



COMPLETE line

Networking

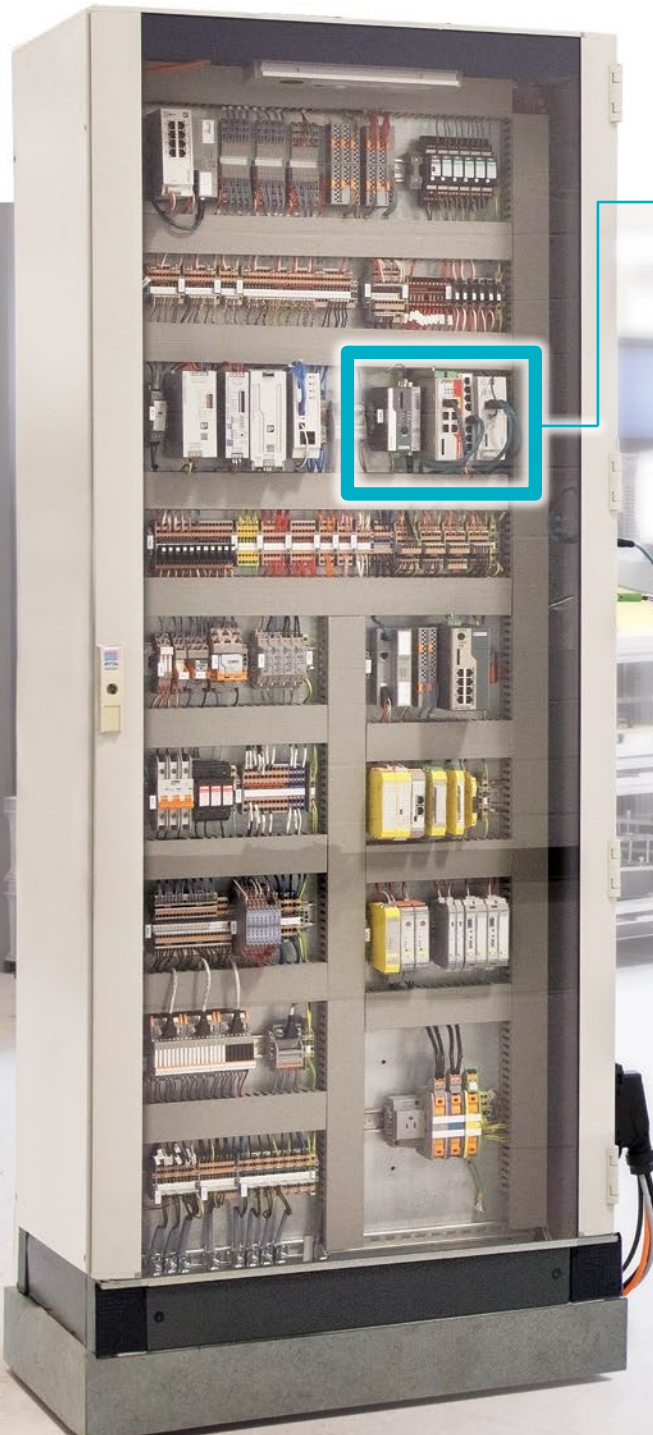
Ethernet infrastructure, network security, remote connectivity, and wireless



Cabinet Confidence

Your trusted partner for the control cabinet

From connectivity to control, Phoenix Contact gives you the confidence you need in your production systems. Our long-standing commitment to quality and innovation will give you the peace of mind and competitive edge to succeed in today's highly complex manufacturing world.



AUTOMATION
AND CONTROL



SIGNAL SWITCHING
AND CONDITIONING



POWER RELIABILITY



CONNECTIVITY



SAFETY



SHOP FLOOR
PRODUCTIVITY



LIMITED LIFETIME
WARRANTY

BUILD WITH CONFIDENCE

Networking

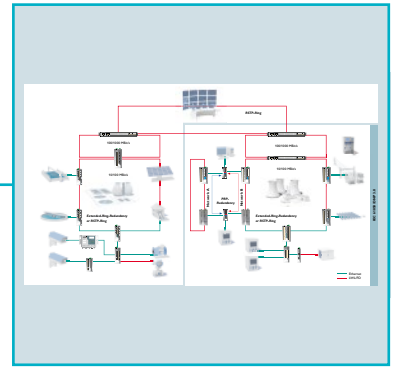
The modern factory, driven by IIoT and big data, has given rise to increased network traffic and subsequent vulnerabilities and risks, both internal and external. Resilient network infrastructure starts with the correct selection of switches, cellular and wireless radios, and security appliances to maximize efficient and resilient communication, enable secure remote access, and prevent network breaches.

NETWORKING

- Ethernet infrastructure
- Network security
- Remote connectivity
- Wireless

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Ethernet infrastructure



Network security



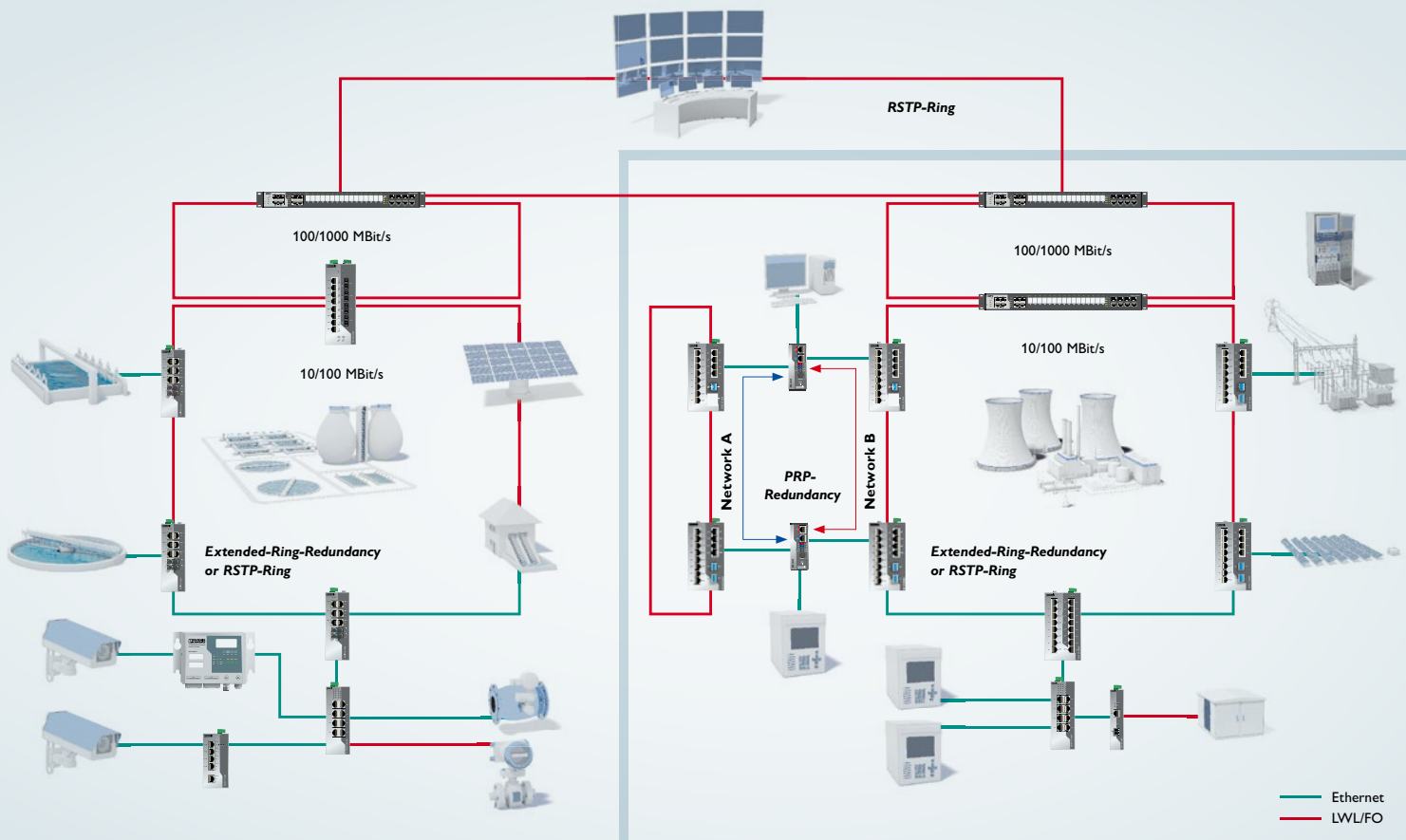
Remote connectivity



Wireless

Ethernet infrastructure

Whether wired or wireless, fiber or copper, Ethernet or serial, network infrastructure is the backbone of your communication and the means for moving the data that is the lifeblood of any application.



Highly productive and efficient networks require well-structured, high-performance, secure infrastructure. The ideal concept and the right components protect the network against automation system failures and costly downtimes. With optimal design and proper industrial network products, you can easily implement the necessary requirements of the network in a future-proof manner.

Ethernet switches (Copper/fiber)

Everything from basic network connectivity to managed devices, all the way to complete system installation.



Connectivity and conversion

Standard patch panels with multiple connection options, advanced panels with PoE and high-end power features, or devices to convert network traffic.



Power over Ethernet (PoE)

Full device selection from the injector to the splitter.

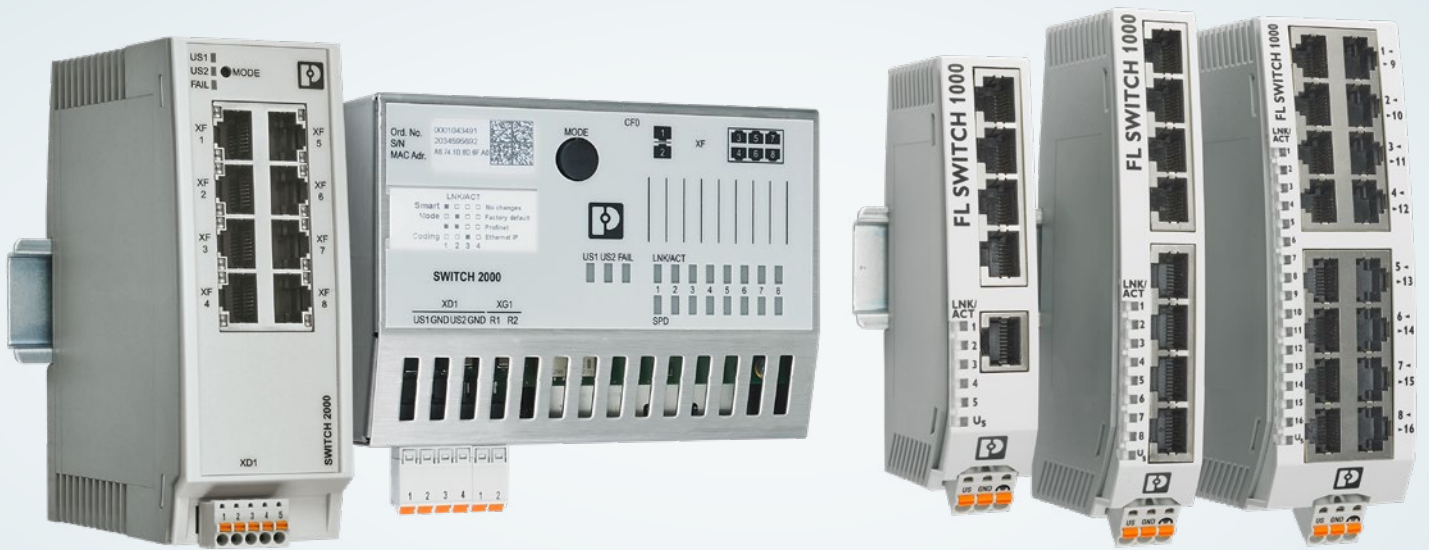


Ethernet infrastructure

Switches

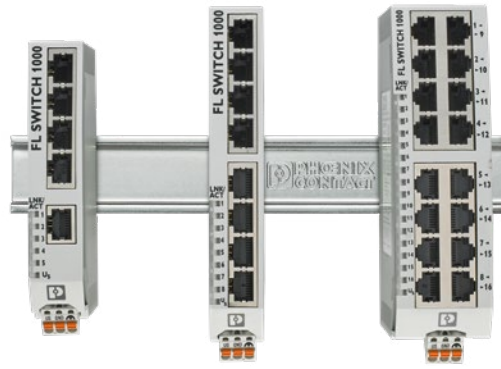
Ethernet switches are the heart of any industrial network, and they must provide a wide array of functions and port counts, as well as flexibility in fiber options, multiple approvals, and the capability to operate in a host of environments.

- Unmanaged switches – basic network connectivity for essential communication among devices
- Managed (Automation) – integrated support for EtherNet/IP and PROFINET
- Managed (Infrastructure) – heavy industrial with added security features
- PoE and specialty – Power over Ethernet support as well as IEC61850 and other special variants



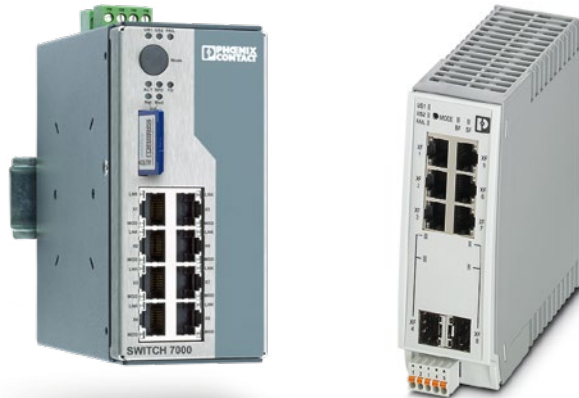
Unmanaged

- ✓ Cost-effective
- ✓ Simple
- ✓ Gigabit/Fast Ethernet speed
- ✓ Multiple fiber options



Managed - Automation

- ✓ Special functions for EtherNet/IP integration
- ✓ PROFINET Conformance Class B/C
- ✓ Modbus-capable devices



Managed - Infrastructure

- ✓ Universal application
- ✓ Multiple redundancy options
- ✓ IT-friendly functions
- ✓ Built-in security features
- ✓ In-depth diagnostic/monitoring capabilities



Specialty

- ✓ Rack- and rail-mount devices for electrical substation applications
- ✓ Machine-mount switches enable network communication from outside the panel
- ✓ Power over Ethernet combines power and signal right on the Ethernet cable



Ethernet infrastructure

Connectivity and conversion

Very often, devices do not communicate in the same way, and network and power connections are not as simple as plugging in a cable. That is when devices to handle these specialty duties are necessary.

- Device servers – migrate legacy serial devices to the Ethernet network
- Injectors – add Power over Ethernet to any network
- Patch panels – provide quick and easy connection between field and control cabinet cabling
- Media converters – transparently convert Ethernet to fiber-optic communication



Device servers

- ✓ Compatibility with RS-232, RS-422, or RS-485
- ✓ No disruption of communication method
- ✓ Create virtual COM port for legacy PLCs



Injectors

- ✓ Options for 30W and 60W requirements
- ✓ Wide power input, surge protection
- ✓ Gigabit communication capability
- ✓ Galvanic isolation, shield current monitoring
- ✓ Perfect for adding POE to a single device



Patch panels

- ✓ RJ45, IDC, screw, or push-in termination choices
- ✓ Models with surge protection
- ✓ Shield current monitoring available
- ✓ Gigabit support



Media converters

- ✓ Multiple termination choices
- ✓ Single-mode or multi-mode
- ✓ Transmission distance up to 40Km
- ✓ SC, ST, and LC connection options



Ethernet infrastructure

Power over Ethernet

Security cameras, wireless access points, VoIP telephones, and even sensors are some of the many devices that employ the convenience and cost savings of PoE technology.

- Unmanaged PoE – power PDs with the ease of connecting an unmanaged switch
- Managed PoE – control over and better vision into the PoE network and devices
- Splitters/injectors – put power onto the Ethernet cable or move it to power leads



Unmanaged PoE

- ✓ Gigabit connectivity
- ✓ PoE+ (IEEE 802.3at) support for up to 30W
- ✓ Models with internal converter to power via 24 V DC
- ✓ Support for up to eight PoE devices



Managed PoE

- ✓ Full managed switch capability
- ✓ Schedule power to devices
- ✓ Full PoE diagnostics/configuration
- ✓ PoE Watchdog for PD monitoring/recovery
- ✓ Can support 60W requirements



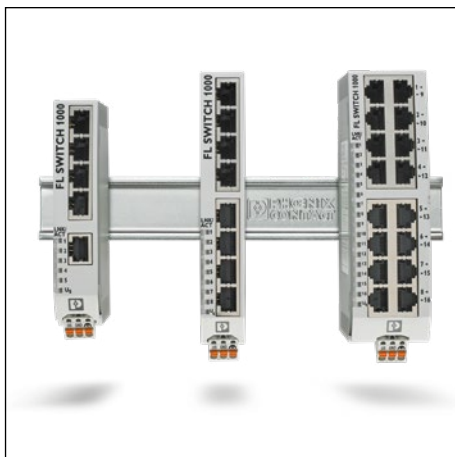
Splitters/injectors

- ✓ Standard and extended temperature
- ✓ Models with support for up to 60W
- ✓ Devices with galvanic isolation and shield current monitoring
- ✓ Built-in surge protection available



Ethernet infrastructure

Unmanaged Ethernet					
Part number	Description	What is the temp spec?	Gigabit required?	Fiber required?	PoE? (ports)
1085039	FL SWITCH 1005N	-10°C - 60°C	N	N	N
1085456	FL SWITCH 1008N	-10°C - 60°C	N	N	N
1085255	FL SWITCH 1016N	-10°C - 60°C	N	N	N
1085254	FL SWITCH 1105N	-10°C - 60°C	N	N	N
1085243	FL SWITCH 1108N	-10°C - 60°C	N	N	N
1084159	FL SWITCH 1004N-FX	-10°C - 60°C	N	Y	N
1085179	FL SWITCH 1004N-FX ST	-10°C - 60°C	N	Y	N
1085214	FL SWITCH 1004N-FX SM	-10°C - 60°C	N	Y	N
1085177	FL SWITCH 10054N-SFX	-10°C - 60°C	N	Y	N
1085176	FL SWITCH 1005N-2SFX	-10°C - 60°C	N	Y	N
1085173	FL SWITCH 1004N-SFP	-10°C - 60°C	Y	Y	N
1085171	FL SWITCH 1005N-2SFP	-10°C - 60°C	Y	Y	N
2891152	FL SWITCH SFN 5TX	0°C - 60°C	N	N	N
2891929	FL SWITCH SFN 8TX	0°C - 60°C	N	N	N
2891001	FL SWITCH SFNB 5TX	-10°C - 60°C	N	N	N
2891002	FL SWITCH SFNB 8TX	-10°C - 60°C	N	N	N
2891673	FL SWITCH SFN 8GT	-40°C - 75°C	Y	N	N
1026932	FL SWITCH 1001T-4POE-GT-SFP	-40°C - 75°C	Y	Y	Y (4)
1026937	FL SWITCH 1001T-4POE-GT	-40°C - 75°C	Y	N	Y (4)
1026929	FL SWITCH 1000T-8POE-GT-2SFP	-40°C - 75°C	Y	Y	Y (8)
1102077	FL SWITCH 1001-4POE-GT	-10°C - 60°C	Y	N	Y (4)
1102079	FL SWITCH 1000-8POE-GT	-10°C - 60°C	Y	N	Y (8)
2891320	FL MC 1000 SC	0°C - 60°C	N	N	N
2891321	FL MC 1000 ST	0°C - 60°C	N	N	N
2891317	FL MC 2000T SM20 SC	-40°C - 75°C	N	Y	N
2703005	INJ 1000	0°C - 60°C	Y	N	Y (1)
2703006	INJ 1000-T	-40°C - 75°C	Y	N	Y (1)
2703015	PP- RJ -RJ	-40°C - 75°C	Y	N	N
2703016	PP-RJ-SC	-40°C - 75°C	Y	N	N
2703018	PP -RJ -SCC	-40°C - 75°C	Y	N	N
2703019	PP -RJ - IDC	-40°C - 75°C	Y	N	N



Unmanaged switches



Managed switches



Device servers

Managed Ethernet

Part number	Description	What is the temp spec.	Gigabit required?	Fiber required?	Protocol Capable?	PoE? (ports)
2702323	FL SWITCH 2005	0°C - 60°C	N	N	P	N
2702324	FL SWITCH 2008	0°C - 60°C	N	N	P	N
2702903	FL SWITCH 2016	0°C - 60°C	N	N	P	N
2702665	FL SWITCH 2105	0°C - 60°C	Y	N	P	N
2702666	FL SWITCH 2108	0°C - 60°C	Y	N	P	N
2702908	FL SWITCH 2116	0°C - 60°C	Y	N	P	N
2702326	FL SWITCH 2205	-40°C - 70°C	N	N	P	N
2702327	FL SWITCH 2208	-40°C - 70°C	N	N	P	N
2702330	FL SWITCH 2206-2FX	-40°C - 70°C	N	Y	P	N
2702331	FL SWITCH 2206-2FX SM	-40°C - 70°C	N	Y	P	N
2702332	FL SWITCH 2206-2FX ST	-40°C - 70°C	N	Y	P	N
2702333	FL SWITCH 2206 - 2FX SM ST	-40°C - 70°C	N	Y	P	N
2702969	FL SWITCH 2206 -2SFX	-40°C - 70°C	N	Y	P	N
2702904	FL SWITCH 2216	-40°C - 70°C	N	N	P	N
2702652	FL SWITCH 2308	-40°C - 70°C	Y	N	P	N
2702970	FL SWITCH 2306-2SFP	-40°C - 70°C	Y	Y	P	N
2702909	FL SWITCH 2316	-40°C - 70°C	Y	N	P	N
1006191	FL SWITCH 2314-2SFP	-40°C - 70°C	Y	Y	P	N
2701418	FL SWITCH 7008-EIP	-40°C - 70°C	N	N	E	N
2701419	FL SWITCH 7006/2FX-EIP	-40°C - 70°C	N	N	E	N
2891031	FL SWITCH 3008	-10°C - 60°C	N	N	M	N
2891058	FL SWITCH 3016	-10°C - 60°C	N	N	M	N
1026922	FL SWITCH 4004T-8POE-4SFP	-40°C - 75°C	Y	Y	M	Y (8)
1026923	FL SWITCH 4000T-8POE-2SFP	-40°C - 75°C	Y	Y	M	Y (8)
1026924	FL SWITCH 4000T-4POE-SFP	-40°C - 75°C	Y	Y	M	Y (4)
2702758	GW DEVICE SERVER 1E/1DB9	-40°C - 70°C	N	N	S	N
2702760	GW DEVICE SERVER 1E/2DB9	-40°C - 70°C	N	N	S	N
2702761	GW DEVICE SERVER 2E/2DB9	-40°C - 70°C	N	N	S	N
2702763	GW DEVICE SERVER 2E/4DB9	-40°C - 70°C	N	N	S	N

(P) PROFINET (M) Modbus (E) EtherNet/IP (S) Serial



Media converters



Unmanaged PoE



Managed PoE

Network security

The trend of smart factories means the convergence between operational technology (OT) and informational technology (IT) actively sharing data. This connectivity impacts the security of critical industrial control systems (ICS). Protecting your industrial network and critical processes in this complex world is essential to a secure and resilient application.



The mGuard portfolio provides a tailored security solution for your industrial network. The robust and industrial security appliances include firewall, routing, and VPN functionalities to protect against malicious cyber attacks and inadvertent malfunctions.

Easy network protection

Low-cost, easy-to-use mGuard firewall and powerful industrial NAT for any industrial application.



Industrial security

The FL mGuard provides comprehensive network protection for local and remote sites, regardless of network infrastructure.



Network security

Smart and easy protection

Quickly put devices into operation with a simplified range of functions for any network size and with any level of expertise. The mGuard 1102 and 1105 fit applications with basic security requirements, stateful packet inspection firewalls, and high data throughput demands with gigabit interfaces.

- Easy protect mode – blocks all traffic coming into your equipment
- Firewall assistant – easily create firewall rules from recorded traffic
- Test mode – the next step after firewall assistance to monitor additional traffic
- RESTful APIs – configure your mGuard through WBM and RESTful Configuration API



Easy protect mode

Protect your equipment by bridging two contacts to provide network defense without the need to redesign or restructure the network.



Firewall assistant

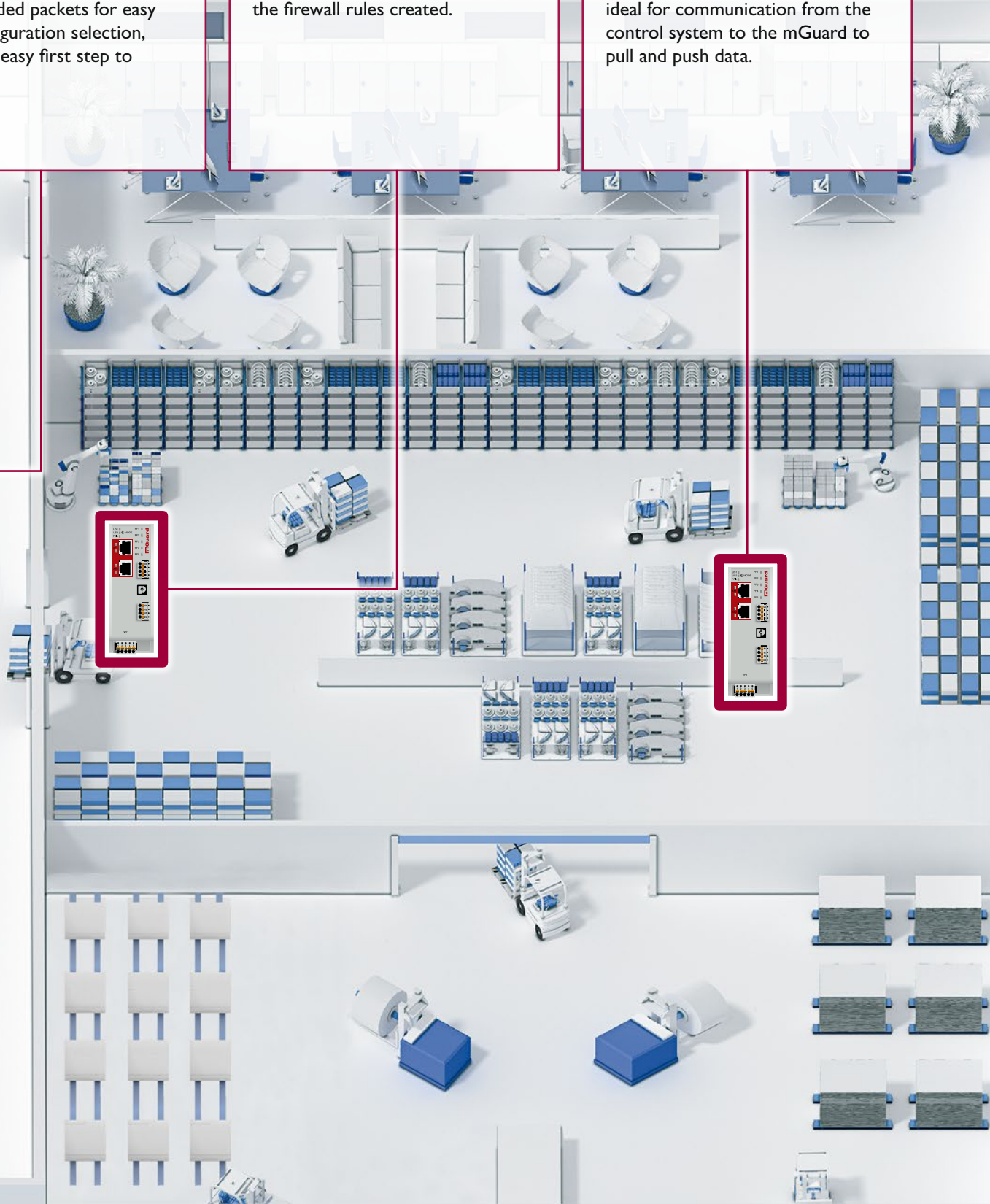
The mGuard logs the network traffic, allowing it to pass through. Then, the mGuard will display all the recorded packets for easy firewall configuration selection, providing an easy first step to create rules.

Test mode

Traffic not matching rules is allowed while being logged, reported, and even alarmed, ideal for verifying the firewall rules created.

RESTful APIs

RESTful Configuration API enables automated dynamic control and configuration of the device. This is ideal for communication from the control system to the mGuard to pull and push data.

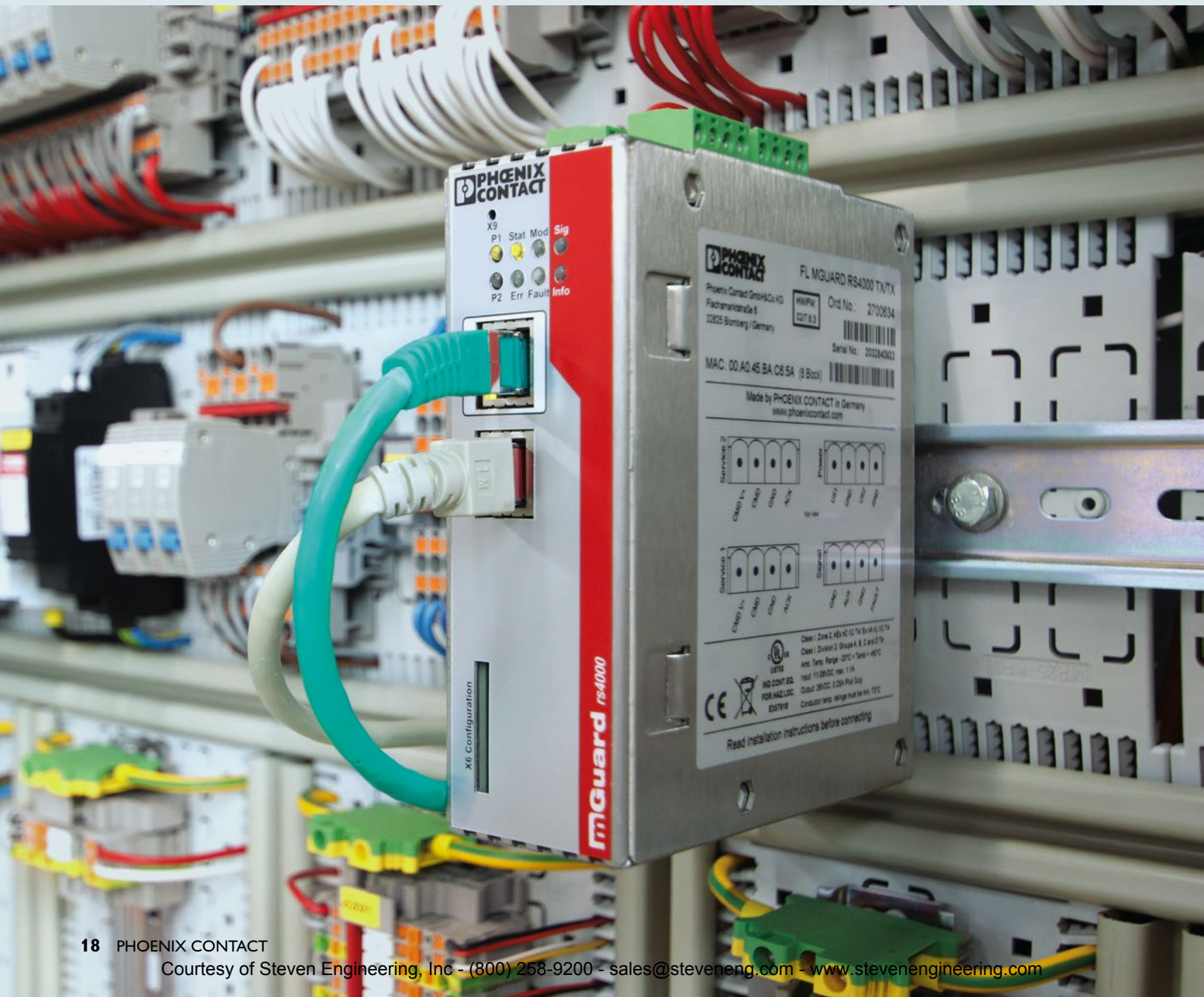


Network security

The mGuard firewalls

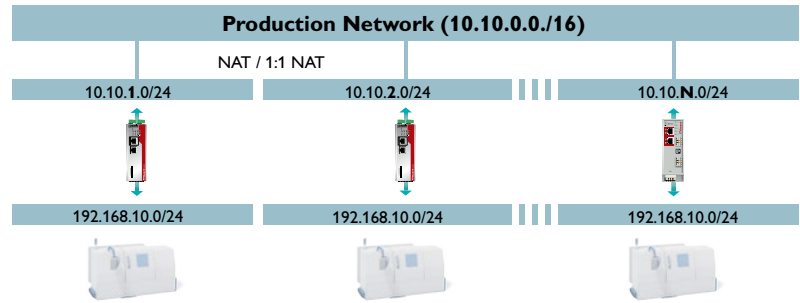
The FL mGuard firewall meets the needs of any industrial operational technology (OT) security application, in industries with security compliance regulations, unpatchable assets, or the simple need for additional security to ensure reliability and uptime.

- Integration for any industrial OT network infrastructure
- Industrial network security protection for a single component or an entire production plant
- Secure remote connectivity, whether point-to-point, hub and spoke, or via the cloud
- mGuard extensions and licensing offer optional expanded functionality



Network integration for OT

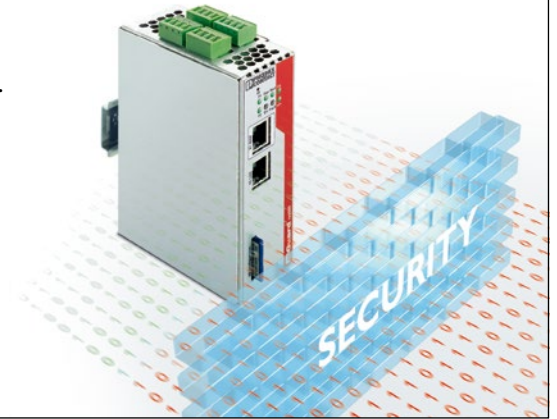
- ✓ In stealth mode, the mGuard can be installed in an existing flat network
- ✓ In router mode, the mGuard is meant to integrate new network segments
- ✓ NAT allows multiple machines to reuse the same IP address scheme



Industrial network security

All incoming and outgoing data packets are checked and use pre-defined rules. These mGuard devices have:

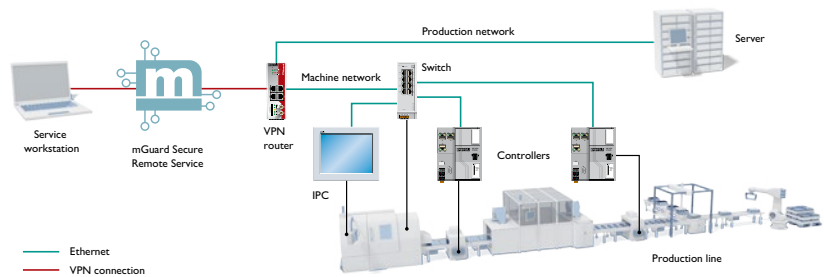
- ✓ Stateful Packet Inspection (SPI)
- ✓ Deep Packet Inspection (DPI) firewalls of Modbus and OPC
- ✓ User firewall via RADIUS authentication
- ✓ DNS/URL filtering



Secure remote connectivity

The mGuard can be used to establish Virtual Private Network (VPN) tunnels between different locations over a network:

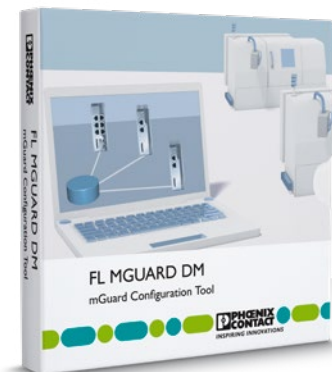
- ✓ IPsec VPN
- ✓ OpenVPN client



Additional mGuard extensions and licenses

Networks grow and requirements change, and mGuard licenses allow you to extend mGuard firmware with a variety of options at any time.

- ✓ FL mGuard Device Manager – MDM
- ✓ Deep Packet Inspection Firewall
- ✓ FL mGuard LIC CIM
- ✓ FL mGuard redundancy functions



Network security

FL mGuard devices								
Part number	Description	Do you need VPN?	Firewall level?	Routing and NAT	Gigabit speed?	Additional LAN ports	Industrial hardware	Mount
1153029	FL MGuard 1102		Y	Y	Y		Y	DIN
2700197	FL MGuard GT/GT	*	Y*	Y	Y		Y	DIN
2700198	FL MGuard GT/GT VPN	Y	Y*	Y	Y		Y	DIN
2700642	FL MGuard RS2000 TX/TX VPN	Y	Y	Y			Y	DIN
2702139	FL MGuard RS2000 TX/TX-B	N	-	Y			Y	DIN
2701875	FL MGuard RS2005 TX VPN	Y	Y	Y		Y	Y	DIN
2700634	FL MGuard RS4000 TX/TX	*	Y*	Y			Y	DIN
2200515	FL MGuard RS4000 TX/TX VPN	Y	Y*	Y			Y	DIN
2702465	FL MGuard RS4000 TX/TX VPN-M	Y	Y*	Y			Y	DIN
2702259	FL MGuard RS4000 TX/TX-P	*	Y	Y			Y	DIN
2701876	FL MGuard RS4004 TX/DTX	*	Y*	Y		Y	Y	DIN
2701877	FL MGuard RS4004 TX/DTX VPN	Y	Y*	Y		Y	Y	DIN
2702547	FL MGuard CENTERPORT	*	Y	Y	Y	Y		19" rack
2701274	FL MGuard PCI4000	*	Y*	Y				PCI
2701275	FL MGuard PCI4000 VPN	Y	Y*	Y				PCI
2701278	FL MGuard PCIE4000 VPN	Y	Y*	Y				PCIE
2700867	FL MGuard DELTA TX/TX	*	Y*	Y				Desktop
2700968	FL MGuard DELTA TX/TX VPN	Y	Y*	Y				Desktop
2700640	FL MGuard SMART2	*	Y*	Y				Dongle
2700639	FL MGuard SMART2 VPN	Y	Y*	Y				Dongle

* Additional mGuard extensions can be added to these devices to expand functionality

Additional mGuard extensions	
Part number	Description
2701083	FL MGuard LIC CIM
2701356	FL MGuard LIC FW RD
2702193	FL MGuard LIC FW/VPN RD
2702244	FL MGuard LIC FW/VPN REDUNDANCY
2700184	FL MGuard LIC LIFETIME FW
2702980	FL MGuard LIC MODBUS INSPECTOR
2702191	FL MGuard LIC OPC INSP
2700194	FL MGuard LIC VPN-10
2702546	FL MGuard LIC VPN-100
2700193	FL MGuard LIC VPN-250


For more information, visit: www.phoenixcontact.com/mguardextensions



Network security

Remote connectivity

Industrial applications typically involve equipment and assets located in remote locations. Whether for an OEM looking to provide support to their customers or an asset owner looking to store and analyze production data, industrial cellular hardware and cloud services provide valuable platforms for remote connectivity.

A man with a beard is shown in profile, looking at a tablet. The tablet displays a dashboard with various charts and graphs, including a line graph at the top, several gauge charts, and a world map. The dashboard is branded with 'PROFICLOUD' and 'Industrial Cloud Solutions'. In the background, there are computer monitors displaying similar data visualizations.

Cost savings, increased efficiency, preventative maintenance, operational insight, program updates, device management, and on-demand technical support are all made possible with remote connectivity and the industrial internet of things.

Industrial cellular

4G LTE cellular connectivity enables highly reliable and secure remote communication for SCADA applications, on-demand connectivity for service technicians, and SMS/email alerts so that operators can keep their equipment running efficiently and minimize unplanned downtime.



Cloud services

Cloud connectivity offers a highly secure, web-based method for accessing, managing, and collecting/visualizing data from remote machines and equipment.



Remote connectivity Industrial cellular

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.

- TC Router – 4G LTE router for SCADA applications
- TC Cloud Client – simple and secure remote access via the mGuard Secure Cloud
- TC mGuard – state-of-the-art network security appliance, 4G LTE router, and VPN gateway



TC Router

- ✓ 4G LTE internet capability
- ✓ Secure firewall and VPN protection
- ✓ Industrially hardened for harsh environments
- ✓ Monitor and control remote systems via SMS



TC Cloud Client

- ✓ Simple, secure 24/7 VPN access to remote equipment
- ✓ Award-winning mGuard Secure Cloud connectivity
- ✓ Ethernet and 4G LTE variants available
- ✓ Basic bridge, routing, and firewall features included



TC mGuard

- ✓ Fully-featured firewall and NAT router
- ✓ Point-to-point and mGuard Secure Cloud VPN capability
- ✓ Variety of redundancy options
- ✓ Multi-carrier and international support



Remote connectivity Cloud services

The world is changing. Digital transformation is occurring throughout every industry as organizations realize the cost benefits and new revenue streams generated by connected technologies. Phoenix Contact recognizes this macrotrend and offers a wide breadth of cloud-based services to help achieve your business objectives.

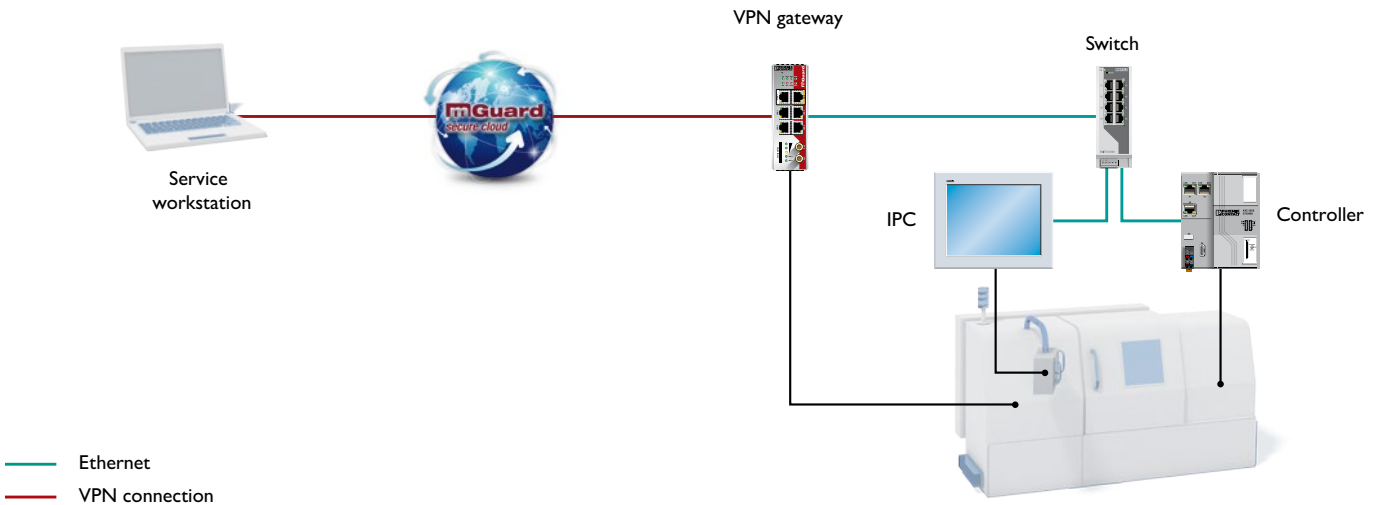
- mGuard Secure Cloud – simple, yet secure VPN remote access service
- PROFICLOUD – professional industrial cloud for data storage and visualization



mGuard Secure Cloud

- ✓ 100% free service
- ✓ Highly secure web-based remote access
- ✓ IPsec VPN standard with AES-256 bit encryption
- ✓ 24/7 on-demand access to machines and networked devices

Register today at: <https://us.cloud.mguard.com>




PROFICLOUD


- ✓ Professional industrial cloud
- ✓ Visualize machine and process data
- ✓ Cloud-based data storage
- ✓ Monitor device status and push firmware updates over the air


Register today at:
<https://proficloud.io>





Remote connectivity


TC Router		
	Part number	Description
	2702533	TC Router 3002T-4G ATT
	2702532	TC Router 3002T-4G VZW
	2702528	TC Router 3002T-4G

TC Cloud Client		
	Part number	Description
	2702888	TC Cloud Client 1002T-4G ATT
	2702887	TC Cloud Client 1002T-4G VZW
	2702866	TC Cloud Client 1002T-4G ATT
	1221706	TC Cloud Client 1101T-TX/TX

TC mGuard		
	Part number	Description
	1010461	TC mGuard RS4000 4G VZN
	1010462	TC mGuard RS2000 4G VZN
	1010463	TC mGuard RS4000 4G ATT
	1010464	TC mGuard RS2000 4G ATT
	2903586	TC mGuard RS 4000
	2903588	TC mGuard RS 2000

Accessories		
	Part number	Description
	2404252	M2M RS2000 ATT
	2404230	M2M RS4000 ATT
	1102358	M2M RS2000 VZN
	1102357	M2M RS4000 VZN
	1107518	M2M TC Cloud ATT
	1107519	M2M TC Cloud VZN

Accessories		
	Part number	Description
	2702273	TC ANT MOBILE WALL 5M
	2702274	TC ANT MOBILE WALL 0.5M
	2800491	CSMA-LAMBDA/4-2.0-BS-SET
	2702679	MGUARD SECURE VPN CLIENT LIC

	Cost effective	Internet access	 Remote access	Point-to point VPN	SMS alerts and control	NAT routing	Network security and redundancy	M2M portable package available
TC Router	✓	✓		✓	✓	✓		
TC Cloud Client	✓		✓					✓
TC mGuard		✓	✓	✓	✓	✓	✓	✓

Wireless

Today's communication needs often extend beyond hardwired networks. Whether it is wireless Ethernet, long-range point-to-point, or remote signal acquisition, today's technologies provide fast, reliable, and secure communication wherever it is required.

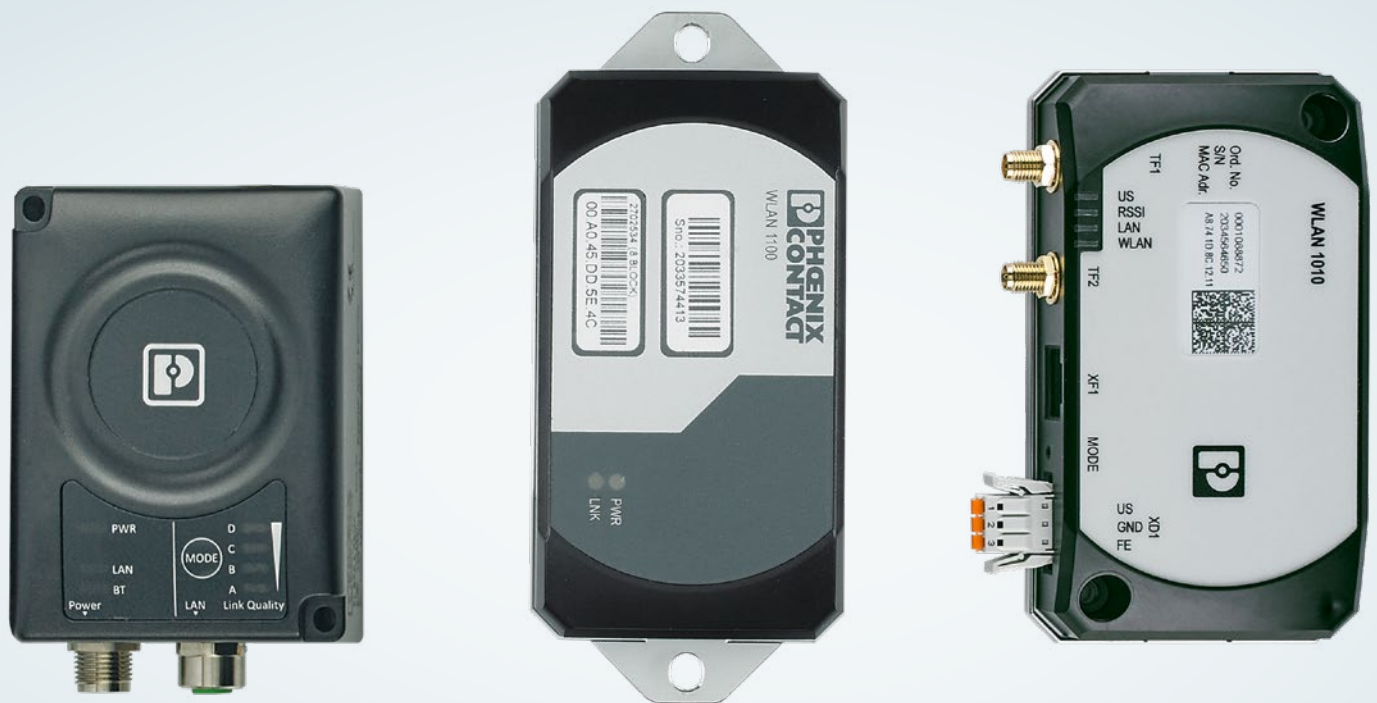
Phoenix Contact is a leading global provider of industrial wireless solutions. Today, with more than 100,000 installed units, Phoenix Contact's wireless products provide dependability and security while monitoring and controlling signals such as level, temperature, frequency, and digital alarms.



Wireless

Wireless Ethernet

- Industrial Bluetooth – Ethernet port adapters are developed specifically for harsh industrial conditions
- DIN rail industrial WLAN – the most compact industrial WLAN unit available. Space savings is realized by the compact design or by the panel-mount option
- IP-rated industrial WLAN – save cabinet space with these all-in-one wireless and antenna devices designed to be used out in the elements
- Long-range wireless Ethernet – the FL WLAN 4321 is a pre-configured point-to-point wireless Ethernet bridge that provides a wireless connection to remote locations up to 2 miles



Industrial Bluetooth

- ✓ IP65-rated housing
- ✓ PtP and PtMP setups
- ✓ Easy configuration with push button
- ✓ Internal or external antenna options



Industrial WLAN

- ✓ Compact rail design
- ✓ External antenna connections
- ✓ Panel-mount option
- ✓ MESH functionality
- ✓ Class 1 Division 2 approvals



Long-range wireless Ethernet

- ✓ Pre-configured point-to-point kit
- ✓ Up to a 2-mile range
- ✓ Up to 300 Mbps
- ✓ 256-bit AES encryption



Complete system accessories

- ✓ Omni and directional antennae
- ✓ Adapter and antenna cables
- ✓ Antenna surge protection
- ✓ Turn-key enclosures



Wireless

Wireless I/O and serial

Analog, digital, and serial wireless I/O signals can be transmitted without using a signal cable to reduce installation time while maintaining reliable communication.

- Bluetooth I/O – easily replace a 40-wire signal cable with wireless MUX to transmit 16 digital and analog signals bidirectionally
- Long-range wireless I/O – Radioline transmits I/O signals and serial data to implement anything from simple point-to-point connections to complex networks
- Flexible I/O options – easily extend Radioline wireless systems with extension modules
- Complete system accessories – additional tools for wireless I/O and serial



Bluetooth I/O

- ✓ Pre-paired point-to-point kit
- ✓ Pre-mapped I/O
- ✓ 16 digital in/out, 2 analog in/out
- ✓ Quick, secure, reliable communication



Long-range wireless I/O and serial

- ✓ Software-free setup to I/O applications
- ✓ 900 MHz engine allows for long-range communication
- ✓ Multiple application functions, including I/O to Modbus conversion
- ✓ DIN rail and NEMA4 options



Flexible I/O options

- ✓ Hot-swappable, modular I/O
- ✓ Channel-to-channel isolation
- ✓ Voltage and current analog options



Complete system accessories

- ✓ Omni and directional antennae
- ✓ Adapter and antenna cables
- ✓ Antenna surge protection
- ✓ Turn-key enclosures



Wireless

Wireless Ethernet						Application type					
Part number	Description	IP rating	Mounting	Max data rate	Functions	Mobile access	Network factory floor	Private mesh	Video surveillance	Networking remote assets	AGV comms
2702900	FL WLAN 1011	IP20	Panel/DIN rail	300 Mbps	Access Point/Client	X	X				X
1119248	FL WLAN 2011	IP20	Panel/DIN rail	300 Mbps	Access Point/Client/MESH	X	X	X			X
2705248	FL WLAN 1101	IP54	Through-panel	300 Mbps	Access Point/Client	X	X				X
2702540	FL WLAN 2101	IP68	Through-panel	300 Mbps	Access Point/Client/MESH	X	X	X			X
1194423	FL WLAN 4321	IP67	Pole-mount	300 Mbps	Point-to-point bridge				X	X	
1005869 1005957	FL BT EPA 2 / RSMA	IP65	Panel mount	3 Mbps	Bluetooth NAP/PANU	X	X				

Wireless accessories					
Antenna assembly components					
Part number	Description	Product type	Compatible frequency	Length	Approximate trasmission distance
2903263	RAD-PIG RSMA/N-0.5	Adapter cable	All	1.5 ft	NA
2903264	RAD-PIG-RSMA/N-1.0	Adapter cable	All	3 ft	NA
2803166	CN-UB-70DC-6-BB	Antenna surge	900 MHz	NA	NA
2803153	DC-UB-70DC-6-SB	Antenna surge	900 MHz	NA	NA
2838490	CN-LAMBDA/4-5.9-BB	Antenna surge	2.5/5 GHz	NA	NA
5606124	RAD-CAB-PFP240-10	Antenna surge	All	10 ft	NA
5605126	RAD-CAB-PFP500-25	Antenna surge	All	25 ft	NA
2867380	RAD-CAB-PFP400-60	Antenna surge	900 MHz	60 ft	NA
2837238	RAD-CAB-PFP400-100	Antenna surge	900 MHz	100 ft	NA
2867199	RAD-ISM-900-ANT-OMNI-5	Omni antenna	900 MHz	NA	3-5 miles
2867801	RAD-ISM-900-ANT-RAGI-3-N	Yagi antenna	900 MHz	NA	3-5 miles
2867814	RAD-ISM-900-ANT-YAGI-6.5-N	Yagi antenna	900 MHz	NA	6-8 miles
2885919	RAD-ISM-2400-ANT-OMNI-6-0	Omni antenna	2.4 GHz	NA	1,000 ft
2701347	ANT-OMNI-5900-01	Omni antenna	5 GHz	NA	800 ft
2701186	ANT-DIR-2459-01	Directional antenna	2.4/5 GHz	NA	1,000 ft



Long-range wireless I/O and serial



Industrial Bluetooth

Wireless I/O and serial						I/O count						
Part number	Description	IP rating	Mounting	Product type	Frequency/distance	Analog in (current)	Analog in (voltage)	Analog out	Digital in (universal)	Digital out (relay)	Digital in (24 V DC)	Digital out (transistor)
2901540	RAD-900-IFS	IP20	DIN rail	Wireless module	900 MHz - up to 20 miles							
2702877	RAD-900-DAIO6	NEMA4	Pole/wall	Wireless module	900 - MHz up to 20 miles	1		1	2	2		
2901541	RAD-2400-IFS	IP20	DIN rail	Wireless module	2.4 GHz - up to 1 mile							
2901533	RAD-DAIO6-IFS		DIN rail	I/O module		1		1	2	2		
2901535	RAD-DI4-IFS		DIN rail	I/O module					4			
2901536	RAD-DO4-IFS		DIN rail	I/O module						4		
2901537	RAD-AI4-IFS		DIN rail	I/O module		4						
2702990	RAD-AI4-U-IFS		DIN rail	I/O module			4					
2901538	RAD-AO4-IFS		DIN rail	I/O module				4				
2901539	RAD-DI8-IFS		DIN rail	I/O module							8	
2902811	RAD-DO8-IFS		DIN rail	I/O module								8
2316275	RAD-NAM4-IFS		DIN rail	I/O module						4		
2904035	RAD-PT100-IFS		DIN rail	I/O module		4						

Enclosure options				
Turnkey control cabinets				
Part number	Description	Recommended for	Cabinet size	Component overview
2701204	FL RUGGED BOX	WLAN	10x7x5in	Box only
2701430	FL RUGGED BOX OMNI-1	WLAN	10x7x5 in	Box with adapter cables and one 5 dBi antenna
2701439	FL RUGGED BOX OMNI-2	WLAN	10x7x5 in	Box with adapter cables, 5 dBi antenna, power supply, and terminal blocks
2701440	FL RUGGED BOX DIR-1	WLAN	10x7x5 in	Box with adapter cables, one 9 dBi panel antenna, power supply, and terminal blocks
1094594	RTU READY 161408	WLAN/wireless I/O	16x14x8 in	Cabinet with power supply, power supply surge, and antenna surge
1092495	RTU READY 181610	WLAN/wireless I/O	18x16x10 in	
1092496	RTU READY UPS161408	WLAN/wireless I/O	16x14x8 in	Cabinet with power supply, UPS, power supply surge, and antenna surge
1068258	RTU READY UPS 181610	WLAN/wireless I/O	18x16x10 in	
1100665	RTU READY EX UPS 161408	WLAN/wireless I/O	16x14x8 in	Same as above with all Class I Division 2 components
1100666	RTU READY EX UPS 181610	WLAN/wireless I/O	18x16x10 in	



Industrial WLAN



Long-range wireless Ethernet



Complete system accessories





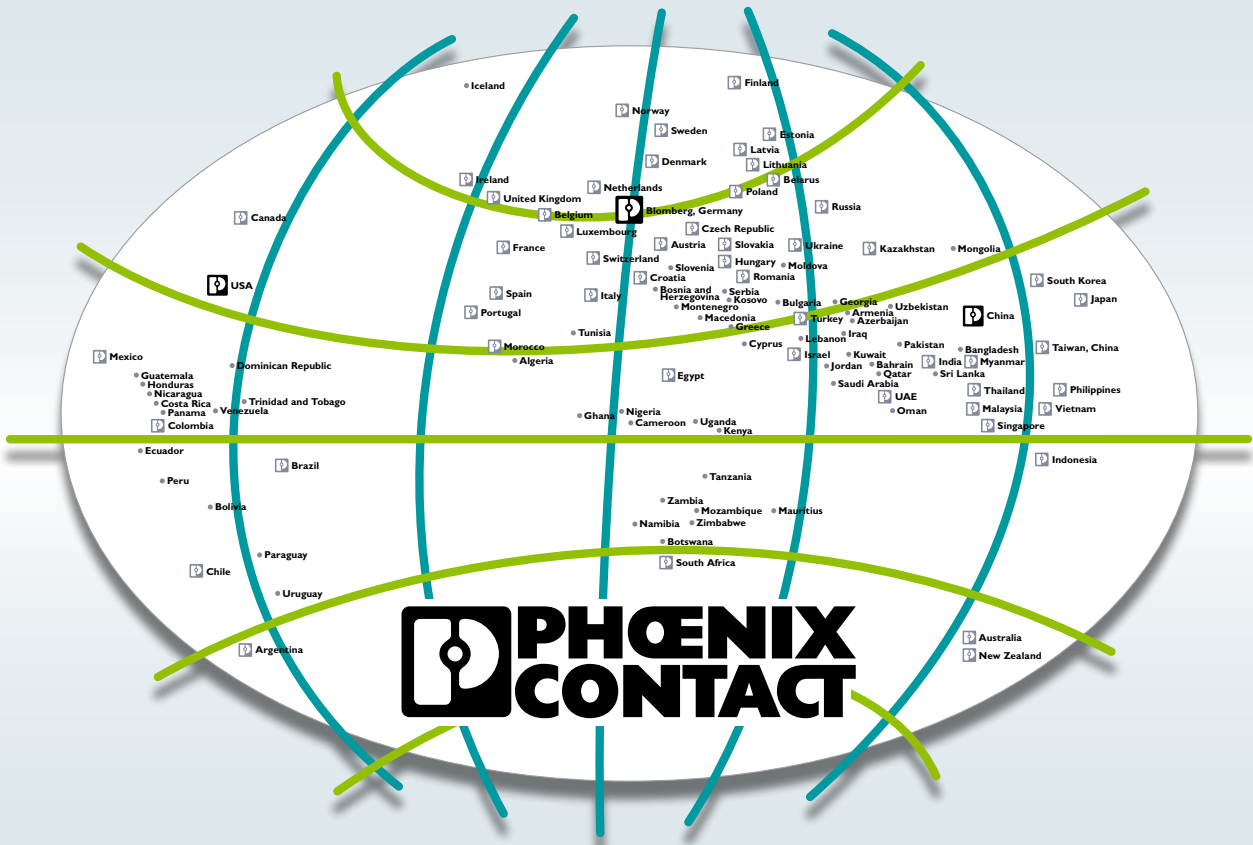
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