



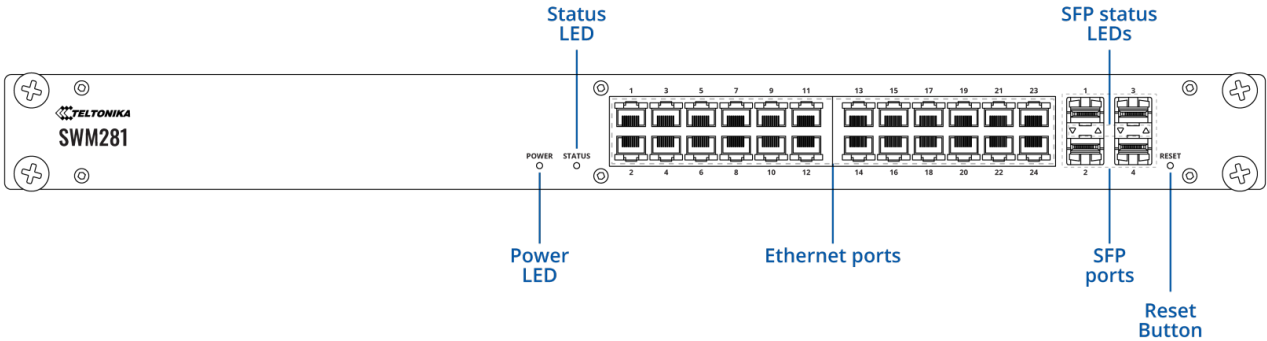
# SWM281

v1.02

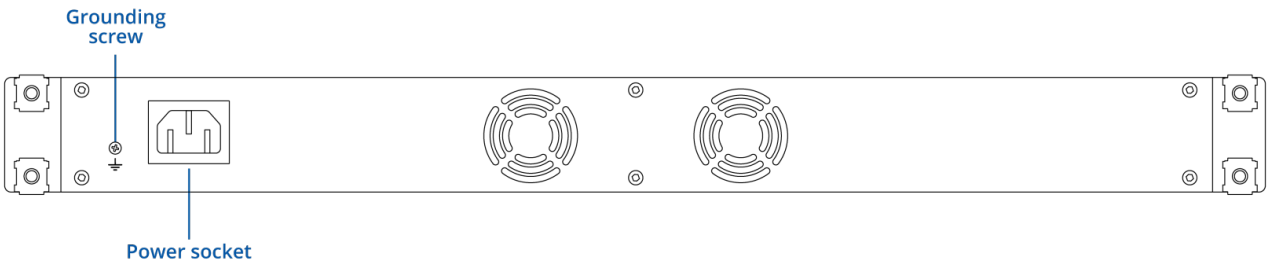


HARDWARE

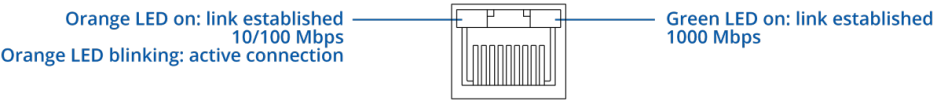
FRONT VIEW



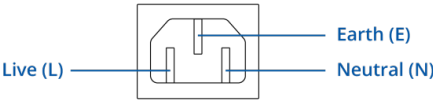
BACK VIEW



RJ45 LED MEANING



POWER SOCKET PINOUT



## FEATURES

### Ethernet

|                                    |                                                                                        |
|------------------------------------|----------------------------------------------------------------------------------------|
| <b>Fiber</b>                       | 4 x SFP ports                                                                          |
| <b>IEEE 802.3 series standards</b> | 802.3i, 802.3u, 802.3ab, 802.3x, 802.3az                                               |
| <b>ETH</b>                         | Multi-layer managed 24 x ETH ports, 10/100/1000 Mbps, supports auto MDI/MDIX crossover |

### INDUSTRIAL PROTOCOLS

|                 |                                                                   |
|-----------------|-------------------------------------------------------------------|
| <b>Profinet</b> | Profinet Class B conformance (available with optional order code) |
|-----------------|-------------------------------------------------------------------|

### Services

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

### Network

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

### QoS

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

### Diagnostics

|              |                                              |
|--------------|----------------------------------------------|
| <b>Tools</b> | Cable diagnostic, ping, traceroute, nslookup |
|--------------|----------------------------------------------|

## Security

|                              |                                                                                                                                                     |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Authentication</b>        | PAM — preshared key, Radius & TACACS+, IP & login attempts block                                                                                    |
| <b>VLAN</b>                  | Port VLAN separation                                                                                                                                |
| <b>802.1x</b>                | Port-based network access control client and server                                                                                                 |
| <b>MAC filtering support</b> | Allow specific MAC addresses to connect through specified ports, ignore unauthorized or disable the port if an unauthorized MAC address is detected |

## API

|                                                  |                                                                                                                                                                                                                                                                         |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Teltonika Networks Web API (beta) support</b> | 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: <a href="https://developers.teltonika-networks.com">https://developers.teltonika-networks.com</a> |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## System Characteristics

|                      |                                         |
|----------------------|-----------------------------------------|
| <b>CPU</b>           | Realtek, single core, 500MHz, MIPS-4KEc |
| <b>RAM</b>           | 128MB, DDR3                             |
| <b>FLASH storage</b> | 16 MB serial flash                      |

## Firmware / Configuration

|                               |                                                                                                                                             |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>WEB UI</b>                 | Update FW from file, check FW on server, configuration profiles, configuration backup                                                       |
| <b>FOTA</b>                   | Update FW                                                                                                                                   |
| <b>RMS</b>                    | Update FW/configuration for multiple devices at once                                                                                        |
| <b>Keep settings</b>          | Update FW without losing current configuration                                                                                              |
| <b>Factory settings reset</b> | A full factory reset restores all system settings, including the IP address, PIN, and user data to the default manufacturer's configuration |

## FIRMWARE CUSTOMISATION

|                            |                                                                                    |
|----------------------------|------------------------------------------------------------------------------------|
| <b>Operating system</b>    | TSWOS (OpenWrt based Linux OS)                                                     |
| <b>Supported languages</b> | Busybox shell, Lua, C, C++                                                         |
| <b>Development tools</b>   | SDK package with build environment provided                                        |
| <b>Package Manager</b>     | The Package Manager is a service used to install additional software on the device |

**Performance Specifications**

|                                 |             |
|---------------------------------|-------------|
| <b>Bandwidth (Non-blocking)</b> | 56 Gbps     |
| <b>Forwarding rate</b>          | 83.33 Mpps  |
| <b>Packet buffer</b>            | 512 KB      |
| <b>MAC address table size</b>   | 8K entries  |
| <b>Jumbo frame support</b>      | 10000 bytes |

**Power**

|                            |                         |
|----------------------------|-------------------------|
| <b>Connector</b>           | C14 connector           |
| <b>Input voltage range</b> | 100-240 VAC, 50/60 Hz   |
| <b>Power consumption</b>   | Idle: 5.5 W / Max: 20 W |

**Physical Interfaces**

|                    |                                                                          |
|--------------------|--------------------------------------------------------------------------|
| <b>Ethernet</b>    | 24 x RJ45 ports, 10/100/1000 Mbps                                        |
| <b>Fiber</b>       | 4 x SFP ports                                                            |
| <b>Status LEDs</b> | 1 x Power LED, 48 x ETH status LEDs, 1 x Status LED, 4 x SFP status LEDs |
| <b>Power</b>       | 1 x C14 connector                                                        |
| <b>Reset</b>       | Software reset button                                                    |
| <b>Other</b>       | 1 x Grounding screw                                                      |

**Physical Specification**

|                               |                                      |
|-------------------------------|--------------------------------------|
| <b>Casing material</b>        | Anodized aluminum housing and panels |
| <b>Dimensions (W x H x D)</b> | 483 x 44 x 234 mm                    |
| <b>Weight</b>                 | 1853 g                               |
| <b>Mounting options</b>       | Rack mounting kit                    |

**Operating Environment**

|                                  |                           |
|----------------------------------|---------------------------|
| <b>Operating temperature</b>     | 0 °C to 50 °C             |
| <b>Operating humidity</b>        | 10% to 90% non-condensing |
| <b>Ingress Protection Rating</b> | IP30                      |

**Regulatory & Type Approvals**

|                   |                            |
|-------------------|----------------------------|
| <b>Regulatory</b> | CE, UKCA, CB, RCM, FCC, IC |
|-------------------|----------------------------|

## ORDERING

### STANDARD PACKAGE\*



- SWM281 L2+ managed switch
- QSG (Quick Start Guide)
- Packaging box

\*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

|                                     |     |                                 |
|-------------------------------------|-----|---------------------------------|
| SWM281 *****0                       | N/A | SWM281000000 / Standard package |
| <b>PROFINET disabled by default</b> |     |                                 |
| SWM281 *****1                       | N/A | SWM281000001 / Standard package |
| <b>Profinet Class B conformance</b> |     |                                 |

For more information on all available packaging options – please [contact us](#) directly.

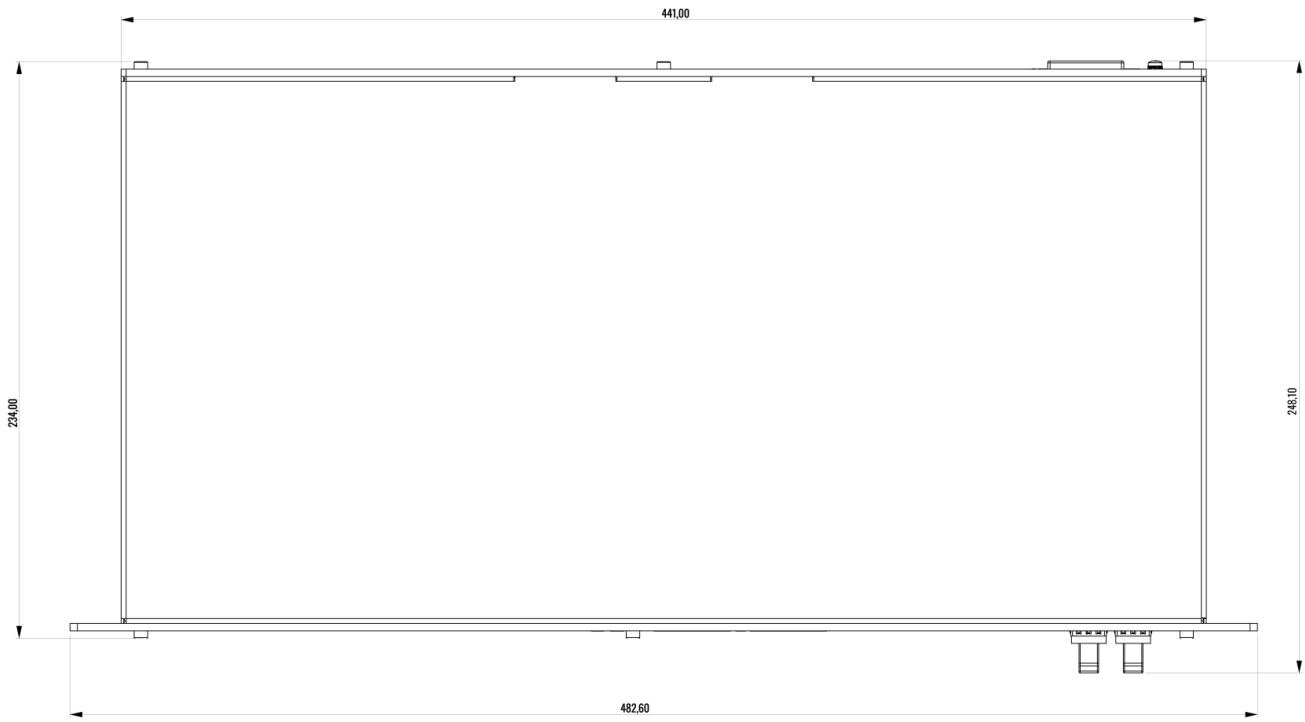
## SWM281 SPATIAL MEASUREMENTS

### PHYSICAL SPECIFICATION

|                                    |                   |
|------------------------------------|-------------------|
| <b>Device housing (W x H x D):</b> | 483 x 44 x 234 mm |
| <b>Box (W x H x D):</b>            | 510 x 73 x 318 mm |

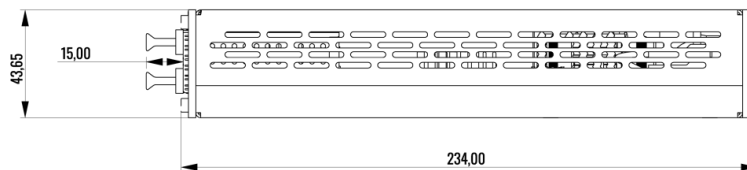
## TOP VIEW

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



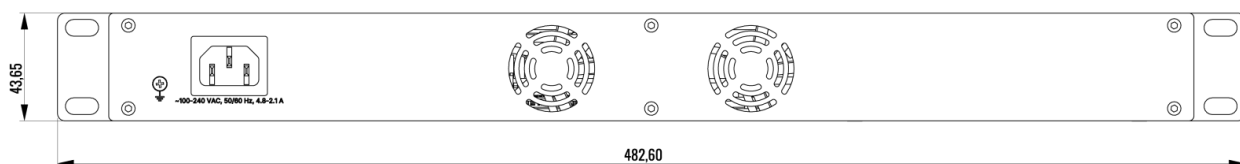
## RIGHT VIEW

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



## REAR VIEW

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



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



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

