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.

To learn more, please visit: **www.phoenixcontact.com/cellular**

Contents

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.

To learn more, please visit: **www.phoenixcontact.com/tcrouter**

Approvals

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

Features

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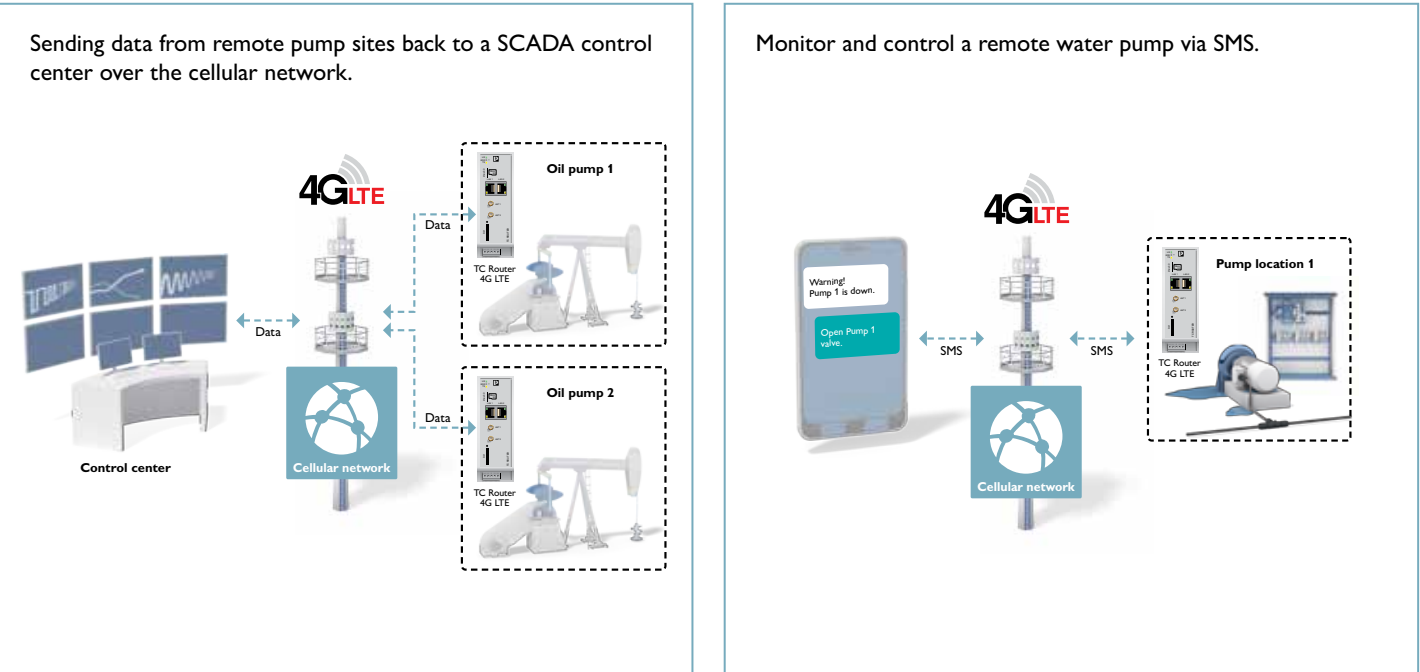- 2 SMA antenna connectors
- -40°C to +70°C

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

Sending data from remote pump sites back to a SCADA control center over the cellular network.

Monitor and control a remote water pump via SMS.

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.

To learn more, please visit: **www.phoenixcontact.com/tccloudclient**

connected by

Approvals

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

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

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.
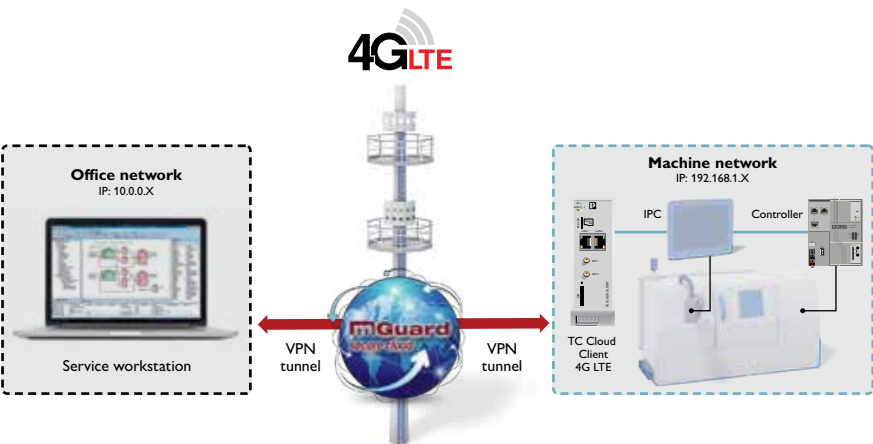
Common industries

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.

To learn more, please visit: **www.phoenixcontact.com/tcmguard**
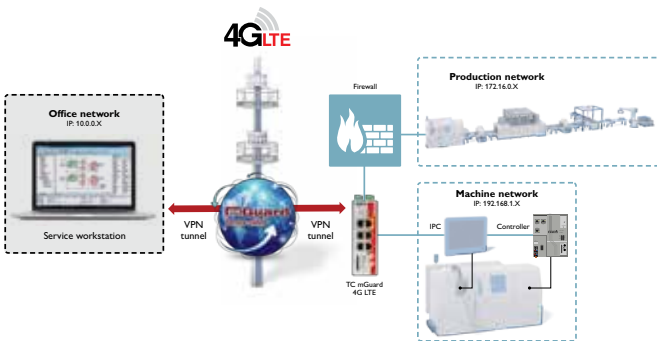
Approvals

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

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

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

Using 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.

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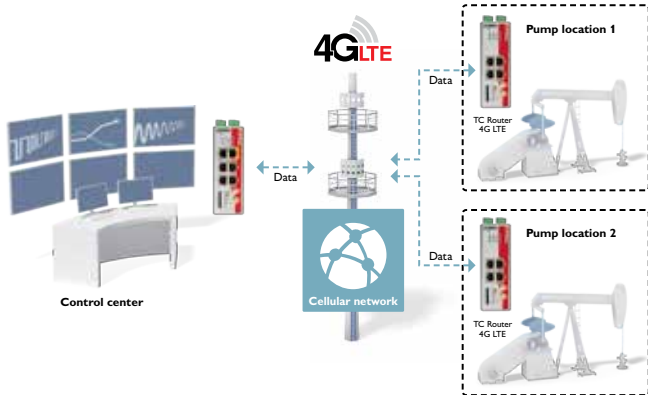
Common industries

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.

To learn more, please visit: **www.phoenixcontact.com/tcmguard**

AT&T

connected by **verizon**✓

4G LTE

mGuard secure cloud

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
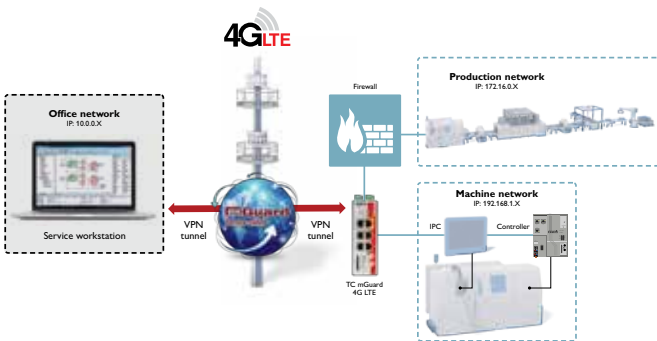- 2 SMA antenna connectors
- -40°C to +70°C

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

Using 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.

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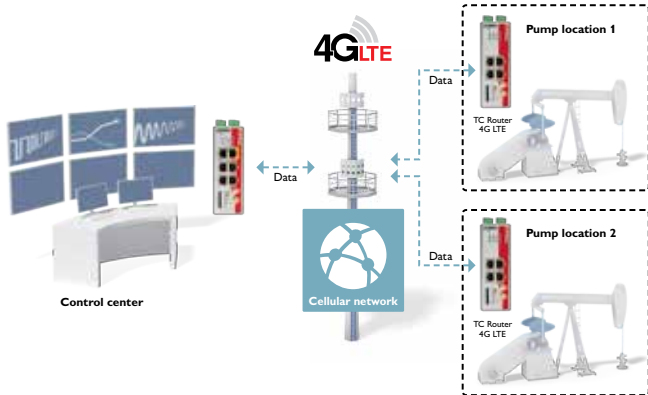
Common industries

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.

To learn more, please visit: **www.phoenixcontact.com/msc**

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 the cost of travel while providing superior 24/7 support and service
- ☑ Identify and solve complex problems remotely, provide program updates, 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.

mGuard Secure Cloud

Register today: **us.cloud.mguard.com**

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	• 4G LTE modem/router • Internet connectivity • Secure SCADA • Point-to-point VPN • Always on connection • Cost-effective • Industrial *Does not connect to the mGuard Secure Cloud.*	• 4G LTE VPN Gateway • mGuard Secure Cloud • Remote access • Remote control • On-demand connection • Cost-effective • Industrial *Only connects to the mGuard Secure Cloud.*	• 4G LTE security device, router, and VPN gateway • mGuard Secure Cloud • Internet Connectivity • Secure SCADA • Remote Access • Remote Control • Point-to-point VPN • Always on connection • On-demand connection • Industrial	• 4G LTE security device, router, and VPN gateway • mGuard Secure Cloud • Internet Connectivity • Secure SCADA • Remote Access • Remote Control • Point-to-point VPN • Always on connection • On-demand connection • Industrial • Critical Infrastructure • Advanced security • High-performance • High VPN traffic
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	1010461
Verizon	2702532	2702887	1010462	1010463
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

LIMITED LIFETIME WARRANTY

BUILD WITH CONFIDENCE

Choose Phoenix Contact with confidence
Combine any cellular product with a Phoenix Contact power supply and surge suppression and protect your equipment for life.

Learn more at: **www.phoenixcontact.com/LLW**

Open communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. We are known for producing 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 with over 14,500 employees, we maintain close relationships with our customers, something we believe is essential for success.

Our wide variety of innovative products makes it easy for our customers to implement the latest technology in a variety of applications and industries. We focus on developing the fields of energy, infrastructure, process and factory automation.

You will find our complete product range at:

www.phoenixcontact.com

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