# TSW212

MANAGED ETHERNET SWITCH


Energy & utilities

Enterprise

Industrial & automation

Retail

Smart city

## MANAGED SWITCH

L2 with additional L3 features for advanced management capabilities

## PROFINET & MORE

Supports PROFINET for automated data processing alongside other protocols, like EtherNet/IP and MRP

## ETHERNET & SFP

8 x Gigabit Ethernet ports and 2 x SFP ports for fiber optic communication

## TSWOS

Teltonika Networks OS for switches, intuitively designed for infinite configurations

| Ethernet | |
|---|---|
| ETH | Multi-layer managed 8 x ETH ports, 10/100/1000 Mbps supports auto MDI/MDIX crossover |
| Fibre | 2 x SFP ports |
| IEEE 802.3 series standards | 802.3i, 802.3u, 802.3ab, 802.3x, 802.3az |

| INDUSTRIAL PROTOCOLS | |
|---|---|
| Profinet | Profinet Class B conformance (available with optional order code) |

| Services | |
|---|---|
| EtherNet/IP | Yes |
| SNMP V2, V3 | Yes |
| LLDP | Yes |
| Network Management | 802.1p class of service, 802.1x port-based network access control, 802.1Q VLAN |

| Network | |
|---|---|
| MRP | MRP client role, MRP manager role |
| Port aggregation | 802.3ad (LACP) |
| L2 features | Loop protection, Forwarding table, VLAN, STP/RSTP |
| DHCP | DHCP server, DHCP client, DHCP static leases capable of using MAC with wildcards |
| Multicast | IGMP snooping, multicast querier support |
| Port Settings | Enable/disable, link speed control, port isolation, EEE (802.3az) management, Port Mirroring |
| L3 Features | Static IPv4 routing, static IPv6 routing, DHCPv6 client, static IPv6 address |
| Routing | Dynamic routing (BGP, OSPF v2, RIP v1/v2, EIGRP) |

| Security | |
|---|---|
| Authentication | PAM — preshared key, Radius & TACACS+, IP & login attempts block |
| MAC filtering support | Allow specific MAC addresses to connect through specified ports, ignore unauthorized or disable the port if an unauthorized MAC address is detected |

| QoS | |
|---|---|
| QOS | Port priority, DSCP priority, 802.1p priority, TOS |
| Scheduling method | SP/WFQ/WRR |
| Bandwidth control | Rate limiting, storm control |
| Traffic Shaper | Port-based shaping |

| Diagnostics | |
|---|---|
| Tools | Cable diagnostic, ping, traceroute, nslookup |

| API | |
|---|---|
| Teltonika Networks Web API (beta) support | Expand your device's possibilities by using a set of configurable API endpoints to retrieve or change data. For more information, please refer to this documentation: https://developers.teltonika-networks.com |

| System Characteristics | |
|---|---|
| RAM | 128MB, DDR3 |
| FLASH storage | 16 MB serial flash |

| Firmware/Configuration | |
|---|---|
| WEB UI | Update FW from file, check FW on server, configuration profiles, configuration backup |
| FOTA | Update FW |
| RMS | Update FW/configuration for multiple devices at once |
| Keep settings | Update FW without losing current configuration |

| FIRMWARE CUSTOMISATION | |
|---|---|
| Operating system | TSWOS (OpenWrt based Linux OS) |
| Supported languages | Busybox shell, Lua, C, C++ |
| Development tools | SDK package with build environment provided |

| Performance Specifications | |
|---|---|
| Bandwidth (Non-blocking) | 20 Gbps |
| Forwarding rate | 14.88 Mpps |
| Packet buffer | 512 KB |
| MAC address table size | 8K entries |
| Jumbo frame support | 10000 bytes |

| Power | |
|---|---|
| Connector | 2-pin industrial DC power socket |
| Input voltage range | 7 – 57 VDC |
| Power consumption | Idle: < 2.5 W / Max: 6 W |

| Physical Interfaces | |
|---|---|
| Ethernet | 8 x RJ45 ports, 10/100/1000 Mbps |
| Fibre | 2 x SFP ports |
| Status LEDs | 1 x Power LED, 1 x Aux LED, 16 x ETH status LEDs, 2 x SFP status LEDs |
| Power | 1 x 2-pin industrial DC power socket |
| Reset | Software reset button |
| Other | 1 x Grounding screw |

| Physical Specification | |
|---|---|
| Casing material | Anodized aluminum housing and panels |
| Dimensions (W x H x D) | 132 x 44.2 x 122.2 mm |
| Weight | 615 g |
| Mounting options | Integrated DIN rail bracket; wall mount and flat surface (additional kit needed) |

| Operating Environment | |
|---|---|
| Operating temperature | -40 °C to 75 °C |
| Operating humidity | 5% to 95% non-condensing |
| Ingress Protection Rating | IP30 |

| Regulatory & Type Approvals | |
|---|---|
| Regulatory | CE, UKCA, RCM, ANRT, FCC, IC, CB, WEEE, RoHS, REACH, SDPPI (POSTEL), JATE, Kenya, ICASA, Giteki, NBCT, ICASA, PROFINET, UL Safety |

| EMC Emissions & Immunity | |
|---|---|
| Standards | EN 55032:2015 + A11:2020 + A1:2020<br>EN 55035:2017 + A11:2020<br>EN IEC 61000-3-2: 2019 + A1:2021<br>EN 61000-3-3: 2013 + A1:2019 + A2:2021 |
| ESD | EN 61000-4-2:2009 |
| Radiated Immunity | EN IEC 61000-4-3:2020 |
| EFT | EN 61000-4-4:2012 |
| Surge Immunity (AC Mains Power Port) | EN 61000-4-5:2014 + A1:2017 |
| CS | EN 61000-4-6:2014 |
| DIP | EN 61000-4-11:2020 |

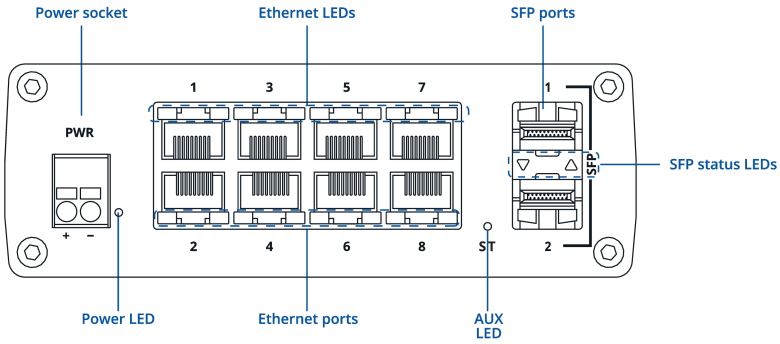
| Safety | |
|---|---|
| Standards | **CE**: EN IEC 62368-1:2020 + A11:2020<br>**RCM**: AS/NZS 62368.1:2022<br>**CB**: IEC 62368-1:2018 |

**Safety (Ordinary Locations)**

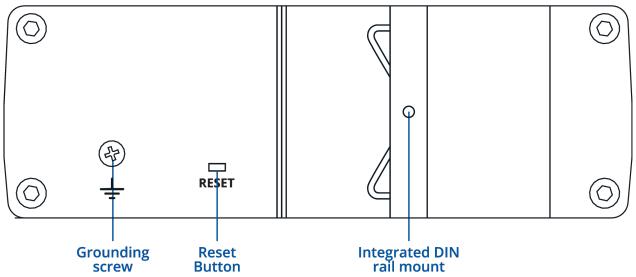
| | |
|---|---|
| Standards | UL/CSA Safety: UL 62368-1 (3rd Ed., Rev. December 13, 2019), C22.2 No. 62368-1:19 (3rd Ed., Rev. December 13, 2019) |

# Hardware

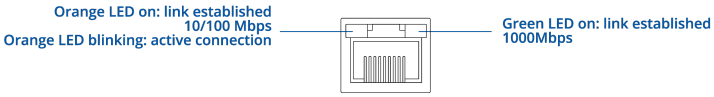
## FRONT VIEW



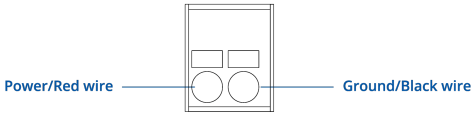

## BACK VIEW



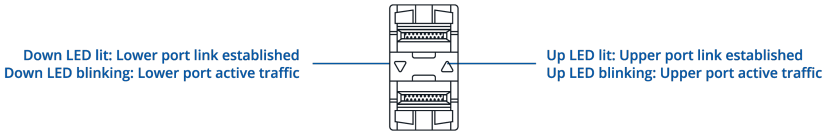

## RJ45 LED MEANING




## POWER SOCKET PINOUT




## SFP LED MEANING



## Ordering

**Standard package***


TSW212

QUICK START GUIDE

*Standard package contents may differ based on standard order codes.

For more information on all available packaging options – please contact us directly.

## Classification codes

**HS Code:** 851762

**HTS:** 8517.62.00

**Available versions**

| | | |
|---|---|---|
| TSW212 *****0 **PROFINET disabled by default** | N/A | TSW212000000 / Standard package withouth PSU TSW212000300 / Standard Package with EU PSU without connector |
| TSW212 *****1 **Profinet Class B conformance** | N/A | TSW212000001 / Standard package withouth PSU |

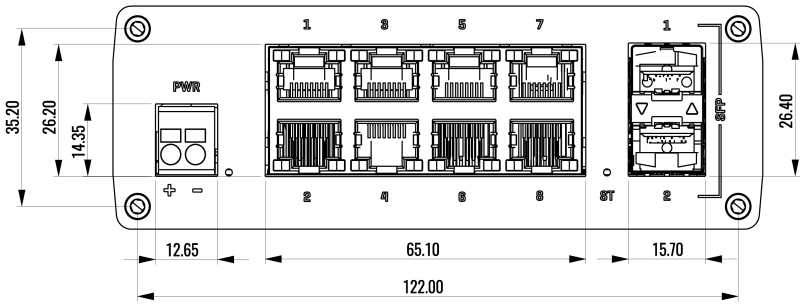
## TSW212 spatial measurements

**Available versions**

| | |
|---|---|
| Device housing (W x H x D)* | 132 x 44.2 x 122.2 mm |
| Box: | 132 x 45 x 122 mm |
| | *Housing measurements are presented without antenna connectors and screws; for measurements of other device elements look to the sections below |

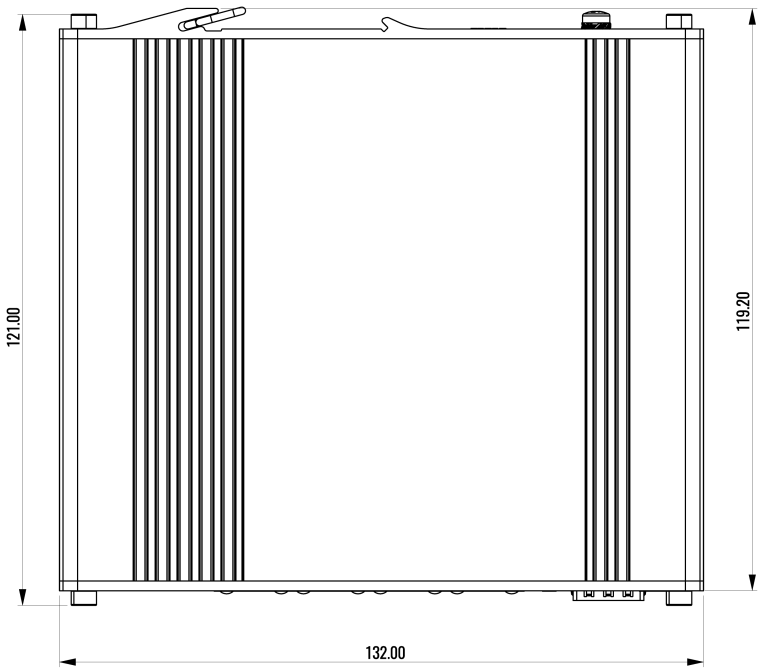
## FRONT VIEW

The figure below depicts the measurements of device and its components as seen from the front panel side:



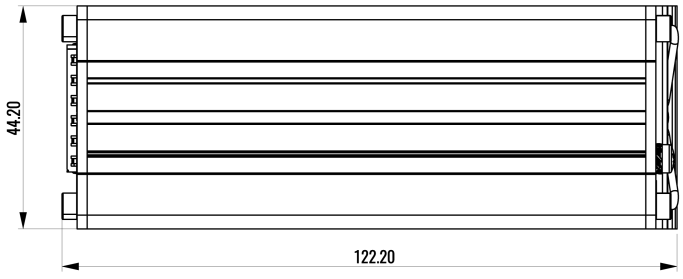

## TOP VIEW

The figure below depicts the measurements of device and its components as seen from the top:



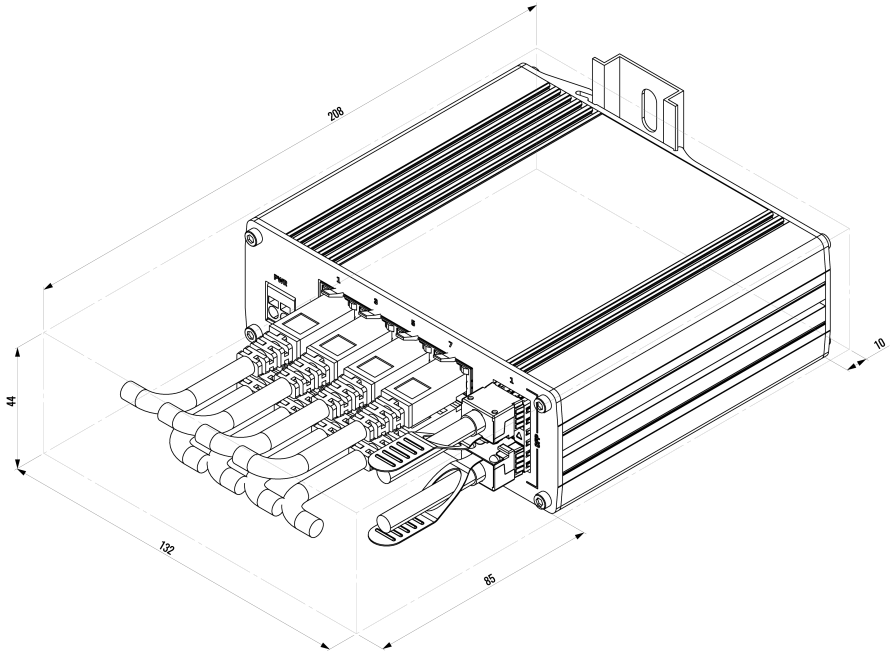

## RIGHT VIEW

The figure below depicts the measurements of device and its components as seen from the right side:



## MOUNTING SPACE REQUIREMENTS

The figure below depicts an approximation of the device's dimensions when cables and antennas are attached:




## REAR VIEW

The figure below depicts the measurements of device and its components as seen from the back panel side: