component in the whole setup. It links the TSW100 switches into a single network and connects an NVR, which stores all the video streams from the cameras. RUTX08 acts as the main gateway between the user, the internet, and the surveillance system.

Naturally, the cameras require internet and electricity to keep running, so the TSW100 industrial PoE+ switch was a perfect fit. TSW100 provides both through the same connection. Four PoE ports accommodate CCTV cameras that monitor the parking space availability and track activity in the parking lot at any time.

Besides, the TSW100 can manage a more advanced PTZ camera with up to 30 W per Ethernet port. Combined with RMS and RUTX08, you may enjoy an entirely remotely controlled solution with an option of accessing each of the PTZ cameras' WebUI and recording automatic movement tracking. It is even more convenient when multiple devices are located across different parking sites, as you may manage them all under one user-friendly interface.

## BENEFITS

- /Easy set up with a plug-and-play TSW100 switch without any additional configurations.
- /RUTX08 features Gigabit Ethernet for uncompromised high-speed video data transfer.
- /RUTX08 is compatible with the Teltonika Remote Management System for controlling multiple camera settings without traveling to the physical location.



# VOIP CONNECTIVITY ACROSS BRANCHES AND HOME OFFICES



// ENTERPRISE

More than 30% of all businesses use VoIP systems. The Global VoIP market share is expected to reach \$55 billion by 2025. Although the biggest spurt in growth was up to 2012, it remains growing steadily to this day, and not without a reason. It is a cost-efficient and convenient way for a business to set up communication with other VoIP or landline users via the internet. It is expected that small to mid-size businesses will find VoIP especially attractive in the coming years due to smaller costs of implementation and remote work trends.

## SOLUTION

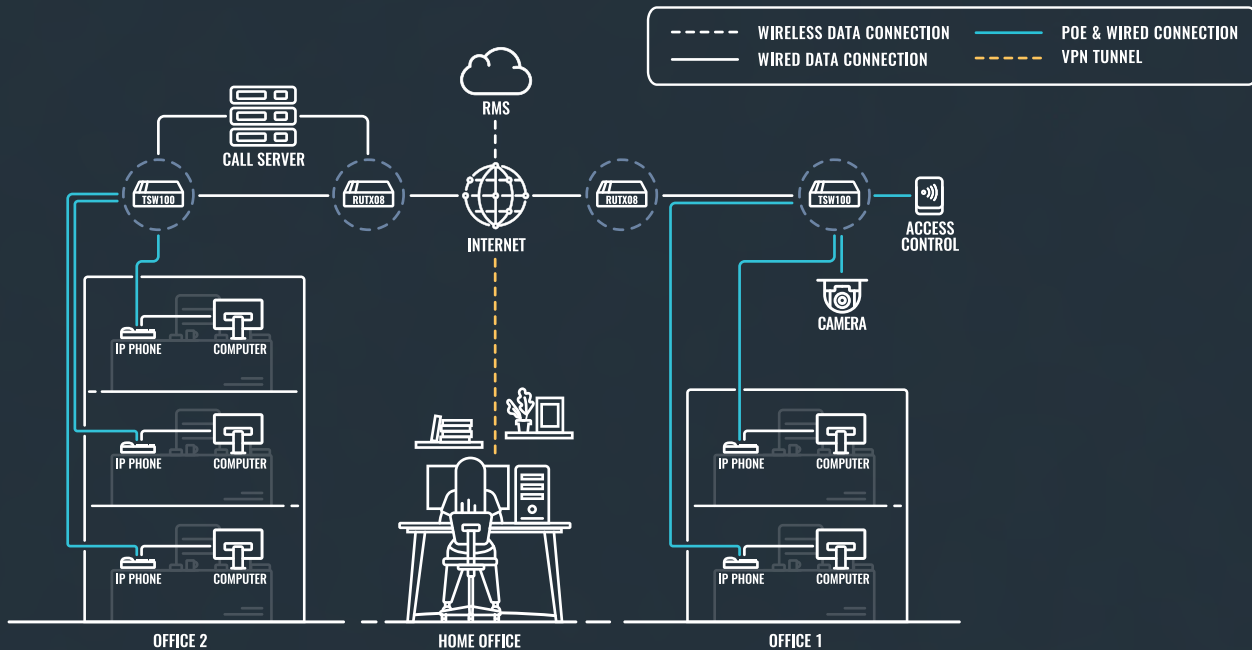
In this solution, remote offices and employees working from home can use the same Call Server, connected to the internet using a RUTX08 Gigabit Ethernet router. RUTX08 offers enough data throughput for a bandwidth-demanding VoIP system and ensures reliable internet connectivity.

In the headquarters, TSW100 is used to connect the multiple IP phones in the office to the internet and powers them up at the same time, making the setup process very simple and quick. TSW100 switch can power up other devices as well, like IP cameras and Access Control System, as you may notice in the Branch connectivity bit.

RUTX08 comes with built-in RutOS software, offering advanced security features, such as multiple supported VPN services, Firewall, making this device a superb performer for such solutions. Firewall and VPN encryption ensures that the communication is taking place securely, even when the employees are working from their homes. Remote Management System (RMS) allows to configure all routers remotely and even reach the devices behind them, like the IP phones, cameras via RMS Connect.

## BENEFITS

- /Gigabit Ethernet – RUTX08 offers enough bandwidth to ensure good call quality.
- /Easy and economical setup – using TSW100 reduces the number of wires and the setup time.
- /Security – provided by Firewall and VPN data encryption.
- /Remote Management – with RMS Connect IT administrators can reach the routers and devices behind them for updates, maintenance and configuration.
- /A single vendor to connect everything – TSW100 allows to connect the IP phones, cameras, Access Control, making the maintenance process easier.





# ROUTERS

Our Ethernet-to-Ethernet and Wi-Fi routers are suitable to provide stable connectivity for challenging industrial networking tasks and more general networking solutions. Ethernet interfaces and VLAN support enable large infrastructures with efficient traffic management. Numerous VPN services, advanced Firewall, and compatibility with Remote Management System (RMS) make these devices a superb choice for highly secure professional solutions.



# RUT300

## INDUSTRIAL ETHERNET ROUTER

Rugged industrial fast Ethernet router comes with the benefits of RutOS, advanced security features, and a possibility to connect to the RMS. Five fast Ethernet ports, two configurable digital inputs/outputs, and a USB 2.0 allow to easily connect industrial machinery, office or retail equipment, and other devices to the internet.

### INTERFACES

5 x Fast Ethernet ports (10/100 Mbps), 2 x Configurable digital Inputs/Outputs and USB 2.0

### DURABILITY

Rugged aluminum housing capable to withstand harsh environments

### VPN

Numerous VPN services including OpenVPN, IPsec, PPTP, L2TP & DMVPN, L2TP, DMVPN,

### RMS

For remote management, access & VPN services

### STANDARD PACKAGE CONTAINS:

RUT300 // 9 W PSU // Ethernet cable (1.5 m) // RMS Flyer // QSG (Quick Start Guide) // Packaging box

# HARDWARE



CPU	QCA9531, MIPS 24kc, 650 MHz
Memory	64 MB, DDR2
Storage	16 MB, SPI Flash
Powering option	4 pin power socket, 7-30 VDC
Ethernet	5 x 10/100 Ethernet ports: 1 x WAN, 4 x LAN
Inputs/Outputs	On 4 pin socket: 2 x Configurable digital Inputs/Outputs open collector output
Other	1 x USB Host
Status LEDs	5 x Ethernet, 1 x Power
Operating temperature	-40 °C to 75 °C
Housing	Aluminium housing with DIN rail mounting option and grounding capability
Dimensions (W x H x D)	100 x 30 x 85 mm
Weight	229 g

# SOFTWARE

Operating system	RutOS (OpenWrt based Linux OS)
Network protocols	TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPPoE, DHCP, Telnet
Routing	Static routes, Routing rules, Dynamic routes (BGP, OSPFv2, RIPv1/v2, EIGRP, NHRP
Firewall	Port forward, Traffic rules, Custom rules, Pre-configured firewall rules, DMZ, NAT, NAT-T, NAT helpers, Unlimited firewall configuration via CLI
Security	DDOS prevention (SYN flood protection, SSH attack prevention, HTTP/HTTPS attack prevention), Port scan prevention (SYN-FIN, SYN-RST, X-mas, NULL flags, FIN scan attacks)
VPN and tunneling	OpenVPN, IPsec, GRE, PPTP, L2TP, Stunnel, DMVPN, SSTP, ZeroTier, WireGuard
Monitoring and Management	WEB UI, CLI, SSH, TR-069, SNMP, JSON-RPC, MQTT, MODBUS, RMS
Cloud solutions	RMS, FOTA, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx
Services	DDNS, Wake On Lan (WOL), WEB filter, UPNP, Network shares (Samba), Traffic Logging
Administration	Multi user, Configuration profiles, Diagnostics, logs, Configuration backup



# RUTX08

## INDUSTRIAL ETHERNET ROUTER

This robust industrial router has four Gigabit Ethernet ports, a Quad-Core CPU, and 256 MB RAM. These powerful specifications combined with core RutOS software features, such as multiple VPN services, advanced Firewall, and RMS support, make this device a superb industrial performer.

### GIGABIT ETH

4 x Gigabit Ethernet ports with up to 128 port/tag-based VLANs supported

### VPN

Numerous VPN Protocols supported, including OpenVPN, IPsec, PPTP, L2TP & DMVPN

### PROTOCOLS

Compatible with industrial DNP3 & Modbus communication protocols

### RMS

For remote management, access & VPN services

## STANDARD PACKAGE CONTAINS:

RUTX08 // 9 W PSU // Ethernet cable (1.5 m) // RMS Flyer // QSG (Quick Start Guide) // Packaging box

# HARDWARE



CPU	Qualcomm, 4 x ARM Cortex A7, 717 MHz
Storage	256 MB Flash
Memory	256 MB RAM
Powering option	4pin power socket, 9-50 VDC
Ethernet	4 x 10/100/1000 Ethernet ports: 1 x WAN (configurable as LAN), 3 x LAN
Inputs/Outputs	On 4pin socket: 1 x Digital input, 1 x Digital open collector output
Other	1 x USB Host
Status LEDs	8 x Ethernet, 1 x Power
Operating temperature	-40 °C to 75 °C
Housing	Aluminium housing with DIN rail mounting option and grounding capability
Dimensions (W x H x D)	115 x 32.2 x 95.2 mm
Weight	345 g

# SOFTWARE

Operating system	RutOS (OpenWrt based Linux OS)
Network protocols	TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPPoE, DHCP, Telnet
Routing	Static routes, Dynamic routes (BGP, OSPFv2, RIPv1/v2, EIGRP, NHRP), Routing rules
Firewall	Port forward, Traffic rules, Custom rules, Pre-configured firewall rules, DMZ, NAT, NAT-T, NAT helpers, Unlimited firewall configuration via CLI
Security	DDOS prevention (SYN flood protection, SSH attack prevention, HTTP/HTTPS attack prevention), Port scan prevention (SYN-FIN, SYN-RST, X-mas, NULL flags, FIN scan attacks)
VPN and tunneling	OpenVPN, IPsec, GRE, PPTP, L2TP, Stunnel, DMVPN, SSTP, WireGuard, ZeroTier
Monitoring and Management	WEB UI, CLI, SSH, TR-069, SNMP, JSON-RPC, MQTT, MODBUS, RMS
Cloud solutions	RMS, FOTA, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx
Services	DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Network shares (Samba), Traffic Logging
Administration	Multi user, Configuration profiles, Diagnostics, logs, Configuration backup



# RUTX10

## PROFESSIONAL ETHERNET ROUTER

This professional router combines the best of wired and wireless routing functionalities with Gigabit Ethernet, Bluetooth LE, and AC Wi-Fi. Advanced remote management capabilities along with numerous supported security and networking protocols make RUTX10 an ideal choice for professional applications.

### GIGABIT ETH

4 x Gigabit Ethernet ports with up to 128 port/tag-based VLANs supported

### WI-FI & BT

Wave-2 802.11ac Dual Band WIFI and Bluetooth LE

### MULTIPLE VPNs

Numerous VPN Protocols supported, including OpenVPN, IPsec, PPTP, L2TP & DMVPN

### RMS

For remote management, access & VPN services

## STANDARD PACKAGE CONTAINS:

RUTX10 // 18 W PSU // 2 x WiFi antennas (swivel, RP-SMA male) // 1 x Bluetooth antenna (magnetic mount, RP-SMA male, 1.5 m cable) // Ethernet cable (1.5 m) // RMS Flyer // QSG (Quick Start Guide) // Packaging box

# HARDWARE



CPU	Qualcomm, 4 x ARM Cortex A7, 717 MHz
Storage	256 MB Flash
Memory	256 MB RAM
Powering option	4pin power socket, 9-50 VDC
Antenna connectors	2 x RP-SMA for WiFi, 1 x RP-SMA for Bluetooth
Ethernet	4 x 10/100/1000 Ethernet ports: 1 x WAN (configurable as LAN), 3 x LAN
WiFi	IEEE 802.11b/g/n 2.4GHz, IEEE 802.11ac/n/a 5GHz, Access point (AP), Station (STA)
Bluetooth	4.0 (Low energy)
Inputs/Outputs	On 4pin socket: 1 x Digital input, 1 x Digital open collector output
Other	1 x USB host
Status LEDs	2 x WiFi, 8 x Ethernet, 1 x Power
Operating temperature	-40 °C to 75 °C
Housing	Aluminium housing with DIN rail mounting option and grounding capability
Dimensions	115 x 32.2 x 95.2 mm
Weight	355 g

# SOFTWARE

Operating system	RutOS (OpenWrt based Linux OS)
Network protocols	TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPPoE, DHCP, Telnet
Routing	Static routes, Dynamic routes (BGP, OSPFv2, RIPv1/v2, EIGRP, NHRP), Routing rules
VPN and tunneling	OpenVPN, IPsec, GRE, PPTP, L2TP, Stunnel, DMVPN, SSTP, WireGuard, ZeroTier
Monitoring and Management	WEB UI, CLI, SSH, TR-069, SNMP, JSON-RPC, MQTT, MODBUS, RMS
Connection monitoring	Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection
Cloud solutions	RMS, FOTA, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx
Hotspot	External/Internal Radius, SMS OTP, MAC authentication, Walled Garden
Supported Hotspot platforms	IronWiFi, HotspotSystem, Cloud4Wi, SAI + WiFi, MugiCloud, Purple.ai
Services	DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Network shares (Samba), Traffic Logging



# MESH NETWORK ENABLING SMART FACTORY CONNECTIVITY

// INDUSTRIAL & AUTOMATION

Industry 4.0 and the increasing scale of automation are revolutionizing manufacturing. With every developed innovative technology, less and less human interaction is required in the day-to-day operation of factories. The benefits of automation are multiple: it helps eliminate human errors, increase productivity, reduce costs and acquire valuable data for future optimization. And that is why the global industrial automation market is growing at an exponential rate, expecting to have surpassed 200 billion US dollars next year.

### SOLUTION

Factory connectivity solution requires professional rugged routers that can sustain the challenges of an industrial environment. Naturally, each device can only cover only a limited area with desirable signal strength. For this reason, multiple RUTX10 Ethernet routers were installed to enable a strong-enough Wi-Fi and ensure seamless operation of all the computers and machinery. While setting up one router does not take a lot of IT resources, configuring multiple to create a secure network can become a time and energy-consuming project. In such cases - creating a Wi-Fi Mesh network could be your best bet.

The 802.11s standard available in RutOS allows connecting various wireless equipment without setting up complicated infrastructure. Mesh Wi-Fi enables quick and easy configuration. All you need to do is configure one router and apply the same properties to the rest of the network via a user-friendly WebUI. Besides, if one node in the network

fails or disconnects, the Mesh network will self-heal and continue the route onto the next node until the issue is resolved. This way, the network continuity remains uninterrupted, and the processes may continue as they were.

Since the factory topology includes moving objects (like autonomous forklifts), this adds another challenge: they need a fast transition between one router and another. That is where 802.11r support (aka Fast Roaming) comes into the picture to save the day. With Fast Roaming, autonomous moving machines can travel around production facilities and seamlessly communicate, quickly switching among routers of the same network.

### BENEFITS

- /Equipped with Dual Band Wi-Fi 5 802.11ac, RUTX10 offers high data transmission and robust wireless performance.
- /Multiple supported protocols, including MQTT, Modbus, Bluetooth, DNP3, make this router suitable for industrial automation solutions.
- /The solution is easily scalable due to the simplicity of the Wi-Fi Mesh network configuration.
- /Advanced security features, like multiple VPN choices, Firewall, access control, and others, ensure the system runs uncompromised.
- /The solution can be remotely monitored and managed with Teltonika Networks Remote Management System (RMS).
- /Industrial aluminum casing of the router ensures that it sustains challenging environments and offers convenient mounting options.



# SECURE CONNECTIVITY FOR BANK BRANCHES

// ENTERPRISE

Today's banking would be unimaginable without the internet and technology. Not a single service could be provided without having access to the internet, connecting various systems and databases of a bank. The financial sector is among the most rapidly changing verticals nowadays. While in some places of the world the growth of mobile and internet banking is making a portion of physical banks obsolete, in other places the number of branch additions is still on the rise, or elsewhere they are getting reshaped to meet the changing market needs and methods of providing services.

### SOLUTION

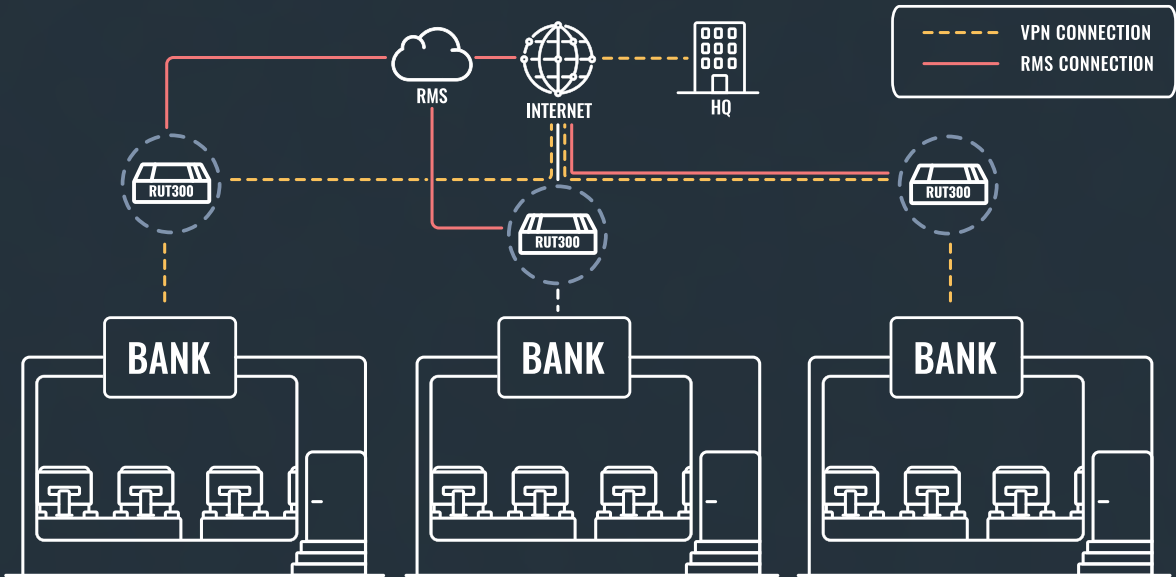
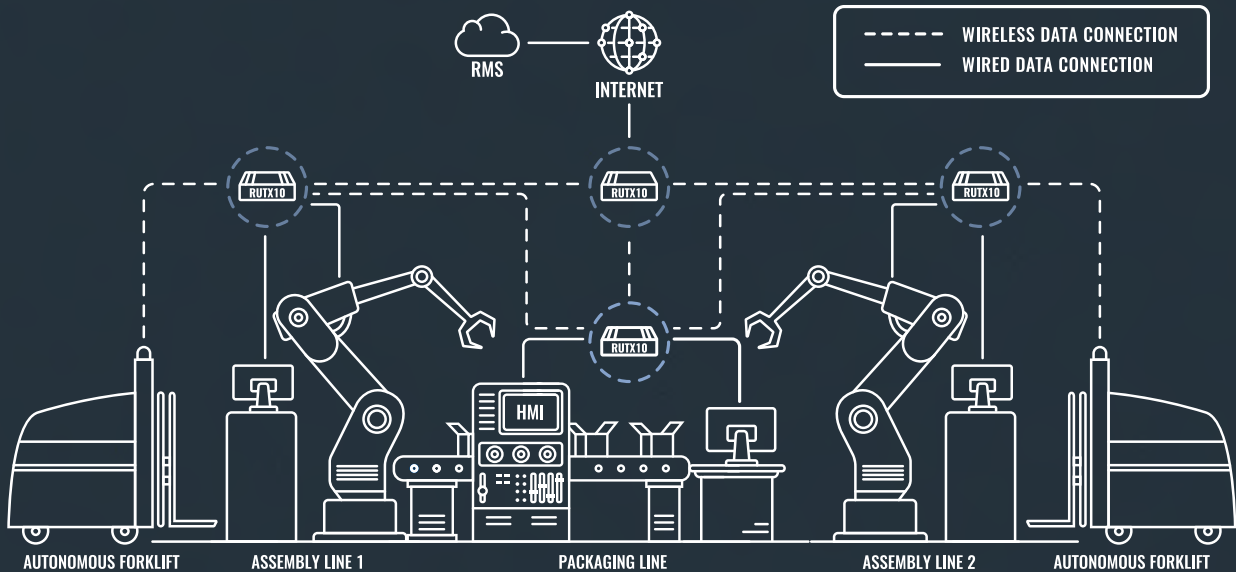
The bank branches in the US and across the world are getting smaller in size and the staff. The number of full-time employees has declined and varies on average from 3 to 8 per branch. As seen in topology, such branches do not require a complicated network infrastructure and Ethernet connectivity fully suffices the day-to-day operations.

RUT300 Ethernet router has five fast Ethernet ports to easily plug in the computers and gives immediate access to the internet. It is a small device that will easily fit into any cabinet or on a desk and the Passive PoE feature makes it very simple to deploy avoiding additional wires and messy setups. A USB port can be used to easily

connect a printer or other office equipment to the network. This device enjoys an abundance of RutOS benefits. It comes with a preconfigured Firewall, meaning that it is immediately safe to use. It also offers a selection of 10 different VPN services to establish a secure and private connection between the branches and the headquarters. RUT300 is compatible with Remote Management System (RMS), so the routers can be easily configured, updated, and troubleshot from a distanced location. Additionally, RMS Connect allows you to reach the equipment connected to the routers and manage it remotely as well (e.g., computers, printers, IP phones, etc.).

### BENEFITS

- /Simple setting-up process – such solution takes minutes to connect and can be easily transferred to a new setting.
- /Security – pre-configured Firewall makes the device safe to use from the very first seconds without complicated configurations.
- /Multiple VPNs – 10 various VPN services to choose from to establish a private connection between the remote branches and the headquarters.
- /Small sized device – will fit into any server cabinet, drawer, or simply anywhere when using a DIN rail mounting option.
- /Remote management of the whole solution – via RMS Connect.







**UPCOMING DEVICES**





# TSW010

UNMANAGED INDUSTRIAL SWITCH

TSW010 unmanaged industrial Ethernet switch is a plug-and-play device that effortlessly and cost-efficiently connects devices into a single network. Five Ethernet ports, rugged design, and a wide range of supported power supply voltages make this device suitable for connecting industrial machinery, retail, or office equipment.

- ETHERNET**  
5 x Fast Ethernet ports (10/100 Mbps)
- 9-30 V**  
Wide range of supported power supply voltages
- MOUNTING**  
DIN rail and surface mounting options
- PLUG-N-PLAY**  
No additional configuration needed



# TSW202

MANAGED POE+ SWITCH WITH SFP

The first managed switch in the Teltonika Networks portfolio offers even more control of your network. This smart switch features eight Gigabit PoE+ ports to connect and power up devices and an SFP port suited for long-range fiber-optic communication. This product is perfect to easily connect and control large networks even with far apart devices.

- ETHERNET**  
8 x Gigabit Ethernet with speeds up to 1000 Mbps
- PoE**  
8 x PoE ports with 802.3af and 802.3at support
- POWER BUDGET**  
Total power budget up to 240W
- MANAGED**  
Advanced layer 3 switch for higher control of your network





# TAP100 / TAP200

WIRELESS ACCESS POINT

Teltonika Networks is entering the Enterprise Wi-Fi market with two new products. These Access Points enable extending reliable and secure wide-range wireless connectivity and deliver a seamless user experience. TAP series devices are extremely easy to install due to supported PoE In and a combination of ceiling and wall mounting options.

WIFI 4 / WIFI 5

100MBPS / 1000MBPS  
ETHERNET PORT

POE IN

EASY CEILING AND  
WALL MOUNT

# ETHERNET & WIRELESS DEVICES COMPARISON

Products key features	SWITCHES						ROUTERS		
	TSW100	TSW101	TSW110	TSW200	TSW210	TSW304	RUT300	RUTX08	RUTX10
CPU (MHz)							650	4x717	4x717
RAM (MB)							64	256	256
Flash memory (MB)							16	256	256
Passive PoE			•			•	•	•	•
PoE out	802.3af/at	802.3af/at		802.3af/at					
Power voltage (VDC)	7-57	9-30	9-30	7-57	7-57	7-57	7-30	9-50	9-50
Ethernet ports	5	5	5	8	8	4	5	4	4
SFP ports				2	2				
Ethernet speed (Mbps)	1000	1000	1000	1000	1000	1000	100	1000	1000
WiFi standard									ac
Inputs/Outputs							2	2	2
Bluetooth									•
USB							Host	Host	Host
DIN Rail mounting	•	•	•	•	•	•	•	•	•
Flat surface mounting	•	•	•	•	•		•	•	•
Grounding terminal	•	•	•	•	•	•		•	•
RMS support							•	•	•
RutOS							•	•	•



# ACCESSORIES / POWERING OPTIONS



**EU power supply, 9 W**  
Order code: PR3PUEU3



**UK power supply, 9 W**  
Order code: PR3PUUK3



**AU power supply, 9 W**  
Order code: PR3PUAU3



**US power supply, 9 W**  
Order code: PR3PUUS3



**EU 2-pin power supply, 9 W**  
Order code: PR3PREU6



**UK 2-pin power supply, 9 W**  
Order code: PR3PRUK6



**AU 2-pin power supply, 9 W**  
Order code: PR3PRAU6



**US 2-pin power supply, 9 W**  
Order code: PR3PRUS6



**EU power supply, 18 W**  
Order code: PR3PXEU3



**UK power supply, 18 W**  
Order code: PR3PXUK3



**AU power supply, 18 W**  
Order code: PR3PXAU3



**US power supply, 18 W**  
Order code: PR3PXUS3



**EU Power supply, 50 V, 1.3 A**  
Order code: PR3PWEU3



**UK Power supply, 50 V, 1.3 A**  
Order code: PR3PWUK3



**US Power supply, 50 V, 1.3 A**  
Order code: PR3PWUS3



**Universal power supply, 9 W**  
Order code: PR3PUPS3



**4-pin to barrel socket adapter**  
Order code: PR2PD01B



**4-pin power adapter with I/O access**  
Order code: PR5MEC21



**Power cable whit 4-way screw terminal**  
Order code: PR2FK20M



**Power cable whit 4-way open wire**  
Order code: PR2PL15B



**4-pin plug with contact terminals**  
Order code: PR4MK04K



**DIN Rail power supply**  
Order code: PR3PDNP0

# ACCESSORIES / ANTENNA OPTIONS



**Bluetooth magnetic SMA antenna**  
Order code: PR1KRT25



**WiFi dual-band SMA antenna**  
Order code: PR14RD35

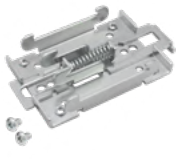


**WiFi dual-band magnetic antenna**  
Order code: PR1KRD30

# ACCESSORIES / MOUNTING OPTIONS



**Compact DIN Rail Kit**  
Order code: PRMEC11



**DIN Rail Kit**  
Order code: PR5MEC00



**Surface mounting Kit**  
Order code: PR5MEC12



**Surface clip holder Kit**  
Order code: PR5MEC22



# OUR WORLDWIDE PRESENCE



CONTACT US



[info@teltonika.lt](mailto:info@teltonika.lt)





**Crowd-support forum**  
<https://community.teltonika.lt/>



**Wiki knowledge base**  
<https://wiki.teltonika.lt/>



**Teltonika-networks**  
<https://teltonika-networks.com/>