

# Configuration Examples

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This page contains various configuration guides for the Teltonika Networks routers. Unlike the articles in the router manuals, which provide more general knowledge on all of the router's features and functions, these guides are more in-depth and are usually focused on specific configuration scenarios with extensive explanations. While most of the guides apply to both Windows and Linux Operating Systems, some are exclusive to one OS and others aren't OS specific in any way and apply to any system.

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# Router control and monitoring

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- [Separating Mobile Data Traffic: Using First SIM Card For LAN Traffic and Second SIM Card For WLAN Traffic](#)
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## Modbus

- [Monitoring via Modbus](#)
- [Modbus custom register block RutOS](#)
- [Modbus TCP Slave Send SMS example](#)
- [Simulate Modbus serial communication](#)

## DNP3

- [DNP3\\_TCP\\_Master](#)

## Mbus

- [Sending M-Bus data to a server](#)

## DLMS

- [DLMS client configuration example](#)

## System upgrades

- [Firmware upgrade via the Bootloader Menu](#)
- [Firmware upgrade via command line](#)

## Modem control

- [AT Commands](#)
- [Locking Devices to a Mobile Cell](#)
- [RUTOS gsmctl Commands](#)
- [Multi-APN \(Multiple PDN\)](#)

## LAN

- [Setting up a PPPoE between Teltonika Networks router and a Mikrotik device](#)
- [VLAN Inter-Zone accessibility control configuration example](#)
- [Setting up WAN as LAN](#)
- [Load Balancing Rules/Policies examples](#)
- [LAN as WAN RutOS](#)
- [VLAN: Tag-Based RUTOS](#)

## WiFi

- [WiFi WAN](#)
- [How to set up a guest WiFi network](#)
- [WiFi roaming setup for home/small office](#)
- [RUTOS relay / Wi-Fi extender / repeater / bridge configuration](#)
- [Setting up external Radius server for Hotspot authentication](#)
- [Connecting to a Hotspot WiFi for Internet Connectivity](#)
- [Relayd](#)
- [Extending Router Hotspot Network with TAP100](#)

## Connection backup

- [OSPF Route Failover](#)
- [VRRP](#)
- [Starlink\\_Failover\\_Configuration](#)

## VPN

- [DMVPN](#)
- [OpenVPN configuration example](#)
- [IPsec cofiguration example](#)
- [ZeroTier One VPN configuration example](#)
- [ZeroTier](#)
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- [GRE over IPsec Tunnel](#)
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- [Cisco IPsec](#)
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- [Setting up a GRE over IPsec tunnel between Teltonika Networks and Cisco devices](#)
- [Mikrotik GRE over IPsec Tunnel](#)
- [Mikrotik SSTP](#)
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- [Mikrotik L2TP over IPsec](#)
- [OpenVPN Access Server](#)
- [Setting up an IPsec tunnel between RUT and Android phone](#)
- [Tinc VPN configuration examples](#)
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- [OpenVPN traffic split](#)
- [Default IPsec route configuration between Teltonika Networks devices](#)
- [OpenVPN over Stunnel](#)
- [DMVPN with IPsec Phase 3](#)
- [L2 LAN bridging over internet using L2TPv2+EoIP](#)
- [1NCE Configuration](#)
- [ExpressVPN](#)
- [NordVPN](#)

## DDNS

- [noip.com](#)
- [dynu.com](#)

## USB

- [How to set up a USB printer \(Windows\)](#)

## RS232/485

- [Data transfer from Modbus TCP to Modbus RTU Gateway](#)
- [Modbus RTU Master MQTT Serial Gateway](#)
- [BACnet configuration example](#)
- [Bidirectional communication between two serial devices over TCP/IP](#)
- [Connect Serial Devices as Virtual COM Ports using TRB145 and HW VSP3](#)
- [Reaching Cisco router console port remotely](#)
- [Serial OverIP communication between Server and Client](#)

## Email

- [Sending emails via command line](#)

## Camera

- [Camera access from VPN RUTOS](#)
- [Remote camera access](#)
- [Camera access from smartphone](#)

## PC

### Windows

- [Static IP address setup \(Windows 10\)](#)
- [OpenVPN client on Windows](#)
- [OpenVPN server on Windows](#)

- [TLS certificates \(Windows\)](#)
- [Wake on LAN PC setup \(Windows\)](#)

## Linux

- [Static IP address setup \(Ubuntu 16\)](#)
- [FTP server \(Ubuntu 16\)](#)
- [OpenVPN client on Linux](#)
- [TLS certificates \(Ubuntu 18\)](#)

## macOS

- [Setting up a Static IP address on macOS](#)

## SNMP

- [SNMP](#)

## Use cases

### VPN

- [Connecting two same subnet office networks using OpenVPN bridge \(TAP\)](#)
- [Connecting to the office network remotely from your home via VPN \(L2TP over IPsec\)](#)
- [Connecting to the office network remotely from your home via VPN \(OpenVPN\)](#)
- [Configuring clients to access internet through office's gateway from home using VPN](#)
- [Reaching your home network remotely with your Android device](#)
- [Bridged office network with a separate Guest WiFi](#)
- [Anonymous browsing from your home network using NordVPN](#)
- [Anonymous browsing from your home network using ExpressVPN](#)
- [L2TPv3 over IPsec configuration example](#)

### I/O Juggler

- [SMS and Email alerts Triggered by BAT120](#)

### WiFi

- [How to set up a guest WiFi network](#)
- [WiFi roaming setup for home/small office](#)
- [RUTOS relay / Wi-Fi extender / repeater / bridge configuration](#)
- [ironwifi.com \(RutOS firmware\)](#)
- [cobot.me \(RutOS firmware\)](#)

### DHCP

- [DHCP Relay configuration example](#)
- [DHCP Relay over L2TPv3 example](#)

### Hardware application

- [Ignition detection solution](#)
- [Teltonika EYE device pairing and data sender](#)

- [How to use UBUS commands for Bluetooth device scanning / pairing](#)

## Third party services

### IoT platforms

- [Azure IoT Hub cloud connection](#)
- [Cumulocity](#)
- [da³vid](#)
- [AWS MQTT cloud connection](#)
- [BAG·Tower](#)
- [N3uron Notifier](#)

### WiFi

- [IdBlender Secure WiFi Setup](#)
- [ironwifi.com](#)
- [purple.ai](#)
- [UCI-based RelayD configuration with IPv4+IPv6 functionality](#)
- [Guglielmo LUMEN® AAA WiFi Setup](#)
- [OpenRemote](#)