



# Industrial cellular

Cellular solutions for remote connectivity, remote access,  
and network security

# Industrial cellular solutions

Phoenix Contact offers a wide portfolio of industrial cellular products for remote connectivity, remote access, and enhanced network security.



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# TC router 4G LTE

The TC router is an industrial 4G LTE mobile router that enables high-speed internet connectivity via mobile networks. Approved for use with Verizon and AT&T networks, the TC router provides simple remote communication between SCADA servers, PLCs, camera surveillance, or any Ethernet field device.



## Features

- 2 LAN ports
- 3 VPN tunnels
- Micro SD card slot
- 2 inputs/1 output
- ≤ 150 Mbps internet speed
- 2 SMA antenna connectors
- -40°C to +70°C

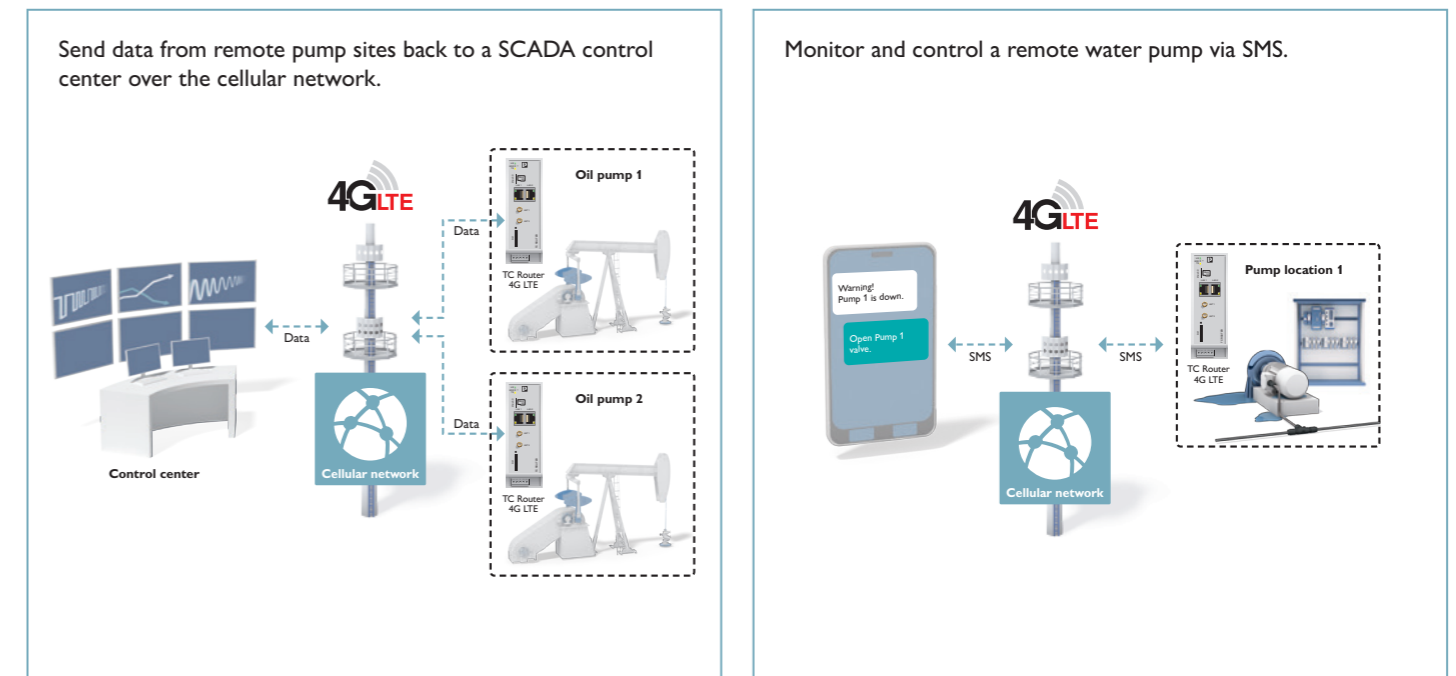
## Approvals

- Class 1, Div. 2
- AT&T, Verizon

## Your advantages

- ✓ 4G LTE high-speed internet
- ✓ "Always on" connection
- ✓ Monitor and control via SMS or email
- ✓ Energy savings mode
- ✓ Extended temperature range
- ✓ Secure firewall and VPN protection

## TC router applications



## Common industries

The TC router is commonly used in industries such as power, oil and gas, water/wastewater, and agriculture to connect devices such as PLCs, HMIs, surveillance cameras, and other Ethernet field devices to SCADA servers over the cellular network.



# TC Cloud Client 4G LTE

TC Cloud Client devices serve as industrial virtual private network (VPN) gateways approved for use on 4G LTE Verizon and AT&T cellular networks. The TC Cloud Client is designed to easily, affordably, and securely provide remote connectivity to devices and machines through the award-winning mGuard Secure Cloud service.



## Features

- 2 LAN ports
- 1 VPN tunnel
- Micro SD card slot
- 1 input/1 output
- ≤ 150 Mbps internet speed
- 2 SMA antenna connectors
- 0°C to +60°C

## Approvals

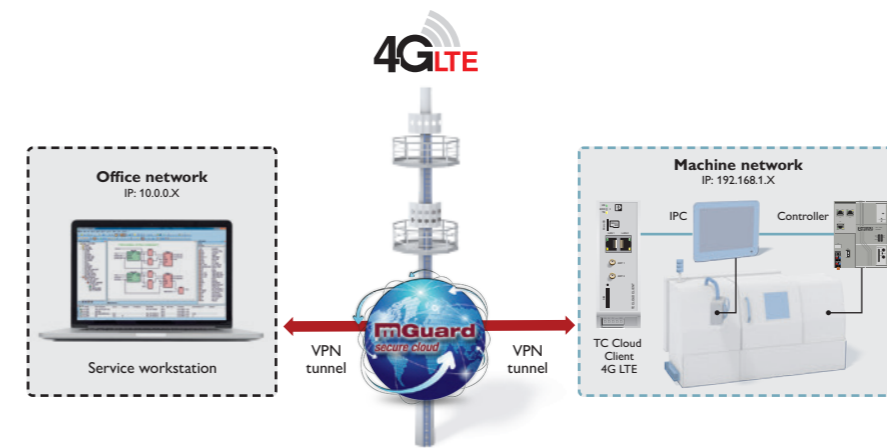
- Class 1, Div. 2
- AT&T, Verizon

## Your advantages

- ✓ 4G LTE high-speed internet
- ✓ Simple and easy VPN solution
- ✓ 24/7 access and control of remote machines
- ✓ Save time and money by preventing downtime
- ✓ Generate additional revenue through service agreements

# TC Cloud Client applications

Access and change PLC settings remotely through the mGuard Secure Cloud.



# Common industries

The TC Cloud Client is commonly used in industries such as machine building and manufacturing to provide technicians with access to remote equipment for troubleshooting and program updates.



# TC mGuard RS2000 4G LTE

The TC mGuard RS2000 4G LTE is an all-in-one industrial router, network security appliance, and virtual private network (VPN) gateway approved for use on Verizon and AT&T cellular networks. The TC mGuard can route data back to SCADA servers, offer enhanced firewall protection, and provide access to remote equipment via the award-winning mGuard Secure Cloud free VPN platform.



## Features

- SD card slot
- 4 LAN ports
- 2 VPN tunnels
- 3 inputs / 3 outputs
- ≤ 150 Mbps internet speed
- 2 SMA antenna connectors
- -40°C to +70°C

## Approvals

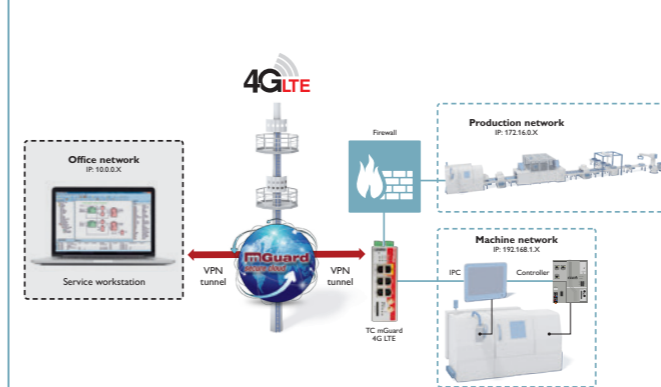
- Class 1, Div. 2
- AT&T, Verizon

## Your advantages

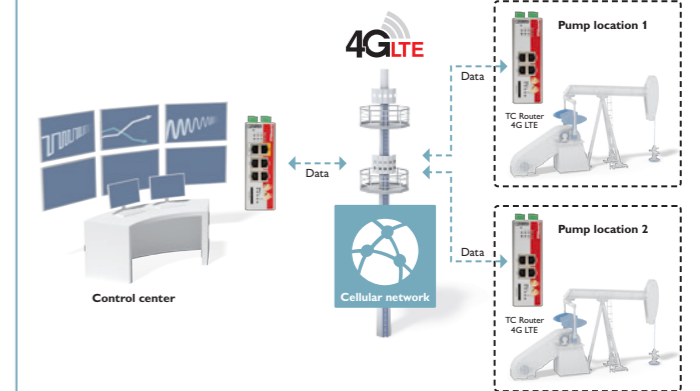
- ✓ 4G LTE high-speed internet
- ✓ Extended temperature range
- ✓ Stateful inspection firewall
- ✓ 24/7 access and control of remote machines
- ✓ Save time and money by preventing downtime
- ✓ Generate additional revenue through service agreements

## TC mGuard applications

Use a TC mGuard RS4000 to access a remote machine network via the mGuard Secure Cloud, while segmenting the machine network from the rest of the production network.



Leverage remote TC mGuard RS2000s to send process data to a central TC mGuard RS4000 through a secure VPN tunnel over the cellular network.



## Common industries

The complete feature set of the TC mGuard enables it to be used in almost any industry or application. The TC mGuard is commonly used to send PLC data back to SCADA servers, provide machine builders with access to remote equipment for troubleshooting, and provide enhanced network security for critical infrastructure.



# TC mGuard RS4000 4G LTE

The TC mGuard RS4000 4G LTE is a state-of-the-art network security appliance, router, and VPN gateway approved for use on Verizon and AT&T cellular networks. The TC mGuard RS4000 has all the functionality of the RS2000, plus additional redundancy, security, and networking settings optimized to move large quantities of data and provide the highest level of protection for your critical infrastructure.



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## Features

- SD card slot
- Redundant power
- 3 inputs / 3 outputs
- Up to 250 VPN Tunnels
- 4 LAN, 1 WAN, 1 DMZ port
- ≤ 150 Mbps internet speed
- 2 SMA antenna connectors
- -40°C to +70°C

## Approvals

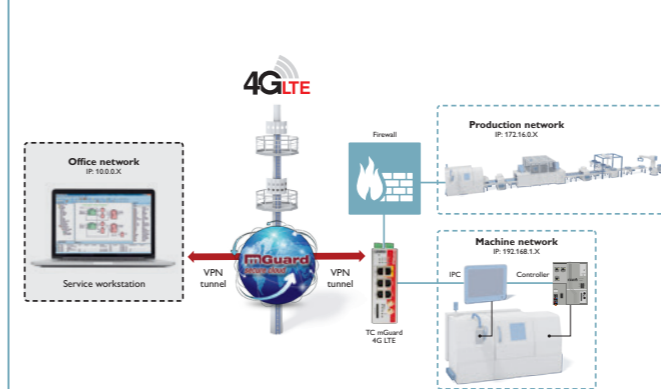
- Class 1, Div. 2
- AT&T, Verizon

## Your advantages

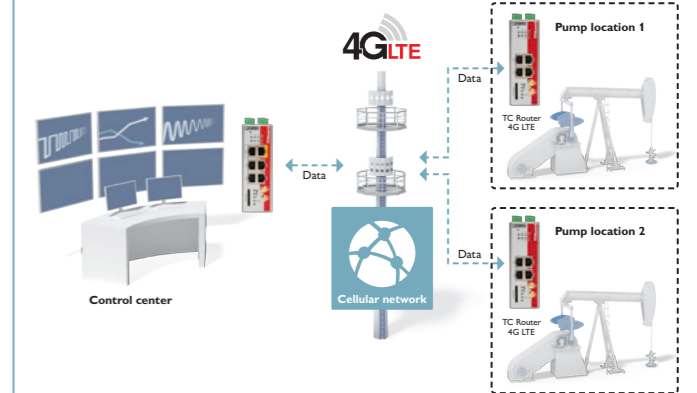
- ✓ 4G LTE high-speed internet
- ✓ Extended temperature range
- ✓ Dedicated DMZ port
- ✓ Configurable user firewall
- ✓ Redundant WAN port to ensure connection and prevent downtime
- ✓ Enhanced network security protects critical infrastructure
- ✓ Up to 250 VPN tunnels for moving large quantities of data
- ✓ 24/7 access and control of remote machines

## TC mGuard applications

Use a TC mGuard RS4000 to access a remote machine network via the mGuard Secure Cloud, while segmenting the machine network from the rest of the production network.



Leverage remote TC mGuard RS2000s to send process data to a central TC mGuard RS4000 through a secure VPN tunnel over the cellular network.



## Common industries

The complete feature set of the TC mGuard enables it to be used in almost any industry or application. The TC mGuard is commonly used to send PLC data back to SCADA servers, provide machine builders with access to remote equipment for troubleshooting, and provide enhanced network security for critical infrastructure.



# mGuard Secure Cloud

## Secure remote access made simple

Phoenix Contact's mGuard Secure Cloud offers operators and machine builders a highly secure, web-based method for accessing remote machines and equipment.

The mGuard Secure Cloud is a professionally hosted, turnkey remote services ecosystem for both the machine builder and the production plant operator.

Service technicians can securely log into the mGuard Secure Cloud through a standard web browser and access remote networks with a click of a button.

Technicians also have visibility to additional client information such as: locations, operators, machines, users, and access permissions.

### Is it simple?

Implementing and operating an industry-standard remote services solution can be a complex task.

The mGuard Secure Cloud simplifies this setup with an easy-to-use configuration builder that enables fast and highly secure remote access.

### Is it secure?

The mGuard VPN technology leverages the highly secure IPsec security protocol with AES-256 encryption.

The mGuard Secure Cloud guarantees the confidentiality, authenticity, and integrity of all information and data transmitted between the service staff and the machines.

### Is it reliable?

The mGuard Secure Cloud servers are housed in a state-of-the-art data center with 24/7/365 monitoring. This ensures maximum reliability to support your machines and your customers.

### Is it free?

Yes! The mGuard Secure Cloud requires an upfront cost for the hardware and VPN client license; however, the service is 100% free to use thereafter.

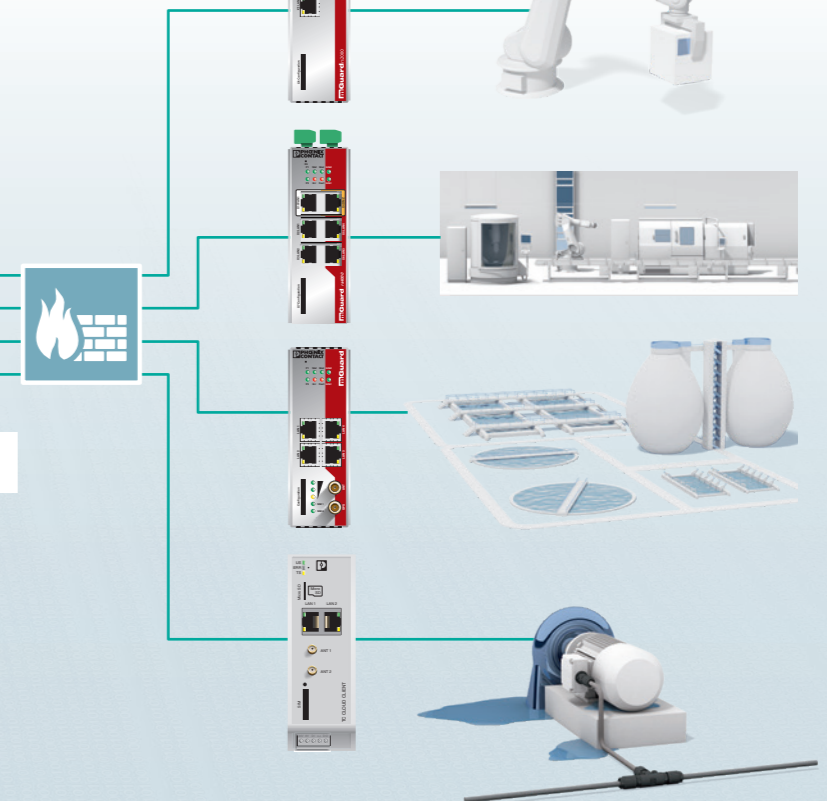
### Your advantages

- ✓ Free industrial VPN service for OEM and machine builders in the Americas
- ✓ Control of remote locations and customer machines in just a few clicks
- ✓ Immediate configurations upon request
- ✓ IPsec VPN (Virtual Private Network) is an accepted and highly secure IT standard
- ✓ Save on travel costs while providing superior 24/7 support and service
- ✓ Identify and solve complex problems remotely, provide program updates, and ease commissioning of new equipment
- ✓ Easy configuration via provided SD card
- ✓ Maintain regular contact with machinery in the field

### Software supported

## mGuard secure vpn client

The new mGSVC is a Phoenix Contact IPsec client compatible with all mGuard firmware and developed for use with the mSC. The mGVSC supports advanced network capabilities, such as proxy settings and TCP encapsulation.



# M2M portables

M2M portables provide a secure cellular VPN connection that can be transported to remote machine networks all over the world. This enables remote access to equipment in the field and provides a secure way to troubleshoot, maintain, and evaluate remote systems. M2M portables ultimately help minimize downtime and prevent costly service calls.

## Your advantages

- ✓ Durable case prevents hardware damage during shipment
- ✓ Securely troubleshoot, maintain, and update remote systems
- ✓ Minimize downtime and prevent costly service calls



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M2M portables come fully assembled with a cellular modem. Simply obtain a SIM card\* to activate cellular service for AT&T or Verizon.

\* SIM cards not included. Please visit one of these websites to obtain and activate an appropriate SIM card.  
AT&T: <https://marketplace.att.com>  
Verizon: <https://thingspace.verizon.com>



Enable VPN

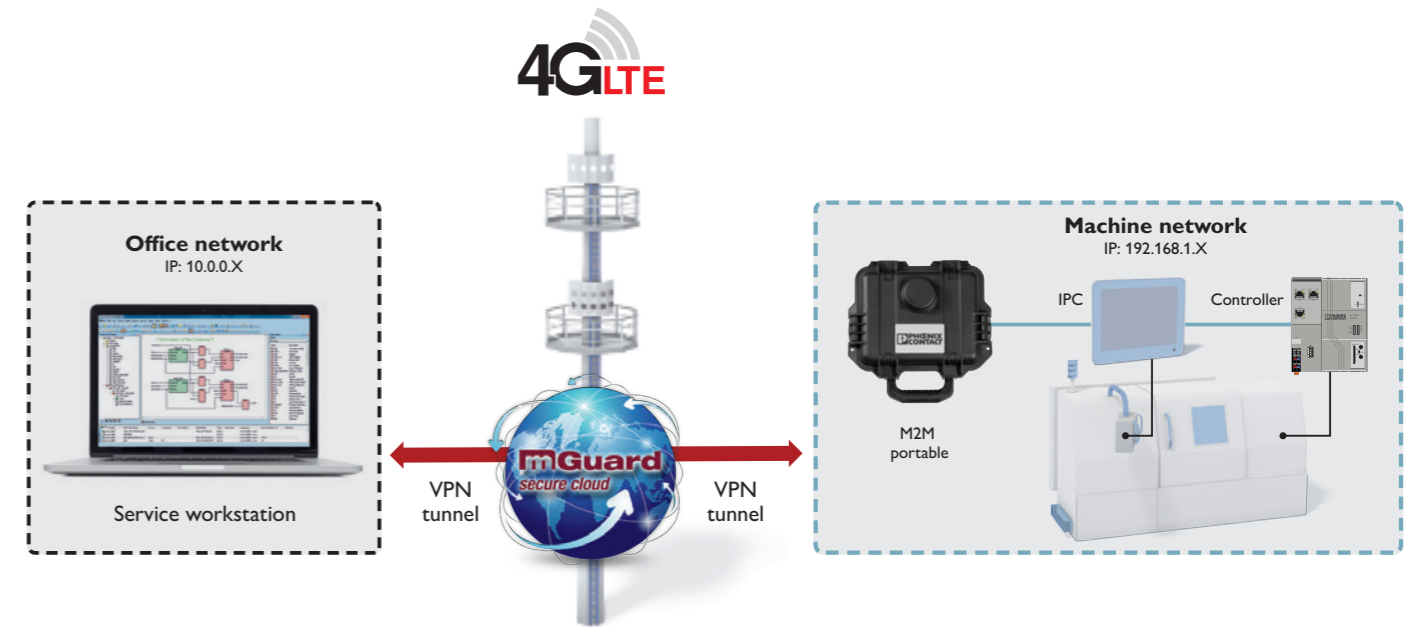
LAN 2/WAN

LAN 1

## How it works

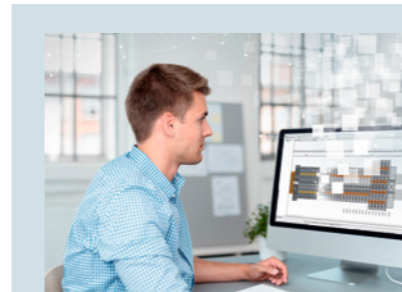
M2M portables establish a secure VPN connection to Phoenix Contact's free mGuard Secure Cloud over the cellular network. Service technicians can securely log into the mGuard Secure Cloud through a standard web browser and access the M2M portable remote network with the click of a button.

The end user has complete control of enabling the device only when service is required. This on-demand connectivity saves on data cost and adds a physical layer of security. Time stamps are taken when connected, allowing technicians to bill appropriately.



## Choose your remote connectivity

Part number	Description	Note
2404252	M2M RS2000 ATT	With TC mGuard 2000 AT&T
2404230	M2M RS4000 ATT	With TC mGuard 4000 AT&T
1102358	M2M RS2000 VZW	With TC mGuard 2000 Verizon
1102357	M2M RS4000 VZW	With TC mGuard 4000 Verizon
1107518	M2M TC CLOUD ATT	With TC Cloud Client 1002-4G AT&T
1107519	M2M TC CLOUD VZW	With TC Cloud Client 1002-4G Verizon







## Can't find what you're looking for?

If none of these enclosures meet your needs, contact us at **US\_Solutions@phoenixcon.com** to discuss your requirements.








## Which 4G LTE product is right for my application?


				
Product	TC router 4G LTE	TC Cloud Client 4G LTE	TC mGuard RS2000 4G LTE	TC mGuard RS4000 4G LTE
Description	<ul style="list-style-type: none"> <li>4G LTE modem/router</li> <li>Internet connectivity</li> <li>Secure SCADA</li> <li>Point-to-point VPN</li> <li>Always-on connection</li> <li>Cost-effective</li> <li>Industrial</li> </ul> <p>Does not connect to the mGuard Secure Cloud.</p>	<ul style="list-style-type: none"> <li>4G LTE VPN Gateway</li> <li>mGuard Secure Cloud</li> <li>Remote access</li> <li>Remote control</li> <li>On-demand connection</li> <li>Cost-effective</li> <li>Industrial</li> </ul> <p>Only connects to the mGuard Secure Cloud.</p>	<ul style="list-style-type: none"> <li>4G LTE security device, router, and VPN gateway</li> <li>mGuard Secure Cloud</li> <li>Internet connectivity</li> <li>Secure SCADA</li> <li>Remote access</li> <li>Remote control</li> <li>Point-to-point VPN</li> <li>Always-on connection</li> <li>On-demand connection</li> <li>Industrial</li> </ul>	<ul style="list-style-type: none"> <li>4G LTE security device, router, and VPN gateway</li> <li>mGuard Secure Cloud</li> <li>Internet connectivity</li> <li>Secure SCADA</li> <li>Remote Access</li> <li>Remote control</li> <li>Point-to-point VPN</li> <li>Always-on connection</li> <li>On-demand connection</li> <li>Industrial</li> <li>Critical infrastructure</li> <li>Advanced security</li> <li>High-performance</li> <li>High VPN traffic</li> </ul>
Concurrent VPN tunnels	3	1	2	10
Digital inputs/outputs	2 inputs / 1 output	1 input / 1 output	3 inputs / 3 outputs	3 inputs / 3 outputs
Number of LAN / WAN / DMZ ports	2 / 0 / 0	2 / 0 / 0	4 / 0 / 0	4 / 1 / 1
UL approvals	Class 1, Div II	Class 1, Div II	Class 1, Div II	Class 1, Div II
Carrier approvals	AT&T, Verizon	AT&T, Verizon	AT&T, Verizon	AT&T, Verizon
Housing type	Plastic	Plastic	Metal	Metal
mGuard Secure Cloud capable	-	✓	✓	✓
Control VPN with SMS	✓	✓	✓	✓
Control I/O with SMS	✓	-	✓	✓
Alarms via SMS or email	✓	-	✓	✓
Public internet access	✓	-	✓	✓
Routing capability	✓	-	✓	✓
Masquerading	✓	-	✓	✓
1:1 NAT	✓	-	✓	✓
Stateful inspection firewall	✓	-	✓	✓
Port forwarding	✓	-	✓	✓
IP address filtering	✓	-	✓	✓
MAC address filtering	-	-	✓	✓
Firewall within VPN	-	-	✓	✓
VLAN	-	-	✓	✓
User firewall	-	-	✓	✓
DMZ	-	-	-	✓
WAN redundancy	-	-	-	✓
Managed switch	-	-	-	✓
Redundancy (Port, Firewall, VPN)**	-	-	-	✓
Additional VPN tunnels (up to 250)**	-	-	-	✓
Deep packet inspection**	-	-	-	✓
CIFS integrity monitoring**	-	-	-	✓


\*The TC router does not support both masquerading and 1:1 NAT at the same time      \*\*Additional license required

## Ordering information

				
Product	TC router 4G LTE	TC Cloud Client 4G LTE	TC mGuard RS2000 4G LTE	TC mGuard RS4000 4G LTE
AT&T	2702533	2702888	1010464	1010463
Verizon	2702532	2702887	1010462	1010461
International	2702528	2702886	2903588	2903586

	
4G LTE antennas	
5 m cable	2702273
0.5 m cable	2702274

	
Antenna surge protection	
Surge protection kit	2800491
SMA(m) to N(f) adapter	2867694
Surge protection device	2801051
N(m) to SMA(f) adapter	2917036

	
mGuard licenses	
mGuard Secure VPN client	2702579
mGuard device manager	2981974
250 VPN tunnels	2700193
10 VPN tunnels	2700194
Modbus inspector	2702980
Firewall and VPN redundancy	2702193
CIFS integrity monitoring	2701083



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Learn more at: [www.phoenixcontact.com/LLW](http://www.phoenixcontact.com/LLW)

## Ongoing communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. Our group is known for its future-oriented components, systems, and solutions in the fields of electrical engineering, electronics, and automation.

With a global network reaching across more than 100 countries and 17,400 employees, we can stay in close contact with our customers, something we believe is essential to success. The wide variety of our innovative products makes it easy for our customers to find future-oriented solutions for multiple applications and industries. We especially focus on the fields of energy, infrastructure, process, and factory automation.



You will find our complete product range at:  
[www.phoenixcontact.com](http://www.phoenixcontact.com)



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