

Security Appliance - TC MGUARD RS4000 4G ATT VPN - 1010463

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Security appliance, version for AT&T (US), WAN and 4G mobile network interface, SD card slot, 10 VPN tunnels, intelligent firewall with full scope of functions, router with NAT/1:1 NAT, optional CIFS Integrity Monitoring, 4 port Managed Switch

Product Description

The TC MGUARD... security appliances are industrial mobile network routers with mGuard technology. As such, the routers offer a remote maintenance infrastructure for the secure connection of machines and systems via the Internet. A high-speed mobile network interface and a 4-port switch are integrated into a compact metal housing. Secure remote communication on a global scale takes place via 4G LTE as well as UMTS and CDMA networks. With the help of an SD card as a configuration memory, the devices can be quickly and easily started up or replaced. The devices have a buffered realtime clock and Trusted Platform Module (TPM) for secure key generation and management.

Your advantages

- ✓ Integrated 4-port switch
- ✓ Maximum security with IPsec protocol on Layer 3
- ✓ Web-based management, SNMP
- ✓ Replaceable configuration memory
- ✓ RS-232 interface with COM server function for integrating serial devices
- ✓ Flexible routing
- ✓ Up to 10 parallel VPN tunnels (up to 250 possible with additional license as an option)
- ✓ Supports current certificates such as x509.v3
- ✓ Stateful inspection firewall for dynamic filtering
- ✓ Extended temperature range



Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626484150
Weight per Piece (excluding packing)	660.600 g
Custom tariff number	85176200
Country of origin	Germany

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Technical data

Note

Trade restriction	The products are offered exclusively for export outside the EU and the European Economic Area.
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Dimensions

Width	45 mm
Height	130 mm
Depth	114 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Altitude	≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation)
Degree of protection	IP20 (Manufacturer's declaration)

General

Electrical isolation	VCC // PE
Test voltage data interface/data interface	1 kV (50 Hz, 1 min., manufacturer's declaration)
Test voltage data interface/power supply	1 kV (50 Hz, 1 min., manufacturer's declaration)
Electromagnetic compatibility	Conformance with RED Directive 2014/53/EU
Net weight	660.6 g
Housing material	Metal
Color	silver
MTTF	532 Years (SN 29500 standard, temperature 25 °C, operating cycle 21 % (5 days a week, 8 hours a day))
	250 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	104 Years (SN 29500 standard, temperature 40 °C, operating cycle 100 % (7 days a week, 24 hours a day))
Wireless licences	USA

Power supply

Supply voltage range	11 V DC ... 36 V DC (via pluggable COMBICON screw terminal block)
Max. current consumption	1.8 A (at 11 V DC (incl. 3 x 125 mA for the outputs))
Typical current consumption	< 320 mA (24 V DC)
Conductor cross section solid max.	2.50 mm ²
Conductor cross section solid min.	0.20 mm ²
Max. AWG conductor cross section, flexible	14
Min. AWG conductor cross section, flexible	24

Interfaces

Interface 1	Ethernet interface, 10/100Base-T(X) in accordance with IEEE 802.3
Interface	Ethernet

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Interfaces

No. of ports	6
Connection method	RJ45
Transmission length	100 m (shielded twisted pair)
Protocols supported	TCP/IP, UDP/IP, FTP, HTTP
Auxiliary protocols	ARP, DHCP, PING (ICMP), SNMP V1, SMTP
Basic functions	Router with intelligent firewall and VPN for 10 tunnels (up to 250 supported with optional additional license), CIFS Integrity Monitoring (as an option), metal housing, slot for SD memory card
Interface 2	V.24 (RS-232) interface in acc. with ITU-T V.28, EIA/TIA-232, DIN 66259-1
Interface	RS-232
Connection method	D-SUB 9 plug
File format/coding	UART/NRZ: 8 Data, 1/2 Stop, None/Even/Odd Parity
Transmission length	15 m
Data flow control/protocols	Software handshake, Xon/Xoff or hardware handshake RTS/CTS
Serial transmission speed	9.6; 19.2; 38.4; 57.6; 115.2 kbps

Wireless interface

Interface description	LTE (FDD) / UMTS
Frequency	850 MHz (UMTS/HSPA B5)
	1900 MHz (UMTS/HSPA B2)
	700 MHz (LTE B13 / B17)
	850 MHz (LTE B5)
	1700 MHz (LTE B4)
	1900 MHz (LTE B2)
Data rate	≤ 150 Mbps (LTE (DL))
	≤ 50 Mbps (LTE (UL))
Antenna	50 Ω impedance SMA antenna socket
SIM interface 1	1.8 volt, 3 volt
UMTS	HSPA 3GPP R9
LTE	CAT4
Country support	USA

Function

Web-based management	yes
Management	Web-based management, SNMP
Security functions	Supported Supported Supported DES, 3DES, AES-128, -192, -256 ESP tunnel / ESP transport Supported Supported X.509v3 certificates with RSA or PSK MD5, SHA-1 Quick mode, Main mode, PFS RFC 3706 MAC and IP addresses, ports, protocols IP spoofing, DoS and Syn Flood Protection Standard routing, NAT, 1:1-NAT, port forwarding

Digital outputs

Output name	Digital output, resistive load
Number of outputs	3

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Digital outputs

Voltage output signal	10 V DC ... 30 V DC (depending on the operating voltage)
Current output signal	≤ 125 mA (Short-circuit-proof)

Digital inputs

Description of the input	Digital input
Number of inputs	3
Voltage input signal	10 V DC ... 30 V DC
Current input signal	5 mA

Conformance/approvals

Designation	UL, USA/Canada
Identification	Class I, Zone 2, AEx nA IIC T4 / Ex nA IIC T4 Gc
	Class I, Div. 2, Groups A, B, C, D T4
Designation	Corrosive gas test
Identification	ISA-S71.04-1985 G3 Harsh Group A

Standards and Regulations

Electromagnetic compatibility	Conformance with RED Directive 2014/53/EU
Type of test	Free fall in acc. with IEC 60068-2-32
Test result	1 m
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	5g, 10...150 Hz, 2.5 h, in XYZ direction
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	Operation: 15g, 11 ms period, half-sine shock pulse
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	Storage: 30g, 11 ms period, half-sine shock pulse
Free from substances that could impair the application of coating	according to P-VW 3.10.7 57 65 0 VW-AUDI-Seat central standard
Standards/regulations	EN 61000-4-2
Contact discharge	± 6 kV (Test Level 3)
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 3 GHz (Test Level 3)
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
Signal	± 1 kV (Data line, asymmetrical)
Standards/regulations	EN 61000-6-4
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years

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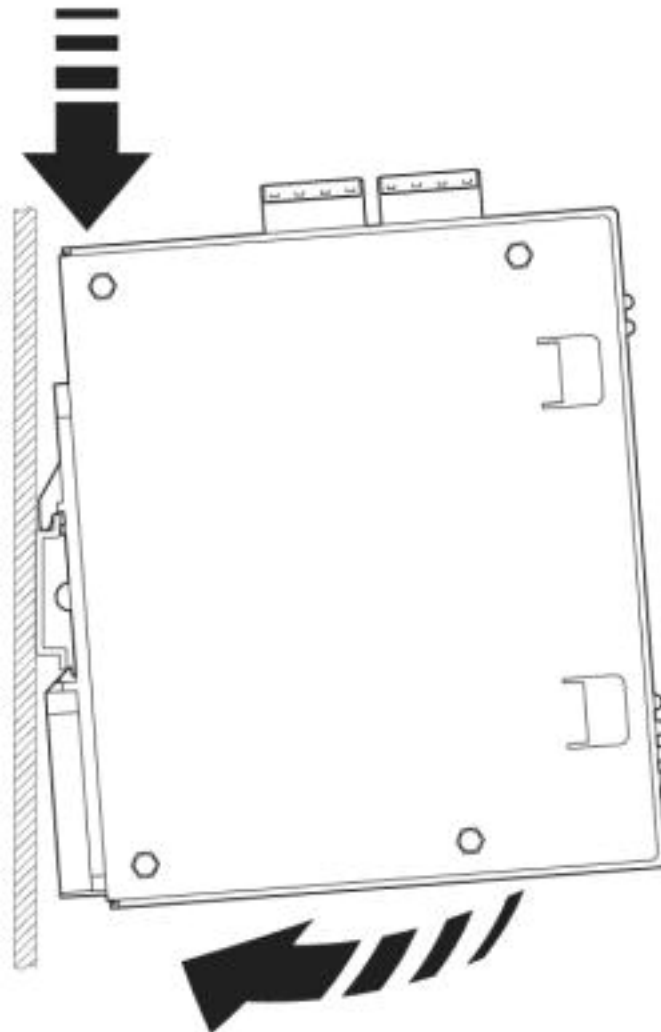
Technical data

Environmental Product Compliance

	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"
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Drawings

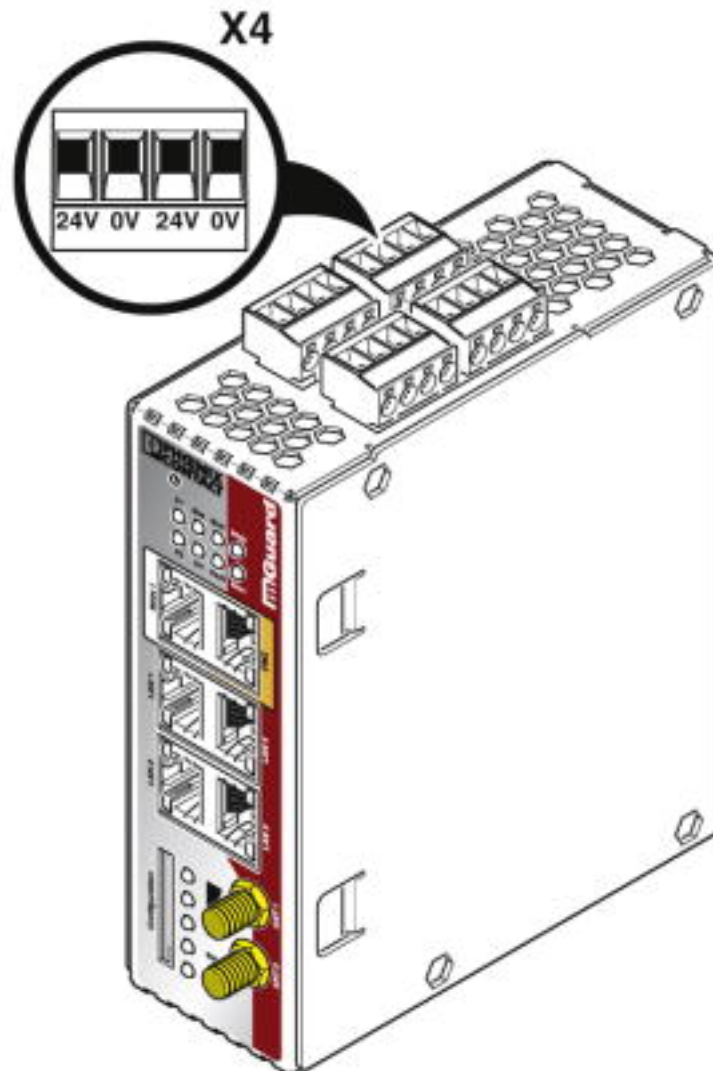
Schematic diagram



Mounting

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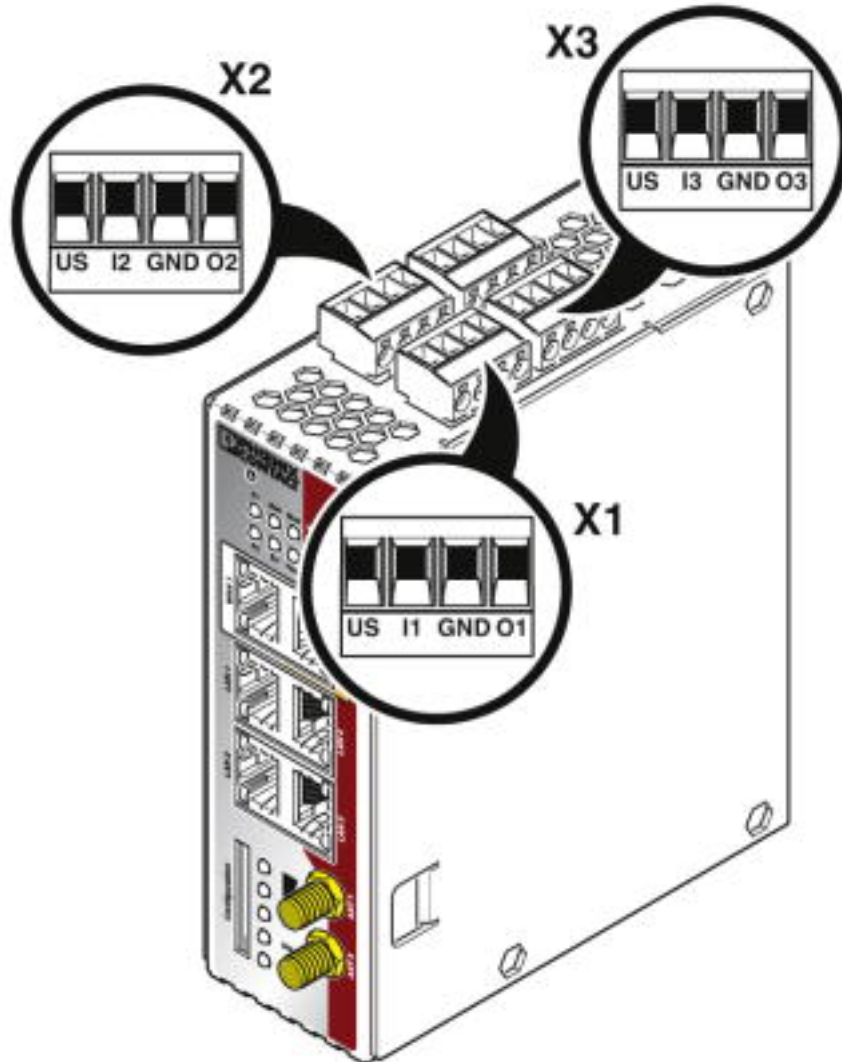
Schematic diagram



Connecting the supply voltage

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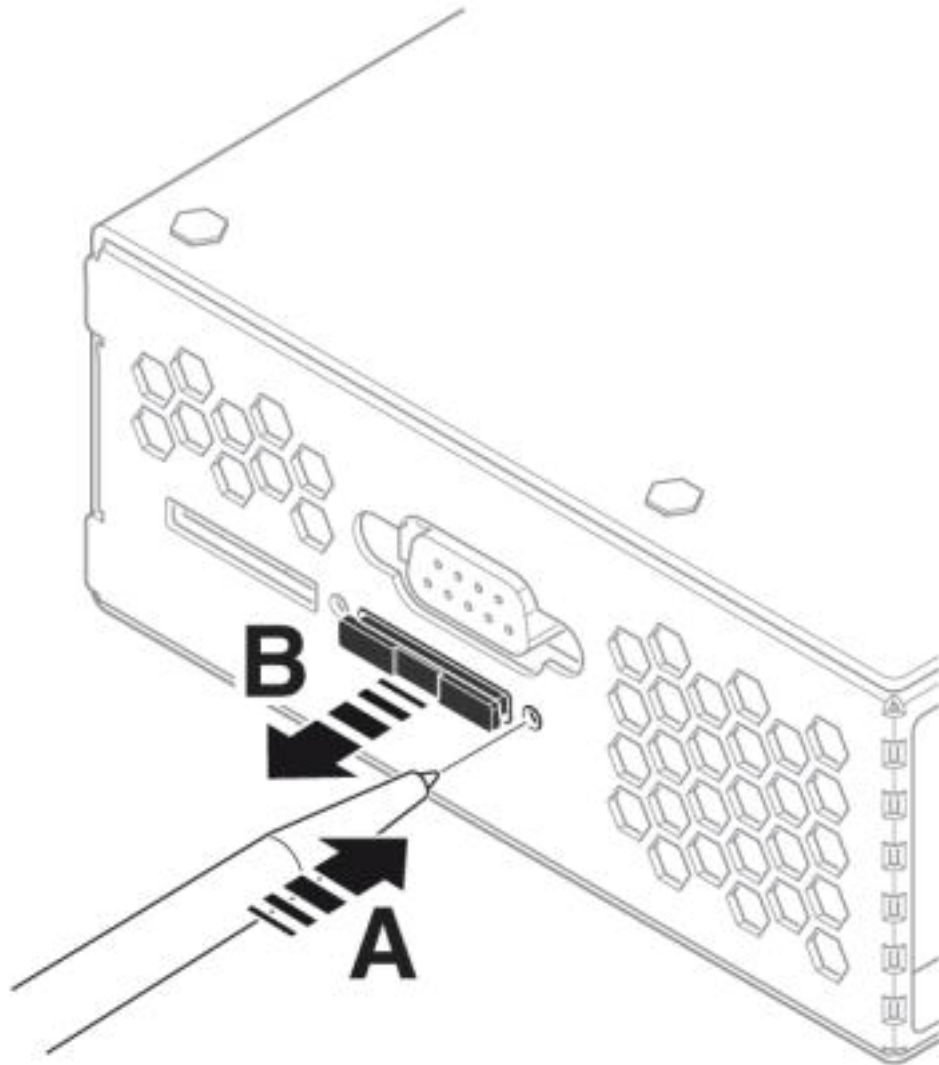
Schematic diagram



Service and signal contacts

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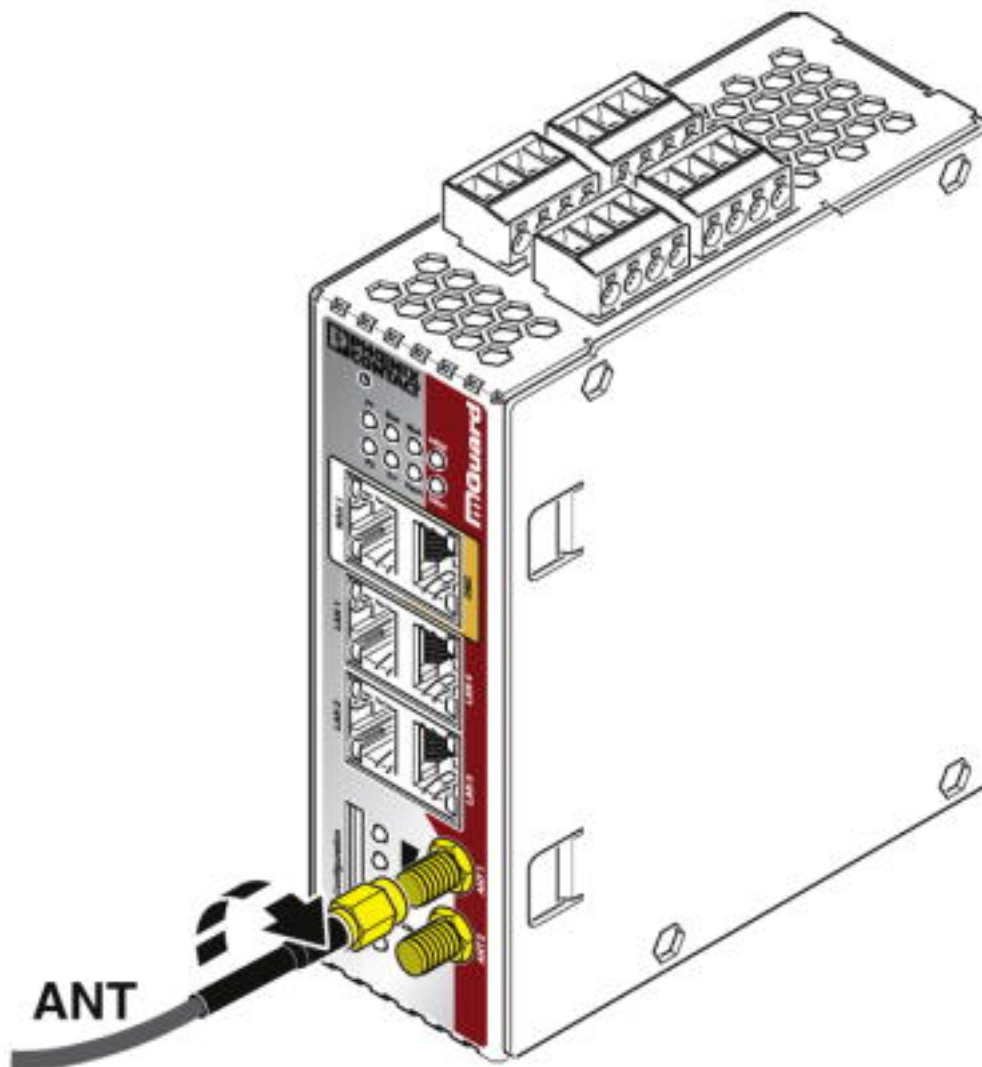
Schematic diagram



Remove SIM card holder

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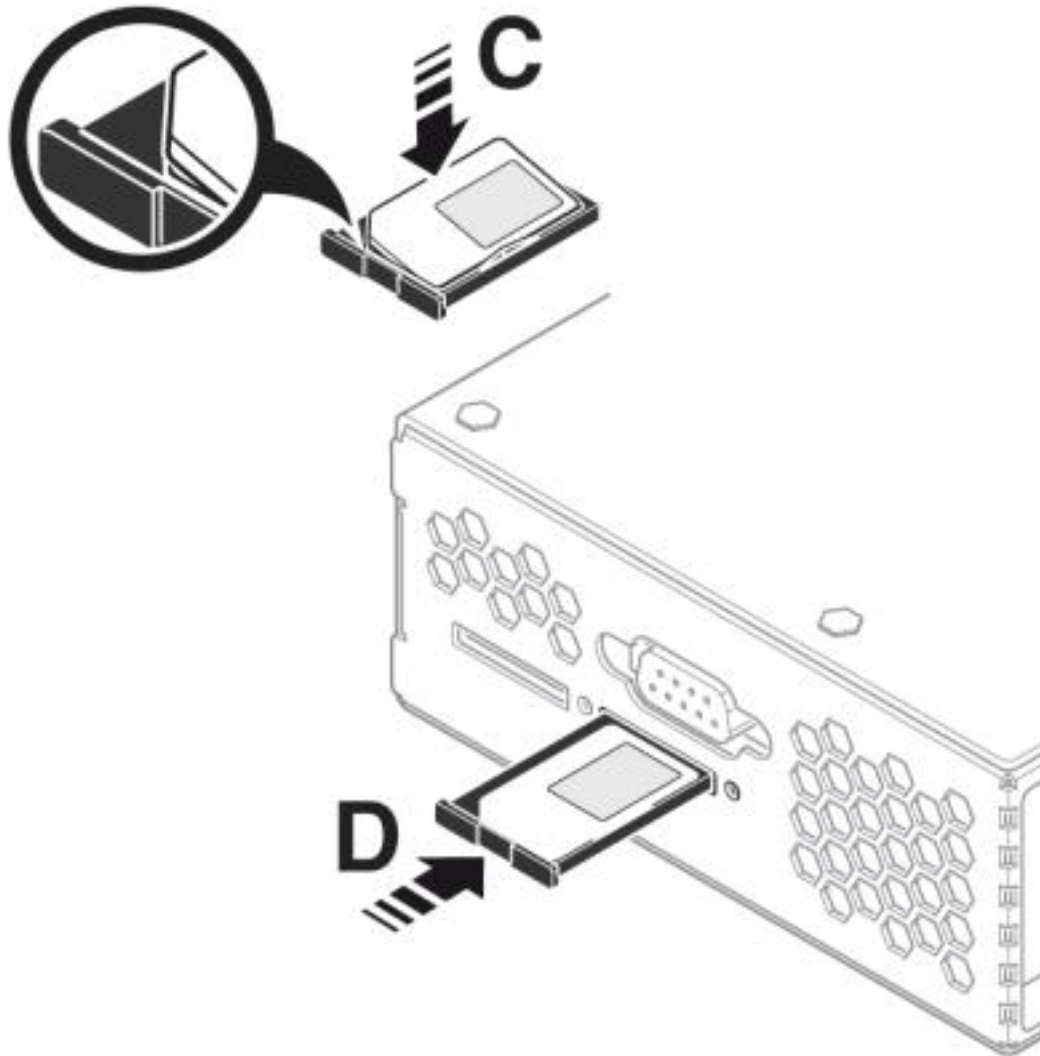
Schematic diagram



Connect the antenna

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Schematic diagram



Insert the SIM card

Classifications

eCl@ss

eCl@ss 5.0	19030100
eCl@ss 5.1	19030100
eCl@ss 6.0	19170100
eCl@ss 7.0	19170103
eCl@ss 8.0	19170103
eCl@ss 9.0	19170103

ETIM

ETIM 5.0	EC001478
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Classifications

ETIM

ETIM 6.0	EC001478
ETIM 7.0	EC001478

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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cULus Listed			
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Accessories

Accessories

Antenna

Antenna - TC ANT MOBILE WALL 0,5M - 2702274



Multiband cellular antenna for wall mounting, 0.5 m antenna cable, with SMA circular connector, suitable for LTE/4G

Coaxial cable

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Accessories

Antenna cable - PSI-CAB-GSM/UMTS- 5M - 2900980

Cellular antenna cable, 5 m in length, SMA (male) -> SMA (female), 50 ohm impedance



Antenna cable - PSI-CAB-GSM/UMTS-10M - 2900981

Cellular antenna cable, 10 m in length, SMA (male) -> SMA (female), 50 ohm impedance



License

License - FL MGUARD LIC VPN-250 - 2700193



License for up to 250 additional VPN online connections

License - FL MGUARD LIC VPN-10 - 2700194



License for up to 10 additional VPN online connections

Media converter

FO converters - FL MC EF 1300 MM SC - 2902853



FO converter with SC duplex fiber optic connection (1300 nm), for converting 10/100Base-T(X) to multi-mode fiberglass (50/125 µm). Auto negotiation and auto MDI(X) function. Comprehensive link diagnostics. DIN-rail mountable, 18 ... 30 V DC supply.

Parameterization memory

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Accessories

Memory - SD FLASH 512MB - 2988146



Program and configuration memory, plug-in, 512 Mbyte.

Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263



Patch cable, CAT5, assembled, 0.5 m

Patch cable - FL CAT5 PATCH 2,0 - 2832289



Patch cable, CAT5, assembled, 2 m

Patch cable - FL CAT5 PATCH 10,0 - 2832629



Patch cable, CAT5, assembled, 10 m

Plug

RJ45 connector - FL PLUG RJ45 GR/2 - 2744856



RJ45 connector, shielded, with bend protection sleeve, 2 pieces, gray for straight cables, for assembly on site. For connections that are not crossed, it is recommended that you use the connector set with gray bend protection sleeve.

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Accessories

RJ45 connector - FL PLUG RJ45 GN/2 - 2744571



RJ45 connector, shielded, with bend protection sleeve, 2 pieces, green for crossed cables, for assembly on site. For connections that are crossed, it is recommended that the connector set with green bend protection sleeves is used.

Protective cap

Dust protection - FL RJ45 PROTECT CAP - 2832991



Dust protection caps for RJ45 socket

Remote control software

License - MGuard SECURE VPN CLIENT LIC - 2702579



License for mGuard Secure VPN Client v11.x

Surge protection for transceiver systems

Surge protection device - CSMA-LAMBDA/4-2.0-BS-SET - 2800491



Attachment plug with Lambda/4 technology as surge protection for coaxial signal interfaces. Connection: Male/female SMA connectors.

Wireless element

Wireless module - FL TIMESERVER NTP - 1107132



GNSS receiver and NTP (Network Time Protocol) for Ethernet networks, receives time, date, and location via GPS, GLONASS, or Galileo, web-based management, supply via PoE (af) or 24 V DC, integrated antenna, IP68 housing

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Accessories

Assembly tool - FL CRIMPTOOL - 2744869



Crimping pliers, for assembling the RJ45 plugs FL PLUG RJ45..., for assembly on site

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