



Industrial Wireless

Wireless from the sensor to the network

Our Industrial Wireless products for your automation infrastructure

Phoenix Contact is a leading international supplier for automation infrastructure. Industrial Wireless products from Phoenix Contact provide reliability and security for the transmission of data and signals.

Wireless systems allow you to easily and efficiently navigate the many challenges in an industrial communication infrastructure.

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Your advantages

- Flexibility, easy installation, and cost savings compared to cable-based installations
- Easy bypassing of obstacles
- Alternative to slip rings that are prone to wear, and to cable lines on mobile devices
- Reduced maintenance costs
- Monitoring and control of remote stations without cable access

Find out more with the web code

For detailed information, use the web codes provided in this brochure. Simply enter # and the four-digit number in the search field on our website.

 **Web code:** #1234 (example)

Or use the direct link:
phoenixcontact.net/webcode/#1234

Wireless technologies

Different wireless technologies for special industrial requirements

In industry, there is a vast range of applications for wireless technologies, from the transmission of a simple sensor value all the way to a powerful network with hundreds of devices. This means that the requirements for wireless technology differ significantly.

This broad range of requirements is not satisfied entirely by one single wireless technology. Phoenix Contact provides products and solutions for a variety of free and license-free wireless technologies that cover virtually all industrial areas of application.

The key requirement for the use of wireless technologies in industrial applications is that the technology must be as robust and reliable as a cable connection, even under harsh conditions. With wireless communication, the data is transmitted with electromagnetic waves through free space that is not available exclusively. The wireless connection is therefore subjected to interference, such as electromagnetic interference fields, which can adversely affect transmission. In addition, reflections, fading, interference, and shadowing can occur. Despite the impacts described, it is imperative that the wireless systems work without interference.

Industrial 5G – wireless networking for efficient processes

In the future, Industrial 5G will enable reliable wireless networking with high data speeds, high numbers of participants, and extremely low latency times. Industrial 5G provides the foundation for scenarios of the future, including Industry 4.0 and the All Electric Society, in which comprehensive networking and smart factories are standard. This 5th generation of wireless broadband technology allows users to establish reliable connectivity, which in turn allows flexible, autonomous, and efficient processes, from production to logistics.

 Web code: #2719



Industrial 5G – opportunities and capabilities of new technology

Wireless technologies					
NearFi Technologyⁱ Designed by Phoenix Contact	Bluetooth Low Energy	 Bluetooth	WLAN WLAN AX WiFi 6	 TRUSTED WIRELESS™	 5G4G
Range with line of sight					
• Up to 10 mm	• Up to 200 m	• Up to 250 m	• Up to 1 km	• Up to 32 km (900 MHz) • Up to 20 km (868 MHz) • Up to 5 km (2.4 GHz)	• Worldwide
Description					
NearFi is a contactless real-time transmission technology for transmitting power and data across an air gap of up to 10 mm	Bluetooth Low Energy enables energy-saving wireless communication with battery-operated sensors	Bluetooth provides fast and efficient transmission of I/O and Ethernet data in machine building and systems manufacturing	WLAN is a wireless standard for establishing wireless local area networks in accordance with IEEE 802.11	Trusted Wireless was designed specifically for the reliable transmission of data and signals over ranges of up to several kilometers	Communication is via private or public cellular networks. In public networks, the telecommunications providers deliver the necessary infrastructure
Fields of application					
• Wireless real-time Ethernet data and power	• Wireless I/O data and measured values	• Wireless I/O: Analog and digital I/O signals • Wireless Ethernet: Ethernet data	• Wireless Ethernet: Ethernet communication with moving and mobile devices	• Wireless I/O: Analog and digital I/O signals (modular extension possible) • Wireless serial: Serial RS-232 and RS-485 data	• Wireless I/O: Analog and digital I/O signals • Wireless Ethernet: Ethernet data
Applications					
• Robots • Material transport systems • Automated guided vehicle systems • Handling/lightweight robots • Cleanroom systems	• Integration of Bluetooth Low Energy sensor technology • Battery-operated sensor technology	• Replacement of cables for wireless PROFINET and PROFIsafe communication • Replacement of signal lines	• Autonomous mobile robots and Automated Guided Vehicles (AGVs) • PROFINET and PROFIsafe communication	• Connection of remote pump stations • Rotating parts (e.g., in scraper bridges) • Level monitoring on reservoirs • Pipeline monitoring	• Remote access to machines and systems • Monitoring signal states
Page 16		Page 18	Page 20	Page 22	Page 22

Wireless I/O

The Wireless MUX wireless signal cable

The wireless multiplexer transmits 16 digital and two analog signals bi-directionally, which means that it can replace a 40-wire signal cable. The connection is also monitored continuously. If there is gross interference in the link or it is interrupted, the outputs are reset to the defined LOW state. This is indicated on the module by a diagnostic LED. The link quality display provides the user with constant information on the status of the link.

 Web code: #1792

Your advantages

- Connections established and signals transmitted automatically based on fixed pairing
- No configuration or settings required
- Typical transmission time of less than 10 ms
- Extremely robust and reliable
- Interference-free operation alongside WLAN



Product overview: Wireless sets



Wireless set with antennas

ILB BT ADIO MUX-OMNI

Order No. [2884208](#)

- Standard package consisting of two permanently paired modules, two omnidirectional antennas with 1.5 m cable
- Ranges between 50 and 100 m in halls and over 200 m outdoors
- Antenna connection: RSMA (female)
- Approvals: FCC, UL 508, MIC (Japan)

Wireless set without antennas

ILB BT ADIO MUX

Order No. [2702875](#)

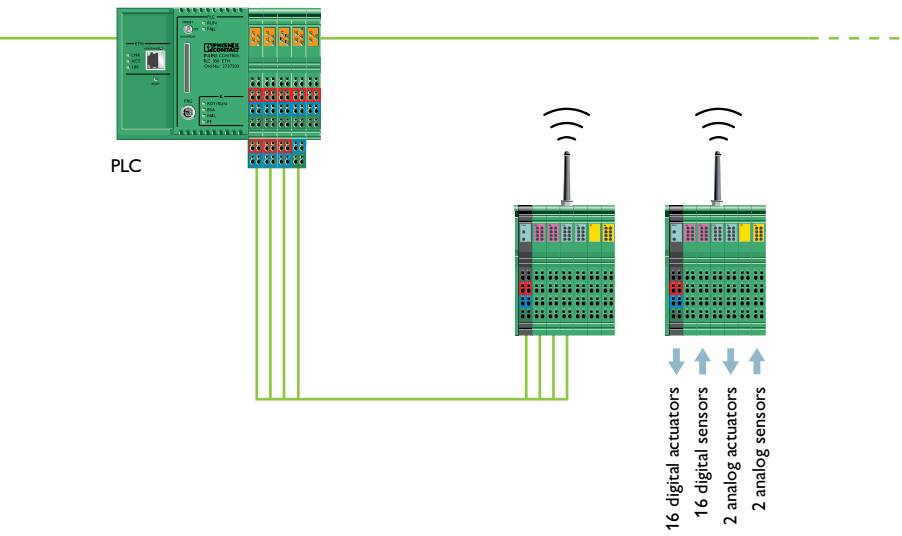
- Package consisting of two permanently paired modules
- Ranges of over 400 m with directional antennas with a free line of sight
- Antenna connection: RSMA (female)
- Approvals: FCC, UL 508, MIC (Japan)

Technical data for wireless sets:

- Current Bluetooth 4.0 technology
- Supply voltage: 19.2 V DC ... 30 V DC
- 16 digital inputs
- 16 digital outputs up to 500 mA
- 2 analog inputs/outputs 0 ... 20 mA or 0 ... 10 V

Wireless MUX, the wireless signal cable

Connection to the controller is quick and easy using existing input and output channels.



Ready to use: Unpack, connect, and switch on

Possible areas of application

The Wireless MUX is used wherever a small number of digital or analog input and output signals need to be exchanged wirelessly with a remote or movable station.

Factory automation in particular is characterized by machine parts that are constantly in motion.



Dynamic applications

Wireless I/O

Radioline – easy signal distribution with I/O mapping

Radioline is the wireless system for large systems and networks. Special features include extremely easy assignment of inputs and outputs by simply turning the thumbwheel – without any programming. Radioline transmits I/O signals as well as serial data, and is therefore very versatile. In addition, you can implement various network structures: from a simple point-to-point connection to complex networks.

Web code: #1927



- Your advantages**
- Easy startup without programming
 - One device for a wide range of applications
 - Integrated RS-232 and RS-485 interface
 - Trusted Wireless 2.0 technology
 - Adjustable data rates for the wireless interface
 - 128-bit data encryption (AES)

Product overview Radioline front modules



900 MHz wireless module

RAD-900-IFS (America) Order No. 2901540
RAD-900-IFS-AU (Australia, New Zealand) Order No. 2702878

- Supply voltage: 10.8 V DC ... 30.5 V DC
- Adjustable transmission power of up to 1 W
- Can be extended with I/O modules via DIN rail connectors
- Extended temperature range: -40°C ... +70°C
- Antenna connection: RSMA (female)
- Approvals: UL 508, HazLoc, FCC
- Suitable for large distances with obstacles



2.4 GHz wireless module

RAD-2400-IFS (worldwide) Order No. 2901541
RAD-2400-IFS-JP (Japan) Order No. 2702863

- Supply voltage: 19.2 V DC ... 30.5 V DC
- Adjustable transmission power of up to 100 mW
- Can be extended with I/O modules via DIN rail connectors
- Extended temperature range: -40°C ... +70°C
- Antenna connection: RSMA (female)
- Approvals: ATEX, IECEx, UL 508, HazLoc, FCC (RAD-2400-IFS only)

Radioline accessories can be found on page 12-13.



For use in America

RAD-900-DAIO6 Order No. 2702877

- Integrated 900 MHz wireless module
- 6 integrated I/O channels (2 x DI/DO, 1 x AI/AO)
- Connection to RAD-900-IFS wireless modules possible
- Ambient temperature: -40°C ... 65°C
- Universal power supply unit: 100 V AC ... 240 V AC / 10.8 V DC ... 30.5 V DC
- Degree of protection: NEMA 4X (IP66)
- Antenna connection: N (female)
- Approvals: ANSI/ISA/CSA 22.2 61010-2-201, UL 50E Type 4, Class I, Div. 2, Groups A, B, C, D T4, Class I, Zone 2, IIC T4

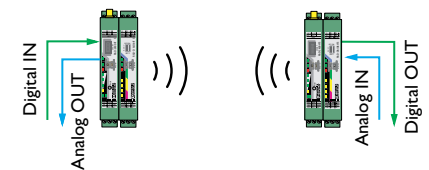
Radioline accessories can be found on page 12-13.

One device – a wide range of applications

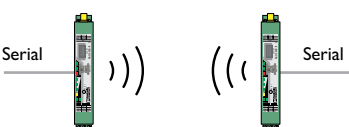
Radioline can transmit both I/O signals and serial data, and can therefore be used in a variety of applications – the Trusted Wireless technology ensures reliable transmission even in harsh industrial environments, regardless of the protocol type. The Radioline function blocks for PC Worx, STEP 7, and TIA Portal allow easy I/O integration in the control level.

PC Worx/STEP 7 function blocks

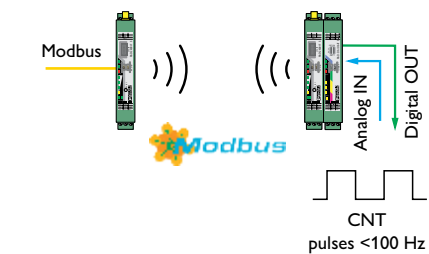
- Free Radioline library
- Central monitoring of wireless stations in the control system



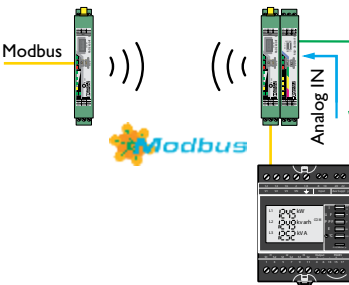
I/O data mode



Serial data mode



PLC/Modbus/RTU mode



PLC/Modbus/RTU dual mode

Wireless I/O

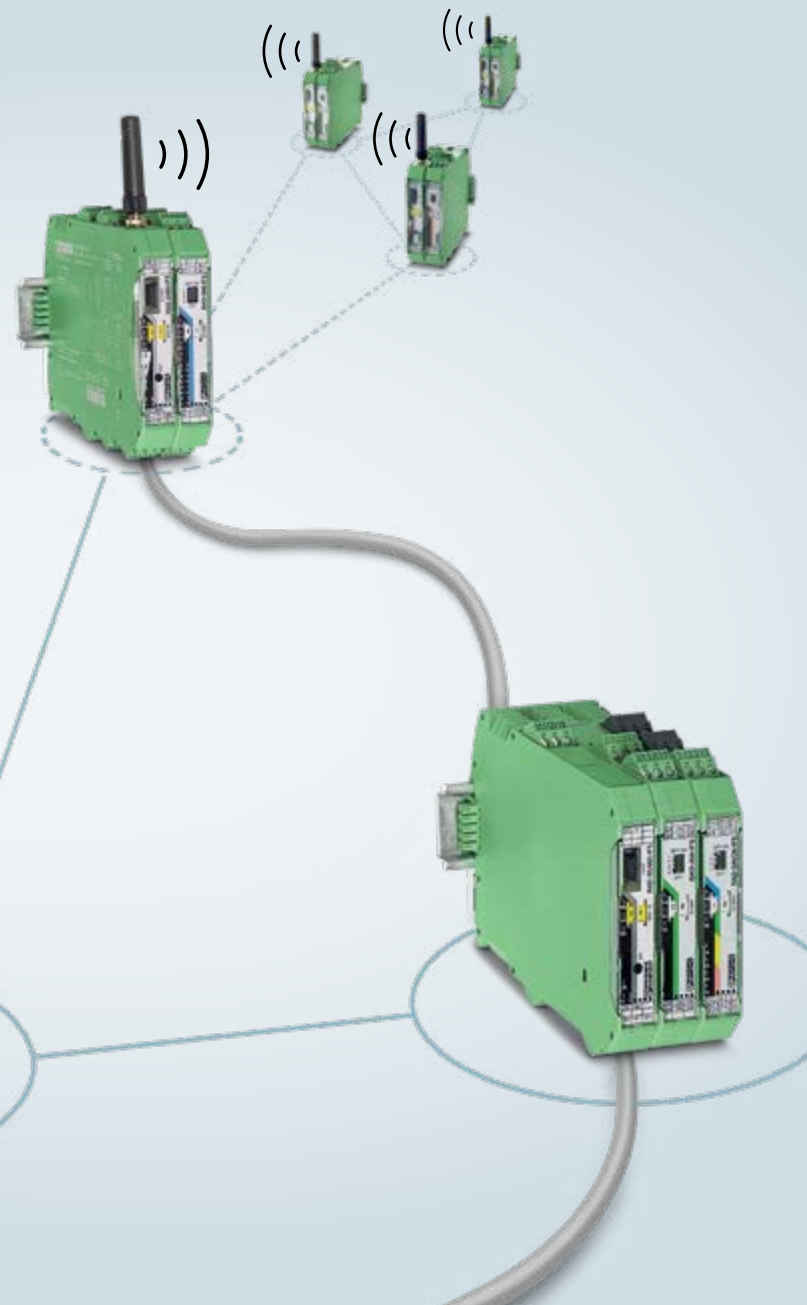
Radioline – I/O mapping available in wired format

The popular, straightforward method of distributing I/O information using the thumbwheels on the front of the device is now also available for RS-485 networks. Addressing the new RS-485 front module is quick and easy too – all it takes is a turn of the yellow thumbwheel. This enhances the Radioline system's flexibility, allowing you to use it for solutions in even more applications.

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Alternative transmission media

To increase the range, you can of course replace the RS-485 line with alternative transmission media. Phoenix Contact provides a range of converters for fiber-optic cables, SHDSL, wireless, or Ethernet technology.



Product overview: Radioline bus module



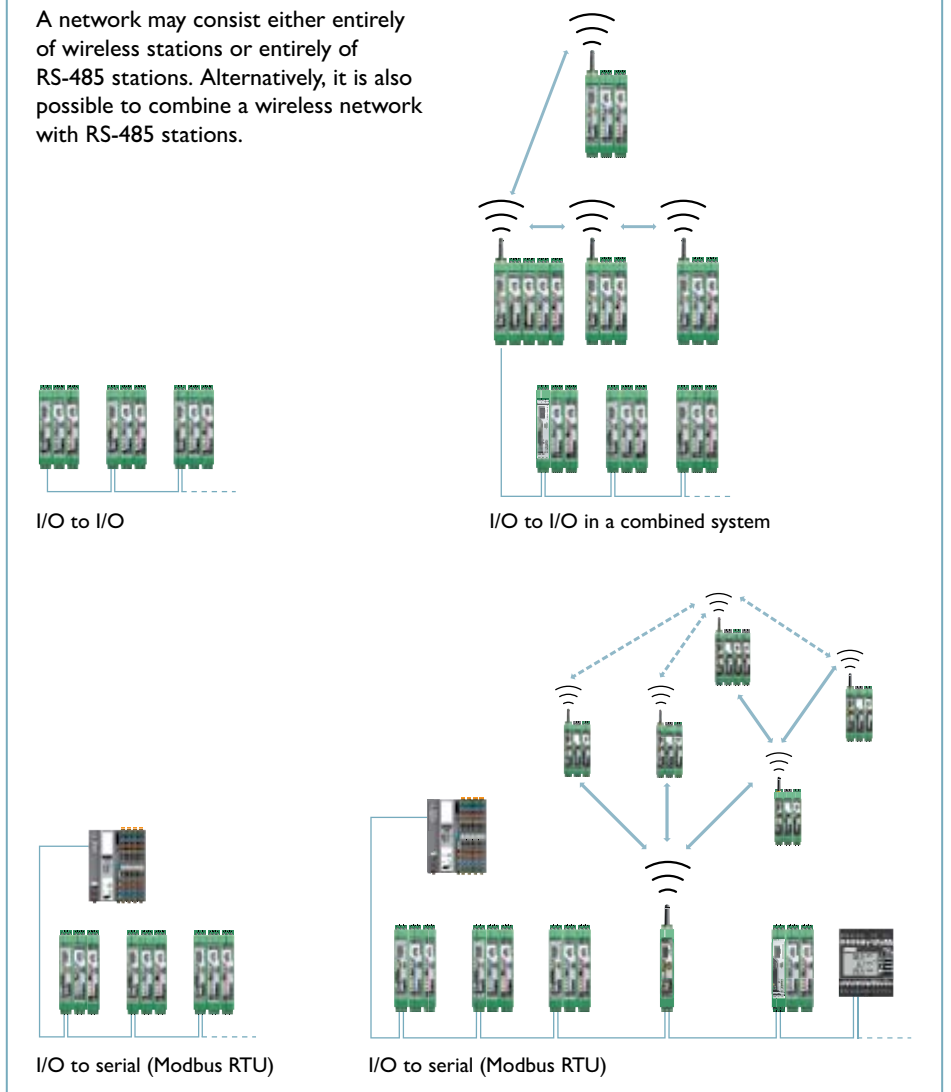
RS-485 bus module

RAD-RS485-IFS Order No. 2702184

- Extended temperature range: -40°C ... +70°C
- RS-485 2-wire connection (screw terminal block)
- Can be used worldwide
- Range: 1,200 m or more with converter or repeater
- Can be extended with I/O modules via DIN rail connectors
- Supply voltage: 19.2 V DC ... 30.5 V DC

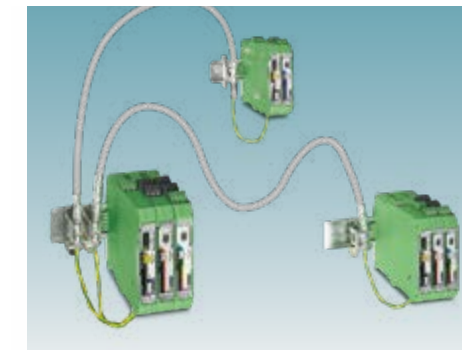
Signal transmission with the Radioline RS-485 bus module

A network may consist entirely of wireless stations or entirely of RS-485 stations. Alternatively, it is also possible to combine a wireless network with RS-485 stations.



Connection to the wireless system

A Radioline wireless system on an existing base station can be extended to include new RS-485 stations. The wireless and RS-485 modules form a combined system.



Multipoint multiplexer

In an RS-485 network with up to 99 Radioline stations, you can now distribute I/O signals between stations entirely without the need for software configuration – all it takes is a turn of the thumbwheel.



Stand-alone operation as a Modbus server

The new Radioline RS-485 stations can also be operated on any Modbus RTU client.

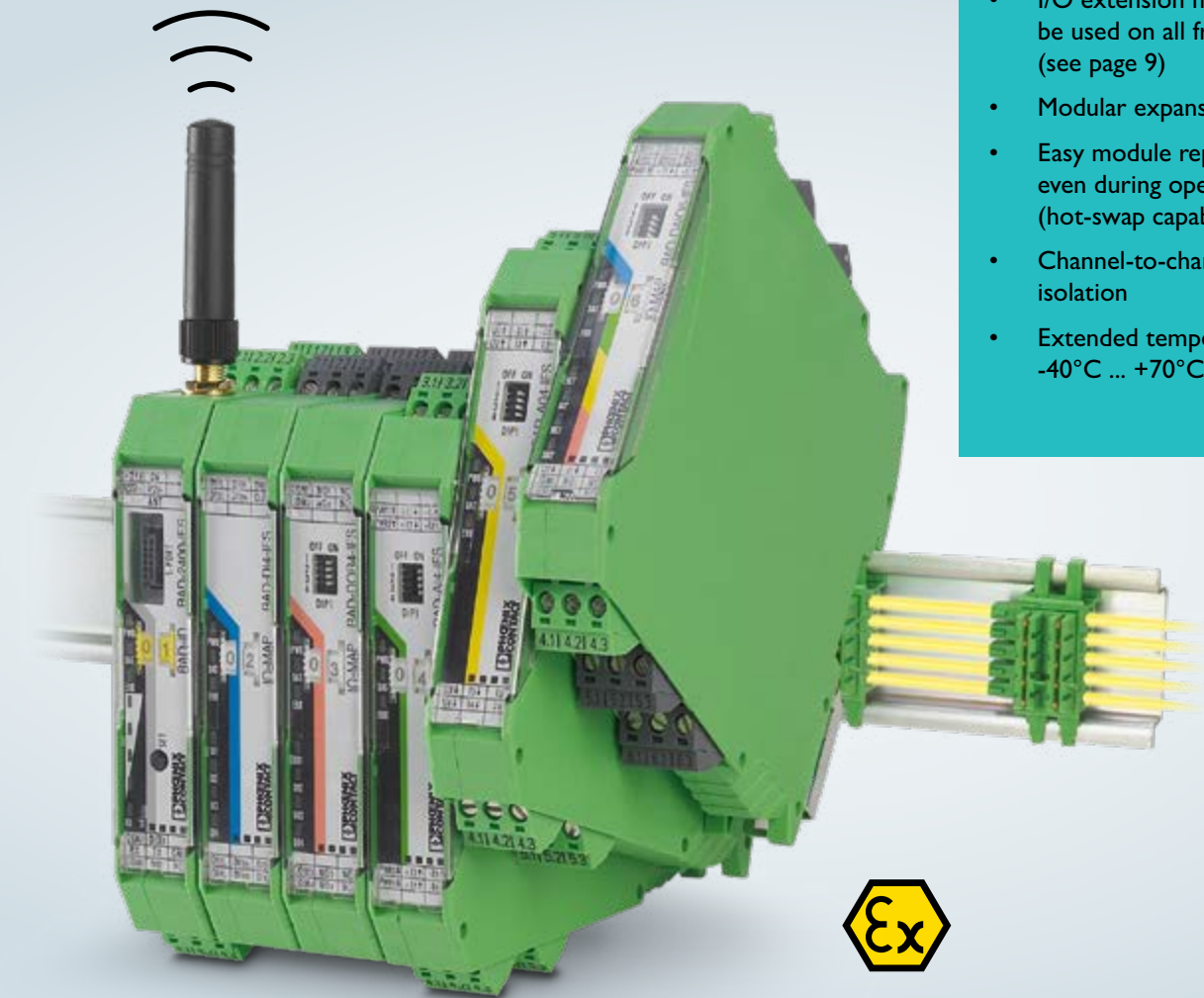
Wireless I/O

Radioline extension modules

Various extension modules are available for extending the Radioline wireless system quickly and easily. They allow the transmission of digital and analog signals as well as temperature signals.

All extension modules are certified in accordance with 94/9/EC (ATEX) directives, and can therefore be used internationally in potentially explosive areas.

 Web code: #1927



Your advantages

- I/O extension modules can be used on all front modules (see page 9)
- Modular expansion possible
- Easy module replacement, even during operation (hot-swap capability)
- Channel-to-channel electrical isolation
- Extended temperature range: -40°C ... +70°C

Product overview: Radioline extension modules



Digital extension modules

RAD-DI4-IFS Order No. 2901535

- 4 digital wide-range inputs: 0 V AC/DC ... 250 V AC/DC

RAD-DOR4-IFS Order No. 2901536

- 4 digital relay outputs: 24 V DC/250 V AC/5 A

RAD-DI8-IFS Order No. 2901539

- 8 digital inputs: 0 V DC ... 30.5 V DC
- 2 pulse inputs: 100 Hz, 32 bit

RAD-DO8-IFS Order No. 2902811

- 8 digital transistor outputs: 30.5 V DC/200 mA

RAD-NAM4-IFS Order No. 2316275

- 4 digital NAMUR inputs
- Line break detection
- Short-circuit detection
- Can be combined with RAD-DO8-IFS



Analog/Pt 100 extension module

RAD-AI4-IFS Order No. 2901537

- 4 analog inputs: alternatively 0/4 ... 20 mA

RAD-AI4-U-IFS Order No. 2702290

- 4 analog inputs: 0 ... 5/10 V

RAD-AO4-IFS Order No. 2901538

- 4 analog outputs: alternatively 0/4 ... 20 mA, 0 ... 10 V DC

RAD-PT100-4-IFS Order No. 2904035

- 4 Pt 100 inputs
- Temperature measuring range: -50°C ... +250°C
- 2-/3-conductor connection
- Can be combined with RAD-AO4-IFS



Analog/digital extension module

RAD-DAIO6-IFS Order No. 2901533

- 1 analog input: alternatively 0/4 ... 20 mA
- 1 analog output: alternatively 0/4 ... 20 mA, 0 ... 10 V DC
- 2 digital wide-range inputs/outputs: 0 ... 250 V AC/DC



Easy installation

Create a modular wireless station in the control cabinet and extend or replace it easily during operation.



Unique addresses for front modules

Set a unique address on the front module by simply turning the thumbwheel.



Distribute inputs and outputs

On the I/O module, the thumbwheel is used to assign the inputs and outputs by creating pairs, thereby easily distributing the I/O signals in the system (I/O mapping).

Wireless serial

Radioline for wireless networking of serial interfaces

The wireless module can be used to wirelessly network multiple controllers or serial I/O devices quickly and easily via RS-232 and RS-485 serial interfaces. Data transmission is transparent, which means that any protocols, such as Modbus, can be forwarded. Furthermore, various network structures can be realized: from a simple point-to-point connection all the way to complex mesh networks.

 Web code: #2797



Your advantages

- Quick and easy startup
- Easy point-to-point or network connections (star, mesh)
- Can be extended with up to 32 I/O modules per station via DIN rail connector (hot-swap capability)
- I/O-to-I/O, I/O-to-serial, serial-to-serial
- Trusted Wireless 2.0 technology
- Adjustable data rates for the wireless interface (16 kbps ... 500 kbps)
- 128-bit data encryption (AES)



Product overview: Radioline



Wireless module

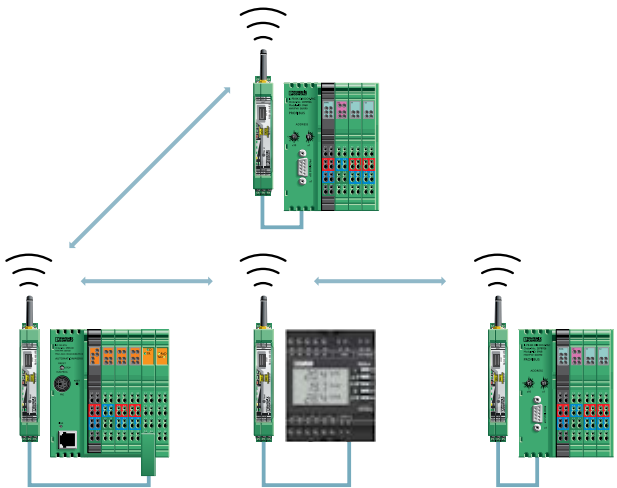
RAD-900-IFS (Canada, North/South America)
Order No. 2901540
RAD-2400-IFS (worldwide)
Order No. 2901541
Integrated RS-232 and RS-485 interface

- Can be extended with I/O modules via DIN rail connectors
- Extended temperature range: -40°C ... +70°C

Replacement for serial cabling

Connect your controller to serial field devices using wireless technology. The remote stations are connected directly or via repeater intermediate stations. This means that you can connect up to 250 repeater stations in series

in order to extend the wireless path. Serial I/O devices and I/O extension modules can be connected to the intermediate stations.



Wireless networking of serial devices

Convenient software diagnostics

All network devices can be monitored conveniently via the base station.

- Online diagnostics:
Network structure design, signal quality of each network station (RSSI), recording of RSSI signal and I/O status of each networked station
- Exclusion of up to two frequency bands (WLAN channels)
- Extended network settings



Comprehensive diagnostics

Wireless Ethernet

NearFi couplers

NearFi technology further extends the Phoenix Contact wireless portfolio. It transmits power and real-time Ethernet data contactlessly, and therefore allows completely new latency-free communication capabilities in the close-proximity range of up to 10 mm. The new NearFi couplers reduce costs resulting from failures and are a simple replacement for connections subject to wear, including slip rings in industrial applications.

 Web code: #2794



NearFi Technology 
Designed by Phoenix Contact

Your advantages

- Contactless – no wear, no maintenance
- Protocol-independent, latency-free real-time communication with 100 Mbps (full duplex)
- High power in a compact housing
- High degree of mounting freedom with flexible proximity options
- All-around visible diagnostics with LED ring on the housing

Product overview: NearFi couplers



Power and data couplers

NEARFI PD 2A ETH B Order No. [1234224](#)
Base

NEARFI PD 2A ETH R Order No. [1234225](#)
Remote

- Power up to 50 W (24 V/2 A)
- Data speed up to 100 Mbps (full duplex)

Power couplers

NEARFI P 2A B Order No. [1234226](#)
Base

NEARFI P 2A R Order No. [1234229](#)
Remote

- Power up to 50 W (24 V/2 A)

Data couplers

NEARFI D ETH B Order No. [1234232](#)
Base

NEARFI D ETH R Order No. [1234234](#)
Remote

- Data speed up to 100 Mbps (full duplex)

NearFi couplers in an application

In industrial automation, power and data are often transmitted via connectors. Wherever connectors are connected and disconnected frequently, for example during tool changes on robots, connector service life is limited because contacts can become soiled or warped. The new NearFi power and data couplers in

an IP65 housing with M12 connection technology make wear-free and maintenance-free communication without contact possible across air gaps of up to 10 mm.



Possible areas of application

The main fields of application for the new NearFi power and data couplers are in the following industries:

- Automotive industry
- Machine building and systems manufacturing
- Industrial robots
- Logistics



NearFi technology in the automotive industry

Wireless Ethernet

Industrial Bluetooth

The industrial Bluetooth modules allow you to wirelessly transmit control data to mobile or difficult-to-access automation devices quickly and easily. Bluetooth communication is characterized by particularly robust transmission under difficult ambient conditions.

The FL EPA 2 wireless modules allow you to transmit industrial protocols such as PROFINET without any problems. You can also realize functionally safe communication, via PROFIsafe or SafetyBridge Technology.

 Web code: #2795



SafetyBridge Technology 
Designed by Phoenix Contact

Your advantages

- Easy and secure installation
- Extremely reliable and robust data transmission with redundant transmission channels and integrated error correction
- Interference-free parallel operation between Bluetooth and WLAN wireless paths with the efficient use of frequency gaps

Product overview: Industrial Bluetooth



Bluetooth Ethernet adapter

FL BT EPA 2 Order No. [1005869](#)

- Internal antenna
- Bluetooth (PAN profile)



Wireless Ethernet adapter

FL EPA 2 Order No. [1005955](#)

- Internal antenna
- Bluetooth (PAN profile)
- WLAN 80211 a/b/g/n (access point and client)



Wireless Ethernet adapter

FL EPA 2 RSMA Order No. [1005957](#)

- External, replaceable antenna (supplied, connection: RSMA (male))
- Bluetooth (PAN profile)
- WLAN 80211 a/b/g/n (access point and client)

Technical data:

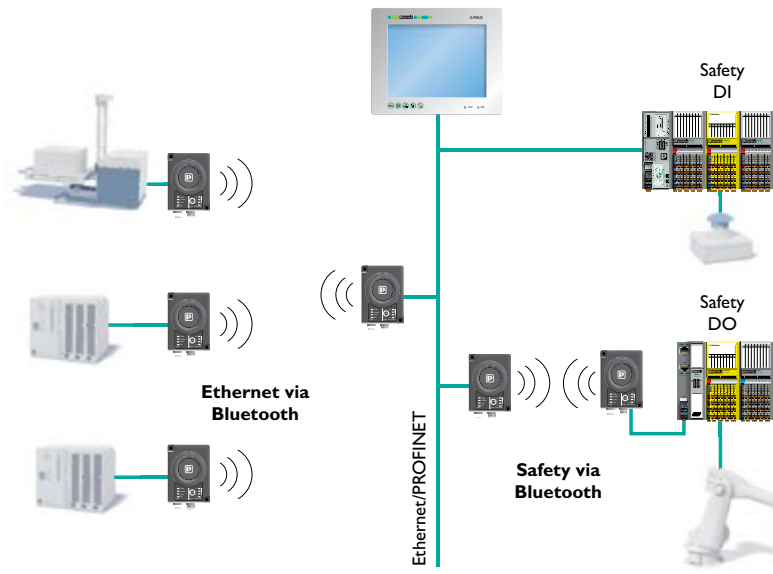
- Frequency band: 2.4 GHz/5 GHz
- 128-bit data encryption, WLAN black channel list, low emission mode (LEM)
- Degree of protection IP65
- M12 connections for power and LAN
- Auto crossing, PROFINET prioritization, LLDP
- Power supply: 9 V DC ... 30 V DC
- Temperature range: -40°C ... +65°C
- UL/cUL Class 1 Div 2 Hazardous location

- Configuration via MODE button, web interface, SNMP and AT commands
- Accessories: Assembly adapter ([2701134](#)), DIN rail adapter ([2701133](#))

Bluetooth applications

The Bluetooth BT EPA 2 modules replace individual Ethernet or PROFINET cables leading to automation devices with a reliable wireless connection.

They allow up to seven Bluetooth modules to be connected to the Ethernet network at the same time.



Possible areas of application

Bluetooth allows mobile devices to be integrated into industrial control networks wirelessly, thereby eliminating the need for expensive cable runs that are prone to wear.

- Robots and traveling robots
- Handling machines, packaging machines, pallet wrapping machines
- Moving machine parts
- Cranes and lifting equipment



Industrial Bluetooth on cranes

Wireless Ethernet

Industrial WLAN

Use industrial WLAN components for wireless machine access with smart devices or as robust communication with mobile machine parts. Industrial wireless systems also provide more flexibility and efficiency for reliable communication between the controller and autonomous transport systems, warehouse shuttles, or carry systems.

The industrial WLAN components support you with the implementation of high-performance and modern MIMO technology.

 Web code: #1532

Your advantages

- Easy and reliable creation of industrial WLAN networks
- Particularly secure with the latest security standards and encryption
- Ideal for networks with a large number of devices
- Maximum mobility with fast roaming functions
- Suitable for time-critical applications such as PROFINET or safety



Product overview: Industrial WLAN



WLAN 110x/210x

IP54:
FL WLAN 1100 (EU) Order No. 2702534
FL WLAN 1101 (USA, CAN) Order No. 2702538

IP65/IP66/IP67/IP68, extended temperature range:
FL WLAN 2100 (EU) Order No. 2702535
FL WLAN 2101 (USA, CAN) Order No. 2702540

WLAN 101x/201x

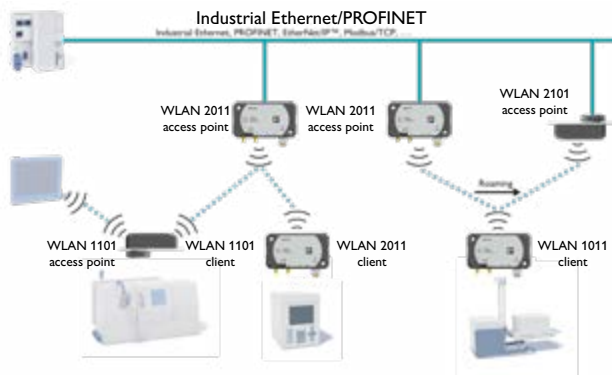
FL WLAN 1010 (EU) Order No. 2702899
FL WLAN 1011 (USA, CAN) Order No. 2702900
FL WLAN 2010 (EU) Order No. 1119246
FL WLAN 2011 (USA, CAN) Order No. 1119248

FL RMS 20 (din rail adapter) Order No. 1178237

- IEEE 802.11 a/b/g/n, WLAN access point and client, frequency band: 2.4 GHz and 5 GHz, 2 integrated antennas with MIMO technology, power supply: 9 ... 32 V DC, WLAN mesh with WLAN 210x
- Degree of protection: IP20
- 2 external antenna connections
- 2 virtual WLAN interfaces
- MAC and IP filter
- IEEE 802.11 a,b,g,n (2.4 GHz and 5 GHz)
- Data rates of up to 300 Mbps
- WLAN Mesh with WLAN 201x

Typical WLAN network structure

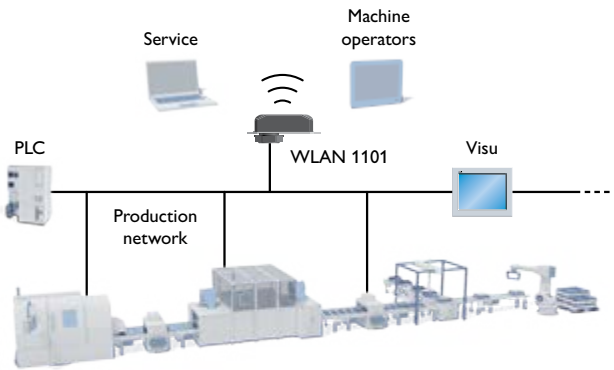
The WLAN 2011 and the compact 1101 are the perfect complements for wireless communication in the machine environment.



Wireless machine communication with industrial WLAN

Connecting smart devices

The WLAN 1101 facilitates easy connection of smart devices to machines and systems.



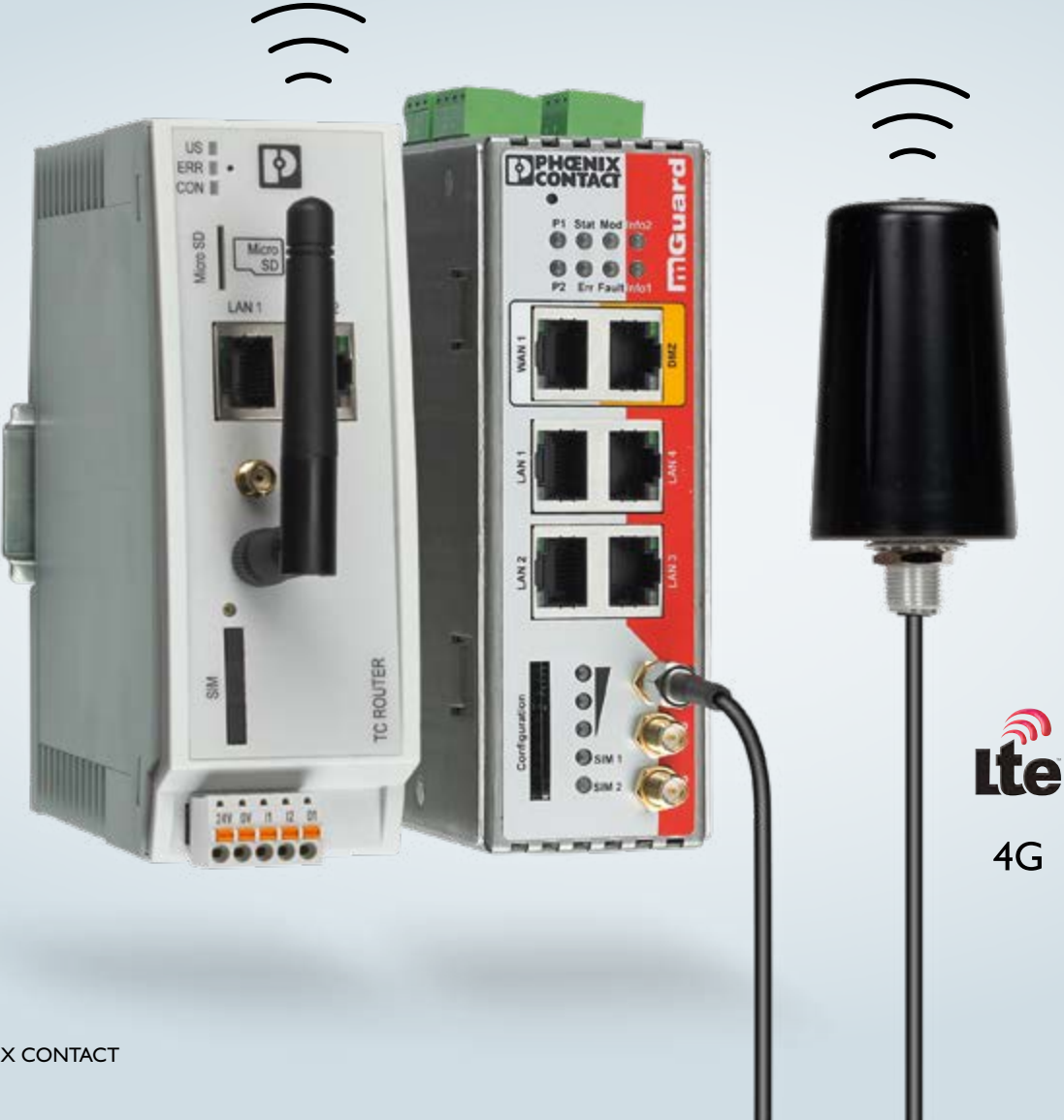
Wireless machine operation and service with wireless LAN

Wireless Ethernet

Cellular routers and remote maintenance gateways for worldwide network access

A cellular router uses the existing 3G, 4G, or 5G cellular infrastructure to provide connectivity to industrial Ethernet networks, allowing data communication between devices, machines, applications, and even cloud services. The integrated firewall and support for the VPN (Virtual Private Network) protects against unauthorized access while transmitting sensitive data securely through the Internet.

Web code: #0499



Product overview: 4G cellular routers and remote support gateways



Infrastructure cellular routers

TC ROUTER...	
... 2002T-4G	Order No. 2702530
... 3002T-4G	Order No. 2702528
... 3002T-4G VZW	Order No. 2702532
... 3002T-4G ATT	Order No. 2702533
... 4002T-4G EU*	Order No. 1234352
... 4102T-4G EU WLAN*	Order No. 1234353
... 4202T-4G EU WLAN*	Order No. 1234354

- Alerts via SMS and e-mail
- Support for IPsec and OpenVPN (TC ROUTER 3002T and 4002T)
- Temperature range: -40°C ... +70°C

Remote maintenance gateways

CLOUD CLIENT...	
... 1002-4G	Order No. 2702886
... 1002-4G VZW	Order No. 2702887
... 1002-4G ATT	Order No. 2702888
... 2002T-4G EU*	Order No. 1234355
... 2102T-4G EU WLAN*	Order No. 1234357
... 2002T-WLAN	Order No. 1234360
... 1101T-TX/TX	Order No. 1221706

- Turnkey VPN tunnel with configuration assistant for the [mGuard Secure Remote Service](#)
- Connection for key switch

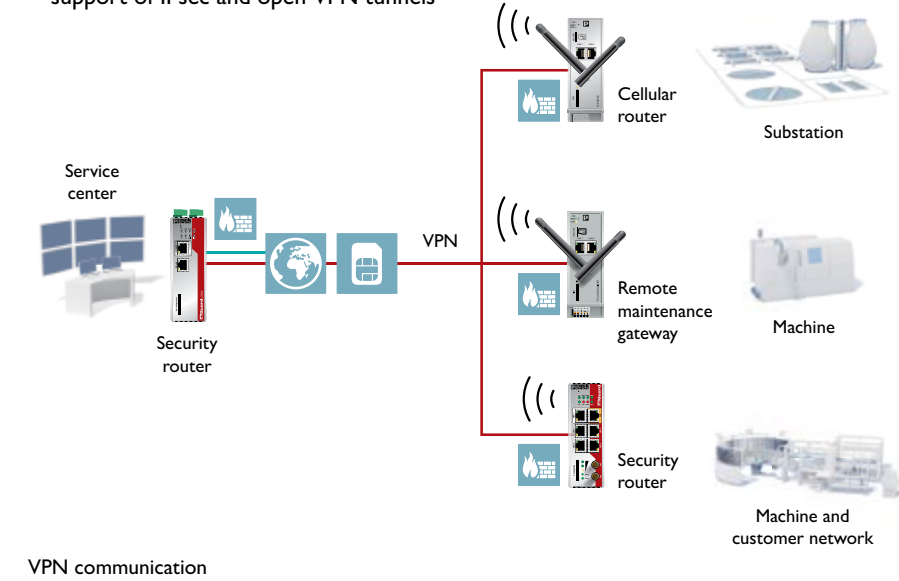
Security routers 4G (LTE)

TC MGuard...	
... RS4000 4G VPN*	Order No. 2903586
... RS2000 4G VPN*	Order No. 2903588
... RS4000 4G VZW VPN	Order No. 1010461
... RS2000 4G VZW VPN	Order No. 1010462
... RS4000 4G ATT VPN	Order No. 1010463
... RS2000 4G ATT VPN	Order No. 1010464

- Central management with the MDM tool
- Easy local connections with the integrated Ethernet switch
- Compatible with [mGuard Secure Remote Service](#)

Data communications

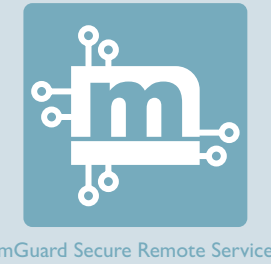
- Access the Internet and send industrial data anywhere in the world via the cellular infrastructure
- Flexible use in small machines all the way to larger system networks
- Secure VPN communications with the support of IPsec and open VPN tunnels



Easy troubleshooting and support via the cloud

The mGuard Secure Remote Service easily connects support personnel to industrial equipment via the Internet, no matter the location, while protecting the user and machine data with the usage of encrypted VPN tunnels.

Through a simple web interface, the users can remotely connect to their machines to provide analysis, support, maintenance, troubleshoot, and even control the process. Additionally, secure remote maintenance can be provided from anywhere in the world at any time, without requiring specific IT knowledge.



* The EU marks indicate that these products can be purchased in the US for equipment that will be shipped to Europe.

Antennas					
900 MHz					
	Omnidirectional antenna	2 dBi	RSMA (male) With 1.5 m cable	Temperature range: -40°C ... +80°C, degree of protection: IP65, including mounting bracket	2904801
	Omnidirectional antenna	2 dBi	N (female)		2904802
	Omnidirectional antenna	5 dBi	N (female)		2867791
	Omnidirectional antenna	7 dBi	N (female)		2867199
	Yagi directional antenna	5 dBi	N (female) With 0.6 m cable		2867801
	Yagi directional antenna	8.5 dBi	N (female) With 0.6 m cable		2867814
	Yagi directional antenna	12 dBi	N (female) With 0.6 m cable		5606614
2.4 GHz					
	Omnidirectional antenna	2 dBi	RSMA (male) With 1.5 m cable	Temperature range: -40°C ... +70°C, degree of protection: min. IP65, including mounting bracket	2701362
	Omnidirectional antenna, vandalism proof	3 dBi	RSMA (male) With 1.5 m cable		2701358
	Bracket for wall mounting	–	For antennas with protection against vandalism		2885870
	Omnidirectional antenna, saltwater resistant 	6 dBi	N (female)		2885919
5 GHz					
	Omnidirectional antenna	5 dBi	N (female)	Temperature range: -40°C ... +70°C, degree of protection: min. IP65, including mounting bracket	2701347
2.4 GHz and 5 GHz					
	Omnidirectional antenna	2.5 dBi at 2.4 GHz 5 dBi at 5 GHz	N (male)	Temperature range: -40°C ... +70°C, degree of protection: min. IP65	2701408
	Omnidirectional antenna, vandalism proof	Up to 6 dBi at 2.4 GHz Up to 8 dBi at 5.6 GHz	N (female)		2702898
	Directional antenna for panel, saltwater-resistant 	9 dBi	N (female)		2701186
	Omnidirectional antenna	2 dBi at 2.4 GHz 2 dBi at 5 GHz	RSMA (male)		1284777
	Omnidirectional antenna	2 dBi at 2.4 GHz 2 dBi at 5 GHz	N (male)		1284780
RTU ready					
	Pre-wired NEMA enclosure including power supply, power distribution, power and antenna surge suppression. Two box sizes available.	RTU Ready 161408	16 in. x 14 in. x 8 in.	1094594	
		RTU Ready 181610	18 in. x 16 in. x 10 in.	1094595	
	Pre-wired NEMA enclosure including power supply and UPS, power distribution, power and antenna surge suppression. Two box sizes available.	RTU Ready UPS 161408	16 in. x 14 in. x 8 in.	1094596	
		RTU Ready UPS 181610	18 in. x 16 in. x 10 in.	1068258	
	Pre-wired NEMA enclosure including power supply and UPS, power distribution, power and antenna surge suppression. Two box sizes available. All components have Class I Division 2 certification.	RTU Ready EX UPS 161408	16 in. x 14 in. x 8 in.	1100665	
		RTU Ready EX UPS 181610	18 in. x 16 in. x 10 in.	1100666	

Antenna cable					
N (male) > N (male)					
	Description	Frequency		Order No.	
	10 ft	0-6 GHz		5606124	
	20 ft	0-6 GHz		5606125	
	25 ft	0-6 GHz		5606126	
	40 ft	900 MHz		2867377	
	50 ft	900 MHz		2867225	
	60 ft	900 MHz		2867380	
	80 ft	900 MHz		2867393	
	100 ft	900 MHz		2867238	
	125 ft	900 MHz		2885171	
RSMA (male) > N (male)					
	0.5 m	0.3 ... 6 GHz For the control cabinet feed-through		2701402	
	0.5 m	0.3 GHz ... 6 GHz		2903263	
	1 m	0.3 GHz ... 6 GHz		2903264	
	2 m	0.3 GHz ... 6 GHz		2903265	
	3 m	0.3 GHz ... 6 GHz		2903266	
	5 m	0.3 GHz ... 6 GHz		2702140	
Accessories					
Adapters and antenna splitters					
	Description	Frequency	Connection	Features	Order No.
	Adapter	0.3 GHz ... 6 GHz	N (female) > N (female)	For the control cabinet feed-through	2867843
	Adapter, 90° angled	0.3 GHz ... 6 GHz	RSMA (male) > RSMA (female)	For control cabinets with little room	2904790
	Antenna splitter	0.3 GHz ... 6 GHz	3 x N (female)	2-way splitter	2702293
	DIN rail adapter	–	–	DIN rail mounting, WLAN 101x/201x	1178237
Surge protection					
	Surge protection	900 MHz	N (female) > N (female)	For the control cabinet feed-through	2803166
			N(male) > N(female)		2803153
	Surge protection, with Lambda/4 technology	2.4 GHz 5 GHz	N (female) > N (female)	For the control cabinet feed-through	2838490

Product overview for antennas and accessories

Accessories				
Leaky wave cables (LCX)				
	Description	Features		Order No.
	Leaky wave cable 2.4 GHz	Longitudinal loss: 14.7 dB/100 m, coupling attenuation 95%: 60 dB, temperature range: -40°C ... +85°C		2702553
	Leaky wave cable 5 GHz	Longitudinal loss: 19.1 dB/100 m, coupling attenuation 95%: 71 dB, temperature range: -40°C ... +85°C		2702860
	Assembly tool	Planning tool for precise mounting of the connectors on the leaky wave cable		2702519
	Connector	Connector for leaky wave cable N (female)		2702518
	Cable tie	Mounting clamp for securing the leaky wave cable		2702520
	Termination resistor	N (male) required for capping the open leaky wave cable end		2884978
	Termination resistor	RSMA (male) for capping the open antenna port of the WLAN APs		2702702
Antenna impeding device for the Ex area				
	Description	Connection	Features	Order No.
	N connector, double-sided, 0.7 ... 6 GHz 	N (female) > N (female)	Installation in Ex zone 2, installation of standard antennas in zones 0, 1, 2	2702198

Cellular communication accessories					
Omnidirectional antennas					
	Description	Technology	Connection	Features	Order No.
	Omnidirectional antenna	2G/3G/4G/5G	5 m antenna cable, with SMA circular connector	For wall or mast mounting	2702273
	Omnidirectional antenna	2G/3G/4G/5G	0.5 m antenna cable, with SMA circular connector	For wall or mast mounting	2702274
Antenna cable					
	Description	Attenuation	Connection	Features	Order No.
	5 m	0.23 dB/m ... 0.44 dB/m	SMA (male) > SMA (female)	Impedance: 50 Ω	2900980
	10 m				2900981

Cellular communication accessories				
Angle adapter				
	Description	Connection	Features	Order No.
	90° adapter	SMA (female) > SMA (male)	For connecting the GSM/UMTS antenna cable where space is restricted	2917324
Surge protection set				
	Description	Connection	Features	Order No.
	Intermediate plug	SMA connectors/socket	With Lambda/4 technology as surge protection for coaxial signal interfaces	2800491
Sealing tape				
	Description	Features		Order No.
	3 m	Self-vulcanizing for external protection of adapters, splitters, or cable connections; watertight		2903182

Control box sets				
For outdoor mounting				
	Description	Features	Property	Order No.
	Set for constructing wireless systems	For industrial applications, IP65, with DIN rail, plugs, and screw connections, without devices	With omnidirectional antennas	1088098
			With omnidir. antennas and power supply unit	1088095
			With omnidirectional antennas and PoE splitter	1088097
			Without antenna accessories	2701204

Radioline accessories					
Configuration memory, memory stick, and USB cable					
	Description	Connection	Frequency	Features	Order No.
	Configuration memory RF band 3	S-PORT	2.4 GHz	For easy and secure network addressing with unique network ID	2902814
	Configuration memory RF band 5	S-PORT	2.4 GHz		2902815
	Configuration memory RF band 7	S-PORT	2.4 GHz		2902816
	Configuration memory RF band 1	S-PORT	900 MHz		2702122
	Flash drive	S-PORT	For all Radioline front modules	Freely configurable	2902828
	USB cable	USB/S-PORT	For all Radioline front modules	For diagnostics and configuration	2903447

Wireless technology for today's industrial challenges

Phoenix Contact is a leading global provider of industrial wireless solutions. Our 12+ years of experience in providing industrial data and I/O communication products, combined with the most robust, reliable, and advanced wireless technologies available, translates to wireless success in the harshest of industrial applications. Today, with more than 50,000 installed units, Phoenix Contact's wireless products provide dependability and security while monitoring and controlling signals such as level, temperature, frequency, and digital alarms.

Whether relaying serial data, I/O data, fieldbus, or Ethernet communications, Phoenix Contact offers the ideal solution for every application, utilizing technologies ranging from Bluetooth to WLAN, cellular, or proprietary Trusted Wireless. Additionally, our award-winning technical support is available 24/7 to assist with product selection, RF surveys, start-up assistance, and system troubleshooting to ensure that your wireless connections are always as strong as wire!

- STEP 1

Determining your technology

Use the application criteria and the distance over which the wireless system must communicate to determine the best Phoenix Contact wireless technology.
- STEP 2

Determining the right product

Locate the technology found in Step 1 and select a radio within the technology group that is best suited for your application.
- STEP 3

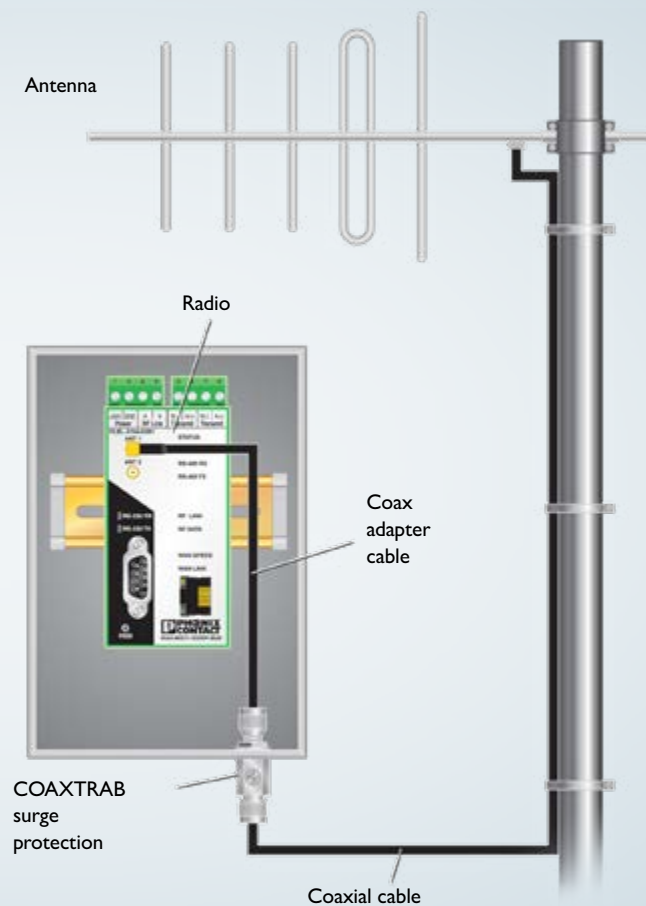
Determining the accessories

Select the appropriate adapter cables, antenna surge protection, antenna cables, and antennas for the distance that the system must communicate.
- STEP 4

System planning

Using the selected products, create a system and a diagram, and define system topology.

Note: When selecting parts for a radio system, be sure to select an antenna for all locations.



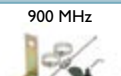
STEP 1		Determining your technology						
Typical applications		0' - 300'	1000' - 3000'	3000' - 1 mile	1 - 2 miles	2 - 5 miles	5 - 8 miles	Around the World
Max distance clear LOS		1000'	1 mile	2 miles	15 miles	20 miles	40 miles	
Minor obstructions		150'	500'	1000'	1.5 mile	3 miles	7 miles	
Heavy obstructions		100'	250'	500'	1 miles	2 miles	5 miles	
Application								
I/O to I/O	Bluetooth I/O							
	Radioline 900 MHz							
	Radioline 2.4 GHz							
I/O to BUS System	Bluetooth Data							
	Radioline 2.4 GHz							
	WLAN							
Low data (data concentration) – <9.6 kbps Example: PLC to PLC I/O collection	Radioline 900 MHz							
	Bluetooth Data							
	Radioline 2.4 GHz							
	WLAN							
Medium data – <500 kbps Example: PLC to PLC communications and programming	Radioline 900 MHz							
	LTE (Cellular)							
	Bluetooth Data							
Heavy data – <54 Mbps Example: video surveillance	WLAN							
	LTE (Cellular)							
	Bluetooth Data							

Technologies

Radioline 900 MHz/ 2.4 GHz	WLAN	Cellular	Bluetooth
Radioline uses Trusted Wireless FHSS technology, which provides a high degree of reliability and security. It is designed to communicate simple I/O and serial data reliably over long distances in noisy environments. Radioline is available in 900 MHz and 2.4 GHz in the USA.	WLAN uses the IEEE 802.11 (Wi-Fi) public standard for high-speed connections that increases productivity, heightens safety, and lowers cabling costs. The 802.11 standard operates in the 2.4 GHz and 5 GHz license-free ISM bands and utilizes the highest level of security, WPA2.	LTE cellular technology is used to send data over the cellular network. Cellular is a great medium for applications where panels are located in remote locations. Cellular takes advantage of infrastructure built by carriers to provide access to processes traditionally incommunicable.	Bluetooth (IEEE 802.15.1) is a standardized wireless technology capable of high-speed serial and I/O communications. Following the frequency-hopping spread-spectrum method (FHSS) in the 2.4 GHz ISM band, Bluetooth has high transmission reliability. It is suitable for worldwide use in applications where cable-based circuits are too costly to install or to change.
Note: Distances are intended as an achievable guideline with minimal RF path engineering and design required.			

STEP 2-3

Radioline

STEP 2 Determining the right product		Part number	Description	Product details			
		2901540	RAD-900-IFS	Radio module for 900 MHz communication with expandable I/O BUS, RS-MA(f) connection			
		2702877	RAD-900-DAIO6	Radio module for 900 MHz communication with onboard I/O. Antenna included for up to 1,000 ft communication, N(f) antenna connection			
		2901541	RAD-2400-IFS	Radio module for 2.4 GHz communication with expandable I/O BUS, RS-MA(f) connection			
		2902828	RAD-Memory	900 MHz/2.4 GHz – CONFSTICK – blank			
		2702122	RAD-900-CONF-RF1	900 MHz RF band 1 CONFSTICK			
		2902814	RAD-CONF-RF3	2.4 GHz RF band 3 CONFSTICK			
	2903447	RAD-CABLE-USB	Programming cable				
	Expansion I/O modules	Part number	Description	Product details			
		2901533	RAD-DAIO6-IFS	2-channel digital in/out, 1 channel analog in/out			
2901537		RAD-AI4-IFS	4-channel current analog input				
2702290		RAD-AI4-U-IFS	4-channel voltage analog input				
2901538		RAD-AO4-IFS	4-channel analog output				
2901535		RAD-DI4-IFS	4-channel digital input				
2901536		RAD-DOR4-IFS	4-channel digital (relay) output				
2901539		RAD-DI8-IFS	8-channel digital input				
2902811		RAD-DO8-IFS	8-channel transistor output				
2316275		RAD-NAM4-IFS	4-channel NAMR input				
2904035	RAD-PT100-4-IFS	4-channel PT100 input					
STEP 3 Determining the right accessories	Adapter cables	Part number	Description	Product details			
		2903263	RAD-PIG-RSMA/N-0.5	0.5 meter RSMA(m) to N(m) adapter cable			
		2903264	RAD-PIG-RSMA/N-1	1.0 meter RSMA(m) to N(m) adapter cable			
		2903265	RAD-PIG-RSMA/N-2	2.0 meter RSMA(m) to N(m) adapter cable			
	Surge arresters	Part number	Description	Product details			
		2803166	CN-UB-70DC-6-BB	Antenna surge protection for 0 – 6 GHz N(f)-N(f)			
		2803153	CN-UB-70DC-6-SB	Antenna surge protection for 0 – 6 GHz N(m)-N(f) Use when adding antenna cable to 2702877			
	Antenna cables	Part number	Description	Length	Connector type	Cable loss	
						900 MHz	2.4 GHz
		5606124	RAD-CAB-PFP240-10	10 feet	N(m)-N(m)	0.8 dB	1.3 dB
5606125		RAD-CAB-PFP400-20	20 feet	N(m)-N(m)	0.8 dB	1.3 dB	
	5606126	RAD-CAB-PFP500-25	25 feet	N(m)-N(m)	0.8 dB	1.4 dB	
	2867380	RAD-CAB-PFP400-60	60 feet	N(m)-N(m)	2.4 dB		
	2867393	RAD-CAB-PFP400-80	80 feet	N(m)-N(m)	3.1 dB		
	2867238	RAD-CAB-PFP400-100	100 feet	N(m)-N(m)	3.9 dB		
	2885171	RAD-CAB-PFP600-125	125 feet	N(m)-N(m)	3.2 dB		
	2885184	RAD-CAB-PFP600-150	150 feet	N(m)-N(m)	3.8 dB		
Determining the right antennas	Antennas	Access point					
		900 MHz	Part number	Description	Distance	Connector type	Gain
		2904801	RAD-900-ANT-OMNI-2-2-RSMA	< 0.5 mile	RPSMA(m)	2 dBi	
		2904802	RAD-900 ANT-OMNI-2-N	< 0.5 mile	N(f)	2 dBi	
		2867199	RAD-ISM-900-ANT-OMNI-5	3 miles	N(f)	7 dBi	
		2885579	RAD-ISM-900-ANT-OMNI-FG-6-N	> 5 miles	N(f)	8 dBi	
		2.4 GHz	Part number	Description	Distance	Connector type	Gain
		2701362	RAD-ISM-2400-ANT-OMNI-2-1-RSMA	< 1,500 feet	RPSMA(m)	2 dBi	
		2885919	RAD-ISM-2400-ANT-OMNI-6-0	< 3,000 feet	N(f)	6 dBi	
		2867623	RAD-ISM-2400-ANT-OMNI-9-0	> 1 mile	N(f)	9 dBi	
Determining the right antennas		900 MHz	Remote				
			Part number	Description	Distance	Connector type	Gain
			2904801	RAD-900-ANT-OMNI-2-2-RSMA	< 0.5 mile	RPSMA(m)	2 dBi
			2904802	RAD-900 ANT-OMNI-2-N	< 0.5 mile	N(f)	2 dBi
			2867801	RAD-ISM-900-ANT-YAGI-3-N	3 miles	N(f)	5 dBi
			2867814	RAD-ISM-900-ANT-YAGI-6.5-N	5 miles	N(f)	8.5 dBi
			5606614	RAD-ISM-900-ANT-YAGI-10-N	> 10 miles	N(f)	12 dBi
		2.4 GHz	Part number	Description	Distance	Connector type	Gain
		2701362	RAD-ISM-2400-ANT-OMNI-2-1-RSMA	< 1,500 feet	RPSMA(m)	2 dBi	
		2701186	ANT-DIR-2459-01	> 1 mile	N(f)	9 dBi	

For more accessory options, please visit: www.phoenixcontact.com/wireless
For help selecting accessories, please contact technical service at 800-322-3225.

STEP 2-3

WLAN

STEP 2 Determining the right product		2702900	FL WLAN 1011	100 mW, 802.11 a/b/g/n radio, up to 300 Mbps, 24 V DC; dual external antennae		Access point, repeater, client	
		1119248	FL WLAN 2011	100 mW, 802.11 a/b/g/n radio, up to 300 Mbps, 24 V DC; dual external antennae		Access point, repeater, client	
		2702538	FL WLAN 1101	100 mW, 802.11 a/b/g/n radio, up to 300 Mbps, 24 V DC; dual internal antennas, IP54 housing		Access point, repeater, client	
		2702540	FL WLAN 2101	100 mW, 802.11 a/b/g/n radio, up to 300 Mbps, 24 V DC; dual internal antennas, IP68 housing		Access point, repeater, client	
		1005955	FL EPA 2	100 mW, 802.11 a/b/g radio, up to 54 Mbps, 24 V DC; single internal antenna, IP65 housing, M12 data and power connectors		Access point, repeater, client	
		1005957	FL EPA 2 RSMA	100 mW, 802.11 a/b/g radio, up to 54 Mbps, 24 V DC; single included external antenna, IP65 housing, M12 data and power connectors		Access point, repeater, client	
		STEP 3 Determining the right accessories	Adapter cables	Part number	Description	Product details	
	2903263		RAD-PIG-RSMA/N-0.5	0.5 meter RSMA(m) to N(m) adapter cable			
	2903264		RAD-PIG-RSMA/N-1	1.0 meter RSMA(m) to N(m) adapter cable			
	2903265		RAD-PIG-RSMA/N-2	2.0 meter RSMA(m) to N(m) adapter cable			
	2903266		RAD-PIG-RSMA/N-3	3.0 meter RSMA(m) to N(m) adapter cable			
Surge arresters	Part number		Description	Product details			
	2838490		CN-LAMBDA/4-5.9-BB	Antenna surge protection for 2.4 – 5.9 GHz; N(f)-N(f)			
	2800023		CN-LAMBDA/4-5.9-SB	Antenna surge protection for 2.4 – 5.9 GHz; N(m)-N(f)			
Antenna cables	Part number		Description	Cable length (ft)	Connector type	Cable Loss	
						2.4 GHz	5 GHz
	5606124		RAD-CAB-PFP240-10	10	N(m)-N(m)	1.3 dB	1.9 dB
	5606125		RAD-CAB-PFP400-20	20	N(m)-N(m)	1.3 dB	2.1 dB
	5606126		RAD-CAB-PFP500-25	25	N(m)-N(m)	1.4 dB	2.1 dB
FL Rugged box	Part number		Product details				
	2701204		IP66 rated box for FL WLAN 1011/2011 radio complete with grommets and DIN rail				
	2701430		Includes three 0.5 m adapter cables and three 5 dB omni antennas				
	2701439		Includes three 0.5 m adapter cables and three 5 dB omni antennas, power supply, and terminal blocks				
	2701440		Includes one 0.5 m adapter cable and one 9 dB panel antenna, power supply, and terminal blocks				
Antennas	Access point						
	2.4 GHz radios		Part number	Description	Distance	Connector type	Gain
			2701362	RAD-ISM-2400-ANT-OMNI-2-1-RSMA	< 500 feet	RPSMA(m)	2 dBi
		2885919	RAD-ISM-2400-ANT-OMNI-6-0	0.5 mile	N(f)	6 dBi	
		2867623	RAD-ISM-2400-ANT-OMNI-9-0	1 mile	N(f)	9 dBi	
	Remote						
		Part number	Description	Distance	Connector type	Gain	
		2701362	RAD-ISM-2400-ANT-OMNI-2-1-RSMA	< 500 feet	RPSMA(m)	2 dBi	
		2701186	ANT-DIR-2459-01	1 mile	N(f)	9 dBi	
	5 GHz	Access point					
		Part number	Description	Distance	Connector type	Gain	
		2701347	ANT-OMNI-5900-01	< 0.5 mile	N(f)	5 dBi	
		Remote					
		Part number	Description	Distance	Connector type	Gain	
		2701186	ANT-DIR-2459-01	0.5 mile	N(f)	9 dBi	

STEP 2-3

Bluetooth and cellular

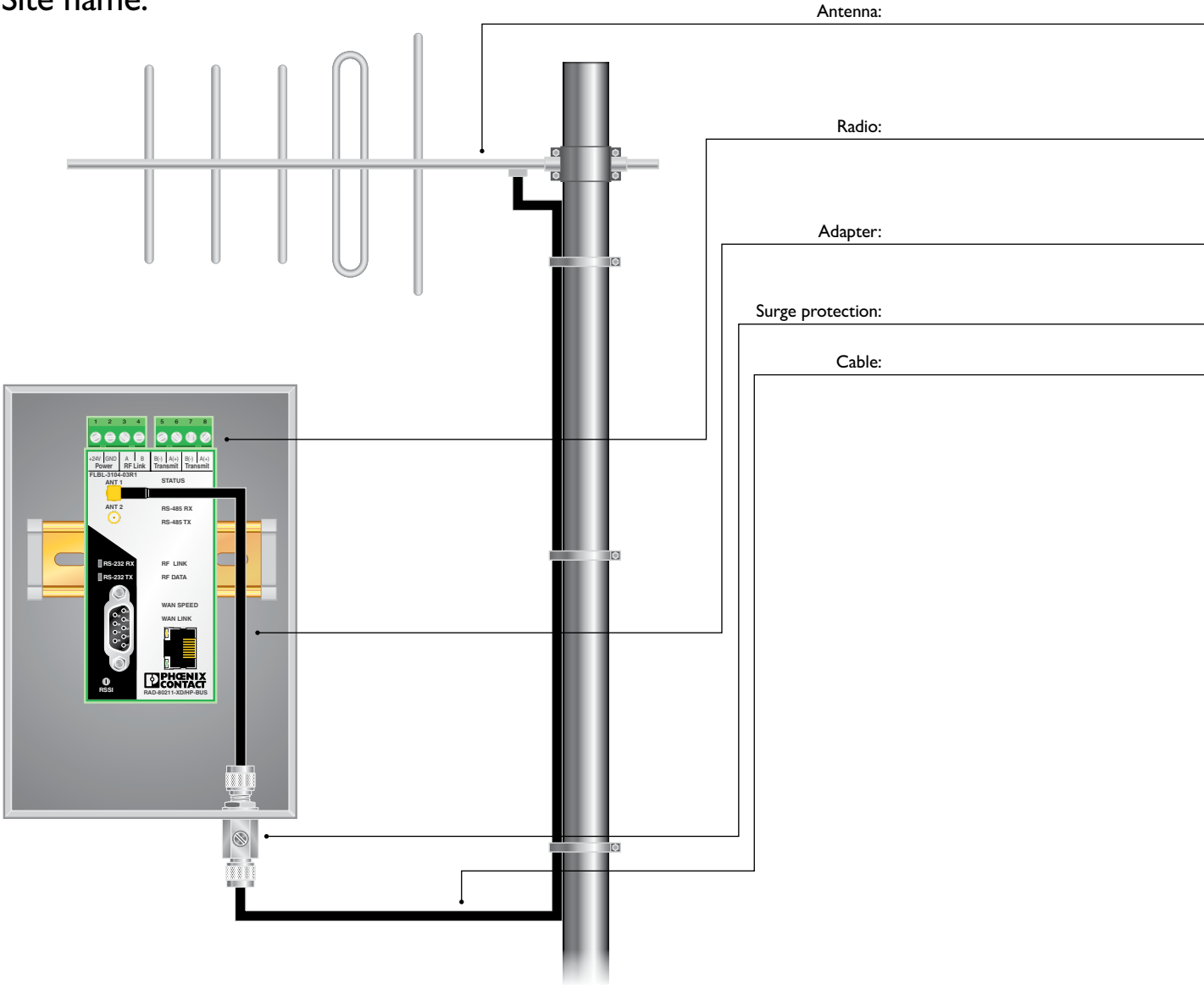
STEP 2 Determining the right product	Bluetooth radios	Part number	Description	Product details			
		2884208	ILB BT ADIO MUX-OMNI	Paired Bluetooth I/O radios, 2 dBi omnidirectional antennas (up to 650-ft transmission distance), 1.5 m antenna cable, 16 digital (In/Out) and 2 analog (In/Out)			
		2702875	ILB BT ADIO MUX	Paired Bluetooth I/O radios, no antennas, 16 digital (In/Out) and 2 analog (In/Out) Consisting of two paired modules, no antennas, RSMA (F) antenna connector			
		1005869	FL BT EPA 2	Bluetooth NAP or PANU, internal antenna, IP65 housing, supports up to 7 clients as a NAP			
	Cellular modems	Part number	Description	Product details			
		2702533	TC ROUTER 3002T-4G ATT	Basic modem functionality, data rates up to 150 Mb/s, integrated VPN and firewall, AT&T network			
		2702532	TC ROUTER 3002T-4G VZW	Basic modem functionality, data rates up to 150 Mb/s, integrated VPN and firewall, Verizon network			
		2702528	TC ROUTER 3002T-4G	Basic modem functionality, data rates up to 150 Mb/s, integrated VPN and firewall, International network			
		2702888	TC Cloud Client 1002-4G ATT	Dedicated connection to the mGuard Secure Cloud, data rates up to 150 Mb/s, AT&T Network			
		2702887	TC Cloud Client 1002-4G VZW	Dedicated connection to the mGuard Secure Cloud, data rates up to 150 Mb/s, Verizon Network			
		2702886	TC Cloud Client 1002-4G	Dedicated connection to the mGuard Secure Cloud, data rates up to 150 Mb/s, international Network			
STEP 3 Determining the right accessories		Adapter cables	Part number	Description	Product Details		
			2867403	RAD-CON-SMA-N-SS	SMA(m) to N(m), 4 ft		
			2903263	RAD-PIG-RSMA/N-0.5	0.5 meter RSMA(m) to N(m) adapter cable		
	2903264		RAD-PIG-RSMA/N-1	1.0 meter RSMA(m) to N(m) adapter cable			
	2903265		RAD-PIG-RSMA/N-2	2.0 meter RSMA(m) to N(m) adapter cable			
	2903266	RAD-PIG-RSMA/N-3	3.0 meter RSMA(m) to N(m) adapter cable				
		Surge arrestors	Part number	Description	Product details		
		2803166	CN-UB-70DC-6-BB	Antenna surge protection for 0 – 6 GHz N(f)-N(f)			
		Antenna cables	Part number	Description	Cable length (ft)	Connector type	
		5606124	RAD-CAB-PFP240-10	10	N(m)-N(m)		
		5606125	RAD-CAB-PFP400-20	20	N(m)-N(m)		
	5606126	RAD-CAB-PFP500-25	25	N(m)-N(m)			
		Bluetooth antennas	Part number	Description	Distance	Connector type	Gain
		2885919	RAD-ISM-2400-ANT-OMNI-6-0	1000'	N(f)	6 dBi	
		Cellular antennas	Part number	Description	Product details		
		2702274	TC ANT mobile Wall 0,5M	Outdoor pipe mounting antenna, 5 meters of cable, SMA(m) connector			
		2702273	TC ANT Mobile Wall 5M	Outdoor pipe mounting antenna, 5 meters of cable, SMA(m) connector			
		2901561	RAD-ANT-GSM/UMTS-QB-YAGI-8	Directional high-gain antenna, with N(f) connector			

For more accessory options, please visit: www.phoenixcontact.com/wireless
For help selecting accessories, please contact technical service at 800-322-3225.

STEP 4

System planning

Site name:



You can count on us

You do not need to be an expert. We provide you with much more than just products. We also provide you with support whenever you need it.

Phoenix Contact offers on-demand professional support, from consultation through network analysis and design, all the way to configuration support and startup.

We not only support you over the phone or by e-mail, but also directly on-site, if you so desire. Contact us for more information.

Overview of our services



Planning and consultation

Whether for failsafe network structures, protecting, or remotely maintaining your machinery or high-performance wireless networks, we will find the right solution for you.



Configuration and startup

We provide support during the configuration and startup of your network and show you how to optimize system performance, availability, and safety.



Maintenance and support

If your network is not working in accordance with your expectations, we will eliminate any faults. We will assist you in analyzing your network and provide recommendations.



Training and workshops

Do you want to gain a better insight into network engineering for yourself or your staff? We provide perfectly tailored instruction and practical training.

For professional wireless coverage

Give us the coordinates of the stations to be networked and we will check the feasibility using our wireless network planning software or by performing wireless path tests on-site.

You will receive an extensive test report and a bill of materials including all required components.

