

Industrial Router - TK500 Series

TK500 RELEASE MAY 2021



Fully integrated with:



SMART EMS
Rollout and central management of routers and edge gateways



VPN Security Suite
Secure E2E access to devices and machines in the field

Industrial Router TK500 Series

- Five Ethernet Ports
- Depending on version with WiFi, RS-232, RS-485, 4G LTE, LTE Cat. 1
- DIN-Rail mounting and 12 to 24 V DC power supply
- Integrated Firewall, OpenVPN and IPsec
- Very compact and rugged housing
- Fully integrated with Welotec Smart EMS and Remote Access Portal

MODEL OVERVIEW - INDUSTRIAL ROUTER TK500 SERIES

| | |
|----------|-------------------|
| TK525L-W | LTE-WiFi-Router |
| TK525L | LTE-Router |
| TK535L1 | LTE Cat. 1 Router |
| TK525W | LAN-Router |

Industrial Router - TK500 Series

TECHNICAL DETAILS

| | TK525L-W | TK525L | TK535L1 | TK525W |
|-----------------------------|--|--------------------------------------|--------------------------|------------|
| GENERAL DATA | | | | |
| Type | LTE-WiFi-Router | LTE-Router | LTE Cat. 1 Router | LAN-Router |
| Series | TK500 Release May 2021 | | | |
| CELLULAR FEATURES | | | | |
| Chipset | Quectel EC25 | Quectel EC25 | Quectel EC21 | - |
| 4G Standard | LTE Cat. 4 | LTE Cat. 4 | LTE Cat. 1 | - |
| GSM Band | B3/B8 | B3/B8 | B3/B8 | - |
| UMTS Band | B1/B8 | B1/B8 | B1/B8 | - |
| LTE Band | B1/B3/B7/B8/B20/ B28A/B38/B40/B41 | B1/B3/B7/B8/B20/ B28A/B38/B40/B41 | B1/B3/B7/B8/B20/ B28A | - |
| Download (max) | 150 Mbps | 150 Mbps | 10 Mbps | - |
| Upload (max) | 50 Mbps | 50 Mbps | 5 Mbps | - |
| Authentication | CHAP/PAP/MS-CHAP/MS-CHAP2 | | | - |
| Cellular antenna connector | 1x SMA (f) | | | - |
| APN functions | APN (Access Point Name), VPDN (Virtual Private Dialup Network, IP VPN of the network operator) | | | - |
| Dial On Demand | Always online or dial, SMS or local data transfer | | | - |
| SMS functions | Reboot and status SMS | | | - |
| WIFI CHARACTERISTICS | | | | |
| IEEE 802.11b | 11 Mbps | - | | |
| IEEE 802.11g | 54 Mbps | - | | |
| IEEE 802.11n | 300 Mbps | - | | |
| IEEE 802.11i | WPA / TKIP / AES | - | | |
| WEP | 64-bit / 128-bit encryption | - | | |
| Access point mode | Yes | - | | |
| Client mode | Yes | - | | |
| WiFi antenna connector | 2x Reverse Polarity SMA (f) | - | | |

Industrial Router - TK500 Series

TECHNICAL DETAILS

| | TK525L-W | TK525L | TK535L1 | TK525W |
|---------------------------------|---|---|---|--------|
| ETHERNET INTERFACE | | | | |
| Connector TX | RJ45 | | | |
| 10/100BaseTX | 5 Ports (1 of them WAN) | | | |
| IEEE 802.3 | 10BaseT / CSMA/CD (Ethernet) | | | |
| IEEE 802.3a | 10Base2 | | | |
| IEEE 802.3i | 10BaseT | | | |
| IEEE 802.3u | 100BaseT(X) / Fast Ethernet | | | |
| WAN-Port | ADSL Dialup (PPPoE)/Static IP/DHCP (uses 1 Ethernet Port) | | | |
| SERIAL INTERFACES | | | | |
| Amount | 1 | | | |
| Type | RS-232, RS-485 | | | |
| Serial interface | TXD, RXD, GND, A(RS-485+), B(RS-485-) | | | |
| Connector | Terminal blocks 5-pin (m) | | | |
| Baud rate | 1200 - 115200 bps | | | |
| Additional protocols | Transparent TCP, Virtual COM, Modbus TCP / RTU | | | |
| ADDITIONAL INTERFACES | | | | |
| SIM card slot | 2 | | | - |
| SOFTWARE CHARACTERISTICS | | | | |
| Configuration | Webbrowser (http/https) | | | |
| Updates | Firmware update locally or via GPRS/UMTS/LTE | | | |
| ADVANCED FUNCTIONS | | | | |
| LED | LED indicators for the signal strength, 5 status LEDs: POWER, STATUS, WARN, ERROR, WIFI | LED indicators for the signal strength, 4 status LEDs: POWER, STATUS, WARN, ERROR | 4 status LEDs: POWER, STATUS, WARN, ERROR | |

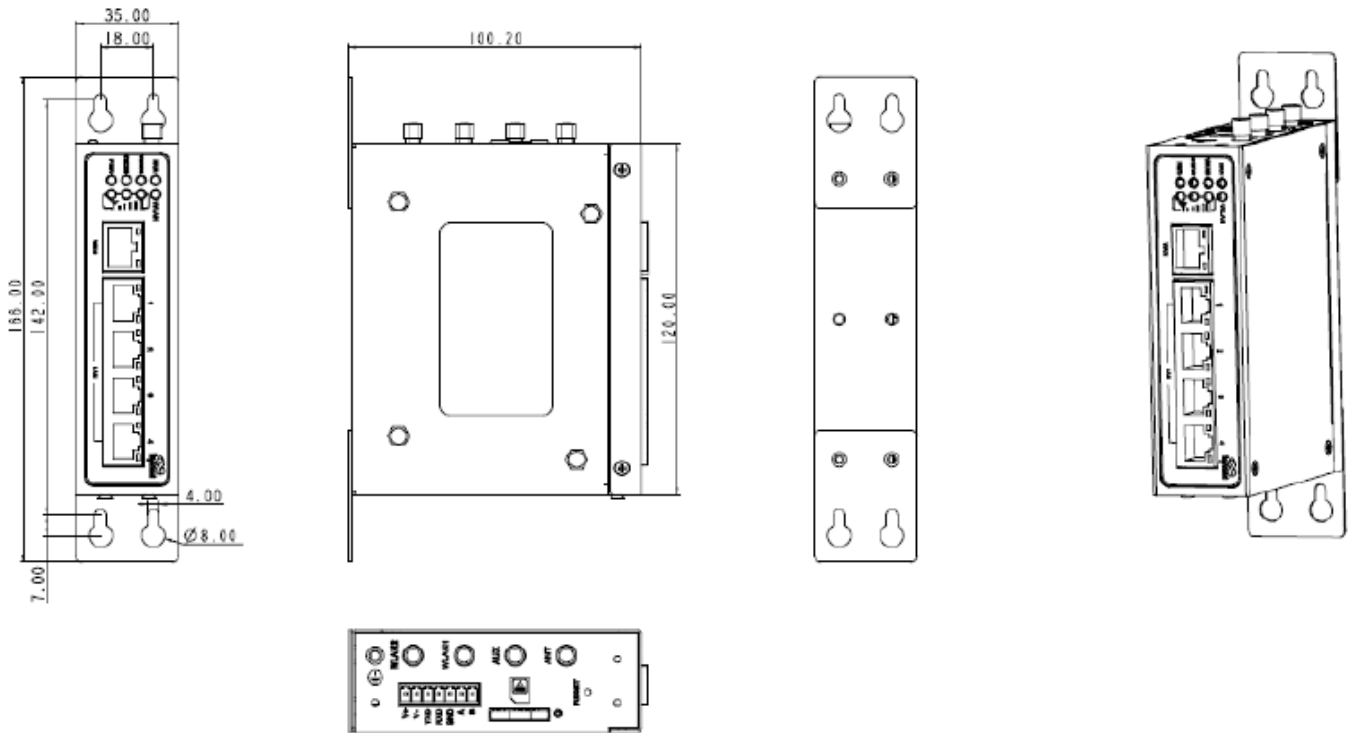
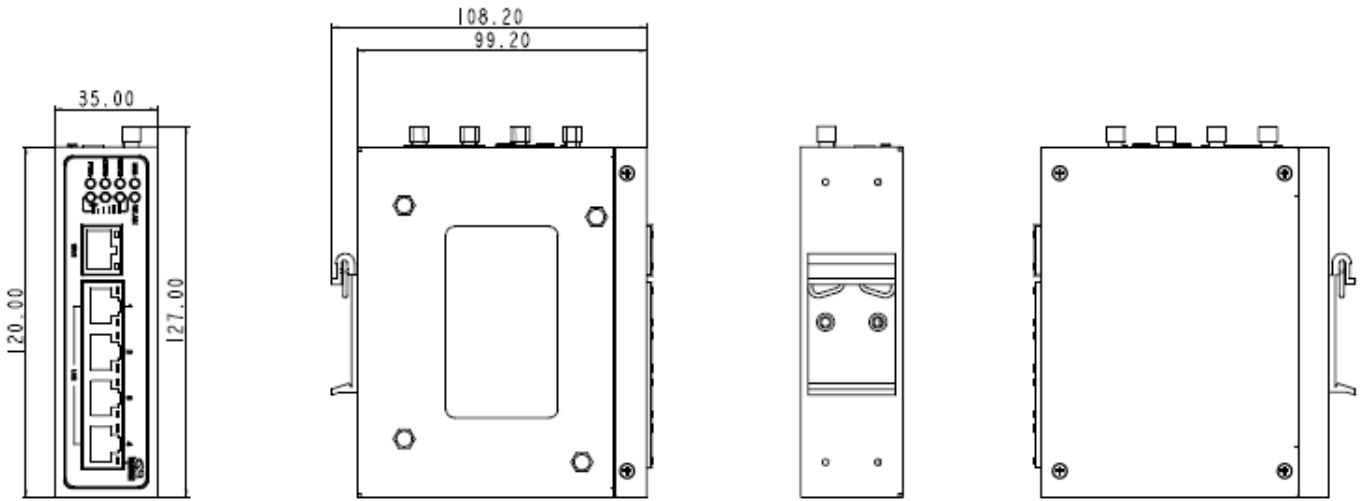
Industrial Router - TK500 Series

TECHNICAL DETAILS

| | TK525L-W | TK525L | TK535L1 | TK525W |
|---------------------------------|---|--------|---------|--------|
| NETWORK CHARACTERISTICS | | | | |
| Routing | Static routes | | | |
| Network protocols | ICMP, TCP, IP, UDP, DHCP, NTP, DNS, HTTP, HTTPS, Telnet, ARP, VRRP, PPP | | | |
| Connection inspection | PPP LCP echo and ICMP keep alive for checking connections | | | |
| NAT and PAT | Network Address Translation (NAT) and Port Address Translation (PAT) | | | |
| DDNS (DynDNS) | Supports Dynamic DNS | | | |
| VRRP | Automatically switch to slave router if the master router fails | | | |
| IPsec | Supports IPsec IKEv1 | | | |
| OpenVPN | Client and Server | | | |
| VPN authentication | Preshared key, digital certificates | | | |
| Firewall | Stateful Packet Inspection (SPI), multicast filtering, filter PING packets, preventing DoS attacks, different firewall strategies | | | |
| MAC address assignment | Prevents illegal host access | | | |
| Port forwarding | Extranet users can access specific intranet access ports | | | |
| Access control | Flexible access control of TCP, UDP and ICMP packets | | | |
| Realtime clock | Provides the system with the current time (NTP) | | | |
| POWER SUPPLY | | | | |
| Power supply | 12 - 24 V DC | | | |
| Connector | Terminal blocks 7-pin (m) | | | |
| Power consumption | 2.4 W (standby) / 3.84 W (active) | | | |
| PHYSICAL CHARACTERISTICS | | | | |
| Housing material | Metal | | | |
| Ingress protection | IP30 | | | |
| Dimensions (WxHxD) | 35 x 127 x 108.2 mm | | | |
| Weight | 450 g | | | |
| Mounting | DIN rail | | | |
| ENVIRONMENTAL | | | | |
| Operating temperature range | -20 - +70 °C | | | |
| Humidity | 5 - 95 %, non condensing | | | |

Industrial Router - TK500 Series

DIMENSIONS (MM)



Industrial Router - TK500 Series

MODEL VIEWS



TK525L-W



TK525L



TK535L1



TK525W