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ATTACHMENT #2 - Radio System Data

SIEMENS

RUGGEDCOM WIN

Wide Area Private Wireless Systems

Brochure

09/2016

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RUGGEDCOM WIN family of products is the first field proven broadband wireless product portfolio designed for private networks, delivering the benefits of carrier-grade 4G technology to critical infrastructure applications in harsh environments.

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RUGGEDCOM WIN
Features and benefits

Standards based
- Based on the IEEE 802.16e family of standards and third party validated to support interoperability with other vendors.

Standalone mode
- Unique capability that allows RUGGEDCOM WIN products to operate without external servers, reducing initial capital outlay significantly, while maintaining features such as GOOSE over the air and mobility.

Range/throughput
- The RUGGEDCOM WIN product family has built-in mechanisms to ensure the system is delivering maximum bandwidth for a given distance/coverage requirement at all times.

Scale
- RUGGEDCOM WIN has been designed to cover vast territories with embedded GPS or IEEE1588 synchronization options to reduce self-interference and maximize frequency reuse.

Quality of service
- RUGGEDCOM WIN has built-in quality of service to enable operators to guarantee latency throughout a mix of IT and OT applications.

Security
- The RUGGEDCOM WIN product family has the security feature set to enable organizations that provide critical infrastructure to be compliant with legal mandates and security guidelines.

Mobility
- The RUGGEDCOM WIN product line is capable of maintaining session persistence with real time applications in a mobility environment at vehicular speeds.

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RUGGEDCOM WIN base stations

The RUGGEDCOM WIN7000 and RUGGEDCOM WIN7200 base stations are powered by OFDMA radio technology, which is robust in adverse environmental conditions and enables Non-Line-Of-Sight (NLOS) operation. Leveraging link adaptation algorithms, modulation and coding are continuously adapted to prevailing link conditions, ensuring an optimal balance between robustness and efficiency.

Mobile WiMAX compliance

- Based on IEEE 802.16e standard and WiMAX Forum Wave2 (MIMO) certification

Rated for harsh environments

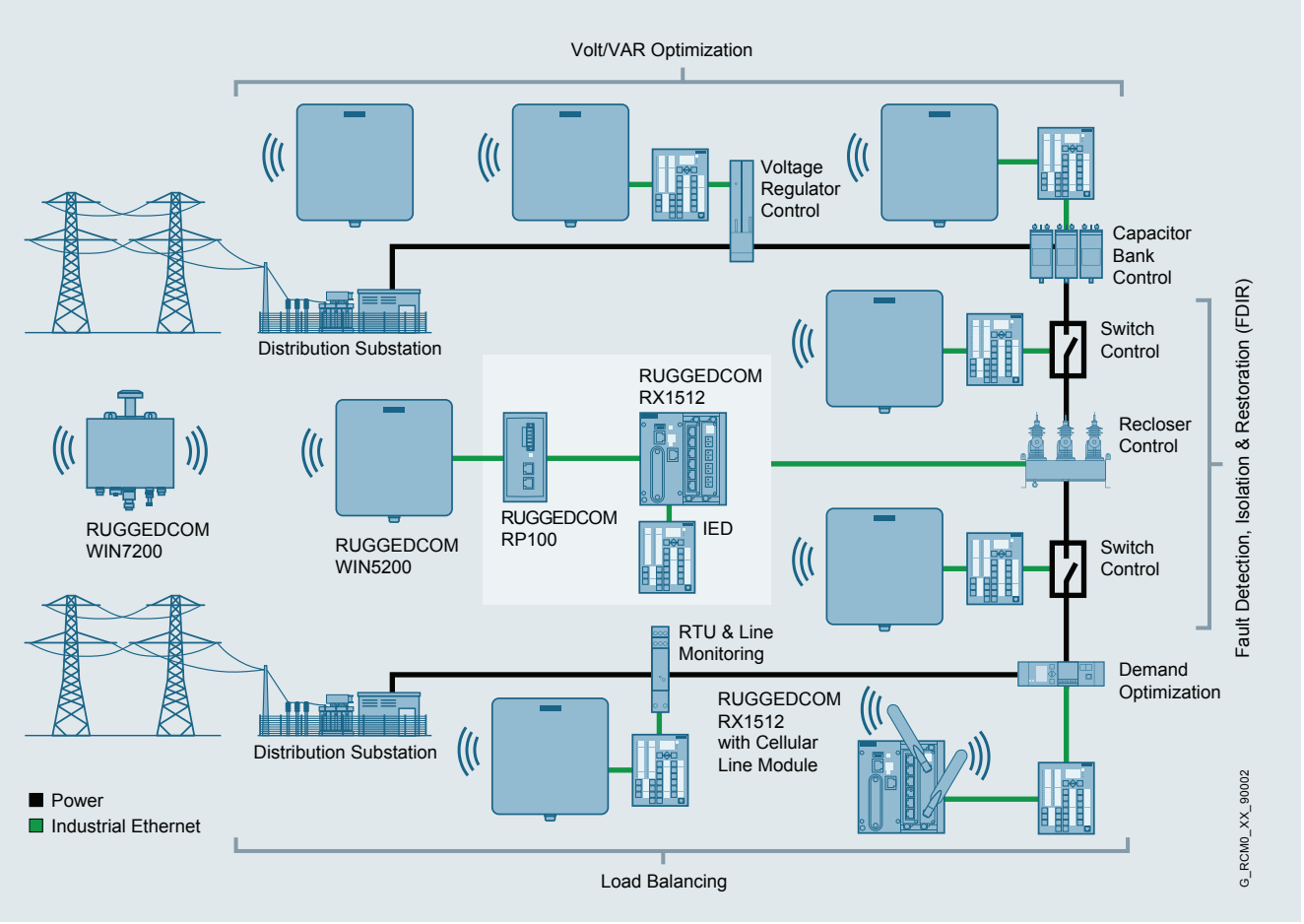
- IEEE 1613, IEC 61850-3, Class 1 Div 2 / ATEX Zone 2, MIL-STD 810F, MIL-STD 509.4 – salt fog
- -40° C to +75° C temperature range

Range

- Transmit and receive diversity combined with high power for improved reach and NLOS performance

High bandwidth

- RUGGEDCOM WIN has two built-in radios operating on the same frequency simultaneously (MIMO) to increase bandwidth (up to 40 Mbps) and spectral efficiency



Multi-service field area network for smart grid applications.

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WIN7249-5

RUGGEDCOM WIN7000 high power base station

The RUGGEDCOM WIN7000 is a high power, broadband wireless base station, compliant to the IEEE 802.16e standard, designed for long range deployments in licensed frequency bands in harsh environments.

Available in a number of different frequency bands, the RUGGEDCOM WIN7000 has been designed around delivering maximum coverage where regulations permit high power operation. The single sector design can accomodate as many sectors as required at a given site, driven by coverage, bandwidth and subscriber density considerations.

RUGGEDCOM WIN7200 standard power base station

The RUGGEDCOM WII roadband wireless base station, 802.16e standard, also supporting unlicensed frequency bands in harsh environments.

The RUGGEDCOM WIN7200 is a single sector lightweight base station that can be easily installed on poles, street lamps or walls, and provides connectivity to fixed or mobile end points. Connected via a single Power-over-Ethernet (PoE) connection and easily provisioned, the RUGGEDCOM WIN7200 reduces operational cost and complexity.

Specifications	RUGGEDCOM WIN7000	RUGGEDCOM WIN7200
Support of worldwide WiMAX deployments	1.X, 2.X and 3.X GHz bands	2.5,3.5,4.9,5.1,5.8 GHz bands
Flexible configurations	Dual PoE or fiber optic interfaces	Single PoE interfaces
Power output	2 x 36 dBm output power	2 x 27 dBm output power for 2.X GHz and 3.X GHz 2 x 24 dBm output power for 4.9 GHz and 5.1 GHz 2 x 21 dBm output power for 5.8 GHz
Width	290 mm (11.42 in)	257 mm (10.12 in)
Height	756 mm (29.76 in)	228 mm (8.98 in)
Depth	195 mm (7.68 in)	112 mm (4.41 in)
Net weight	15 kg (33.1 lb)	3 kg (6.6 lbs)
Maximum subscribers supported	128	64

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RUGGEDCOM WIN subscriber units

RUGGEDCOM WIN5100 vehicular subscriber unit

The RUGGEDCOM WIN5100 is a broadband wireless subscriber unit, compliant with the IEEE 802.16e standard, with external RF connectors for use in fixed or mobile applications in harsh environments.

The self-learning subscriber device automatically detects the base station on the best signal available, allowing for plug-and-play installation and maintenance-free operation. RUGGEDCOM WIN5100 comes with external antenna connectors and can be ordered with an optional 10 – 30 VDC input.

RUGGEDCOM WIN5100-V enhanced vehicular subscriber unit

The RUGGEDCOM WIN5100-V is built to sustain shock and vibration to comply with heavy rail industry certifications. With external M12 RF connectors and M12 DC power connector, this subscriber unit can be installed on mobile tractors and trucks, or in fixed locations susceptible to vibration such as runways.

The RUGGEDCOM WIN5100-V supports 9-36 VDC and comes with an optional GPS receiver which allows accurate location sharing with devices behind the subscriber unit or over-the-air, using 802.16e protocol.

Specifications	RUGGEDCOM WIN5100	RUGGEDCOM WIN5100-V	RUGGEDCOM WIN5200
Antenna	2 N-type antenna connectors for connection to external omni or directional antenna	2 N-type antenna connectors for connection to external omni or directional antenna	High gain integrated antenna
Flexible configurations	Designed for vehicular, cabinet or pole top installations	Designed for vehicular, cabinet or pole top installations	Designed for pole top installations
Power supply	PoE or Direct +/-12 to 24 VDC input	PoE or Direct +/-12 to 24 VDC input	Single cable Power-over-Ethernet (PoE)
Integrated GPS	No	Optional	No
Width	226 mm (8.9 in)	255 mm (10 in)	300 mm (11.8 in)
Height	80 mm (3.15 in)	92 mm (3.62 in)	310 mm (12.2 in)
Depth	92 mm (3.62 in)	108 mm (4.25 in)	91 mm (3.58 in)
Net weight	1.1 kg (2.4 lb)	1.2 kg (2.6 lb)	1.8 kg (4 lb)

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RUGGEDCOM WIN5200 outdoor subscriber unit

The RUGGEDCOM WIN5200 is a broadband wireless subscriber unit, compliant with the IEEE 802.16e standard, with a built-in directional antenna for use in harsh environments.

The RUGGEDCOM WIN5200 greatly simplifies installation with LEDs for signal strength alignment, automatic connection to strongest serving base station and automated service provisioning, based on authentication credentials. Specifically designed for point-to-multipoint broadband wireless access applications, the RUGGEDCOM WIN5200 provides efficient use of the wireless spectrum, supporting a range of applications.

Excellent performance in NLOS conditions
- Overcoming multipath and deep fading, providing extended range and easy installation

Automatic Transmit Power Control (ATPC)
- Optimal network deployment, tight frequency reuse, and interference avoidance

Numerous applications and services
- Guaranteed data, VoIP, video and other services based on advanced QoS

Robust hardware
- -40° C to +75° C temperature range

Global availability
- Wide frequency band support for deployments around the world

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RUGGEDCOM power injectors

RP100

RUGGEDCOM RP100 & RP110

The RUGGEDCOM RP100 & RP110 are single port 802.3at Power-over-Ethernet injectors that provide the flexibility to power remote PoE devices using standard Cat 5 cable.

Compatible with the latest 802.3at high-power PoE standard and backward compatible with low-power 802.3af PoE devices, the RUGGEDCOM RP100 family provides versatility and investment protection to handle future demands for increased power.

The RUGGEDCOM RP110 is a serial 802.3at Power-over-Ethernet injector with a built-in serial server, designed to bridge legacy serial devices onto an IP network and to power remote PoE devices, using standard Cat 5 cable.

Features

- Configuration-free, plug and play operation
- 802.3at/af-compliant or RM version for connection to RUGGEDCOM WIN products
- Rugged Rated, -40° C to +85° C temperature range
- IEEE 1613 and IEC 61850-3 compliance means continued operation in harsh environments
- Supports a wide range of AC and DC input voltages
- Space-saving compact DIN rail design
- Reduces cabling, connection, and power supply requirements for PoE devices
- Rated for 12, 24 – 48 VDC, 100 – 240 VAC, 125 – 250 VDC

Serial Server

The RUGGEDCOM RP110 comes with an integrated serial server and includes a subset of the features of the ROS® operating system, including:

- Remote management and logging
- Serial IP encapsulation
- SNMP based network management
- Precision timing support
- 1 RS485/RS422 port and 1 independent RS232 port and 1 IRIG-B Output

Specifications	RUGGEDCOM RP100	RUGGEDCOM RP110
Width	226 mm (8.9 in)	226 mm (8.9 in)
Height	80 mm (3.15 in)	80 mm (3.15 in)
Depth	92 mm (3.62 in)	92 mm (3.62 in)
Net weight	1.5 kg (3.3 lbs)	1.5 kg (3.3 lbs)

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AeroMACS

AeroMACS (Aeronautical Mobile Airport Communications System) is a new data link technology intended to support airport surface communications. This wireless technology is mandated by ICAO (International Civil Aviation Organization) and will be used for airport ground communications as well as for a safe, orderly, and expeditious flow of air traffic around the globe.

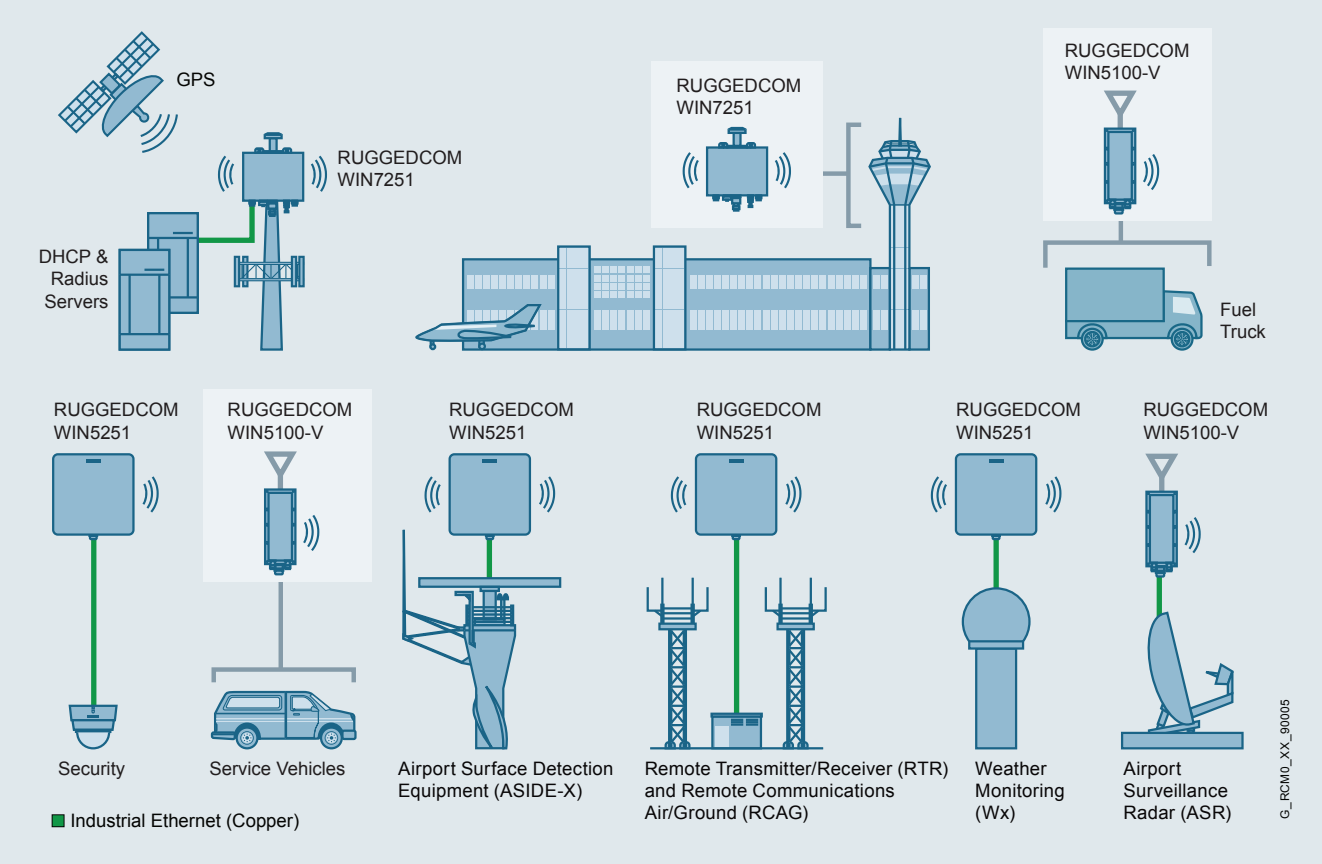
Using the 5000–5030 MHz and the 5091–5150 MHz band, allocated by the International Telecommunication Union, the RUGGEDCOM WIN products are optimized for AeroMACS based airport surface communications.

With the use of an all IP radio, RUGGEDCOM WIN products can be easily integrated in existing airport networks or future networks such as PENS (Pan European Network Services) in Europe, or SWIM (System Wide Information Management) in North America.

Siemens offers 4 products for setting up wireless networks in airports: the RUGGEDCOM WIN7251 base station, the WIN5251 pole-mounted subscriber unit, the WIN5151, and the WIN5151-V-GPS mobile subscriber units.

These products go beyond the AeroMACS standard feature set to provide the following additional functionality:

- Built-in ASN (Access Service Network) Gateway, with embedded management for routing and mobility in the base station
- Full Layer 2 deployment option, including encrypted multicast VLANs support
- IP-CS and ETH-CS co-existence
- Highly accurate NTP Server at the subscriber unit to synchronize end devices
- IEEE1588 synchronization support, with redundancy to GPS
- Extended cell range: coverage beyond the required 8 km and up to 40 km
- SNMP-V3 management system



RUGGEDCOM WIN AeroMACS installation locations and applications in an airport.

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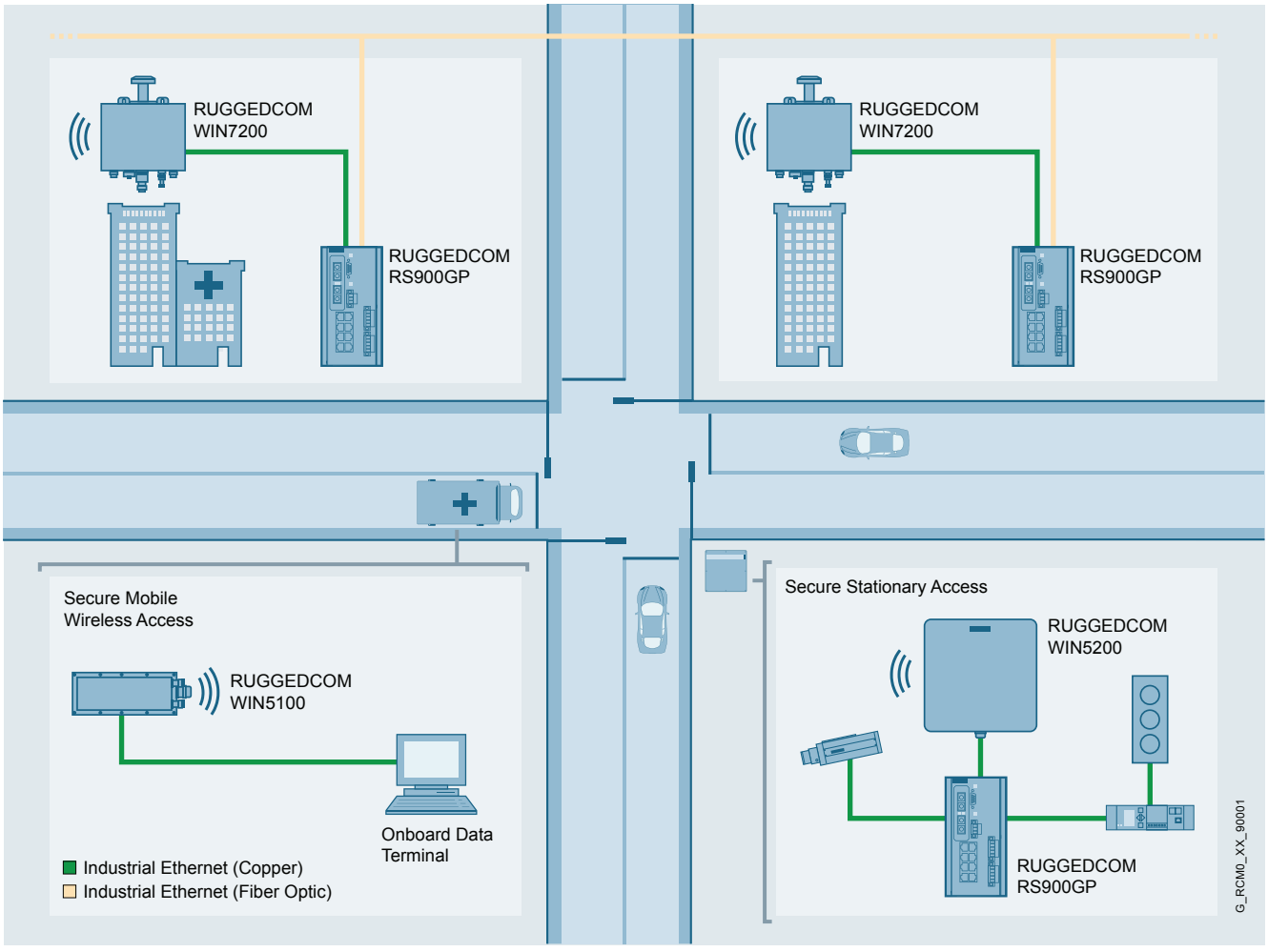
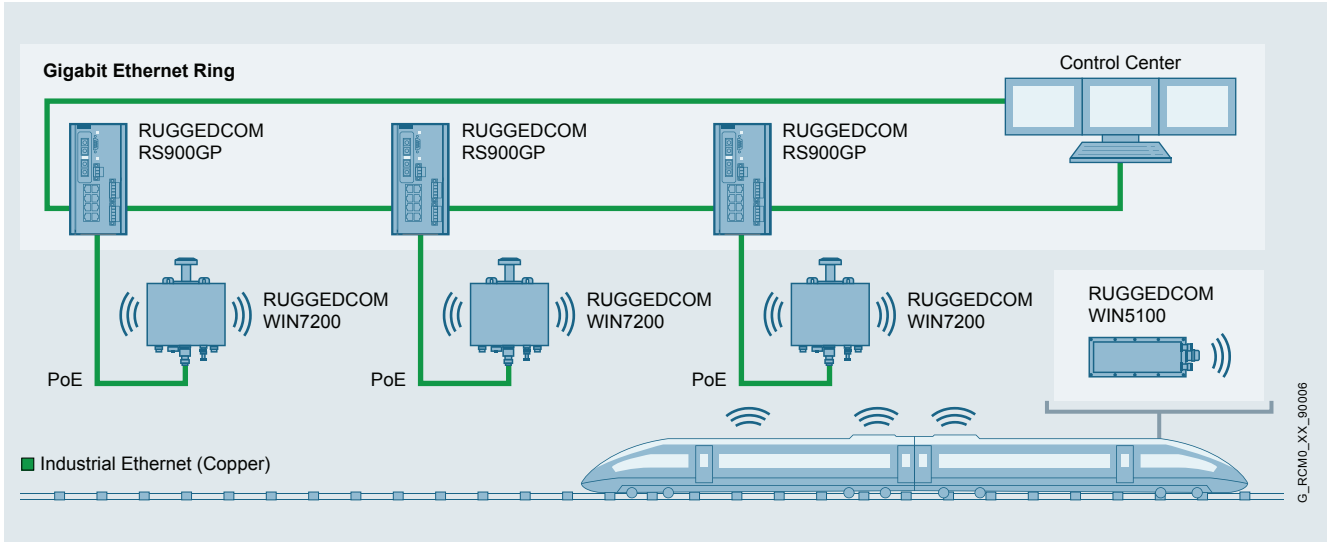
Use cases



Wireless broadband is widely used to enhance connectivity in the ITS industry.



Fully integrated wireless solutions offer broadband data rates for the rail industry.

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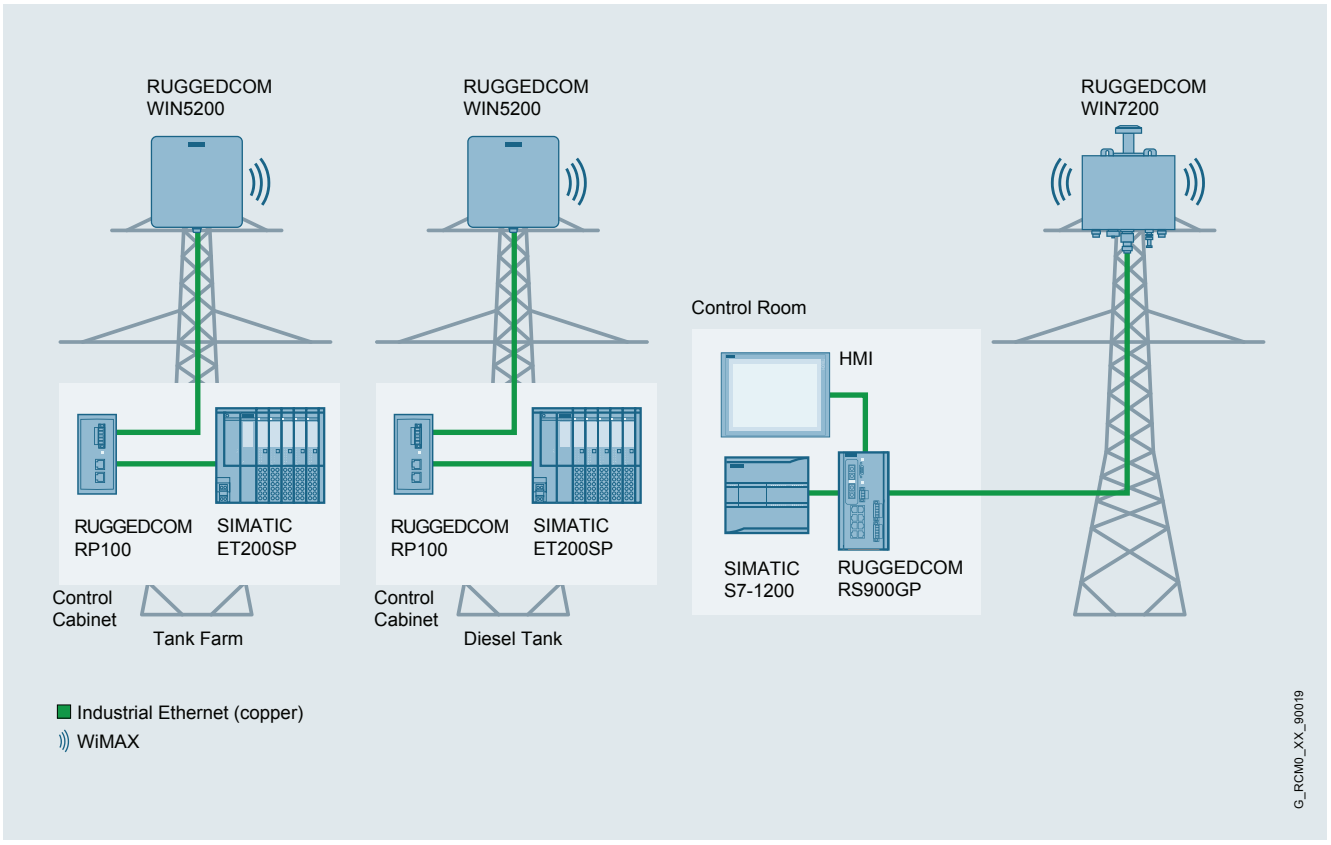
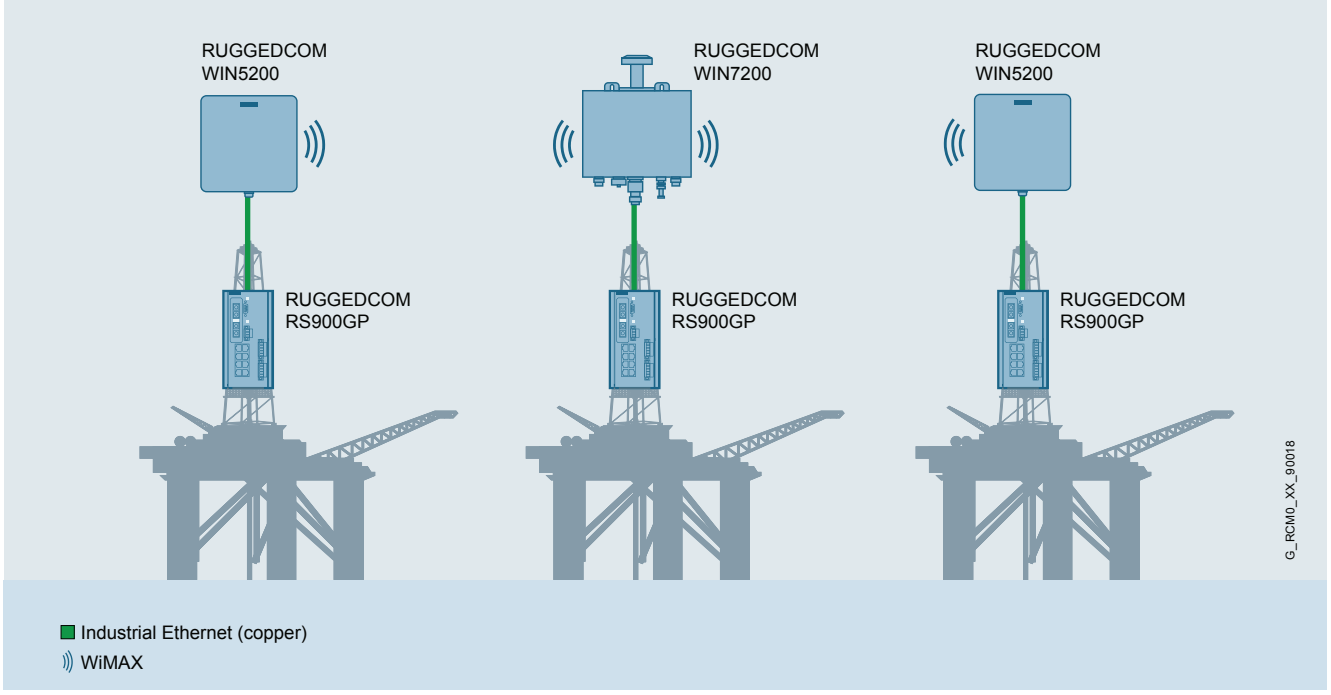


PROFINET IO over wireless broadband for reliable monitoring of remote locations in the oil & gas industry.



Offshore wireless long range monitoring and control of oil platforms.

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Ordering options

RUGGEDCOM WIN7000	Article number		
High power base station, supporting 1350 MHz to 1400 MHz	RUM:WIN7014	–	...
High power base station, supporting 1400 MHz to 1525 MHz	RUM:WIN7015	–	...
High power base station, supporting 1800 MHz to 1830 MHz	RUM:WIN7018	–	...
High power base station, supporting 1785 MHz to 1805 MHz	RUM:WIN7018	–	...
High power base station, supporting 2300 MHz to 2400 MHz	RUM:WIN7023	–	...
High power base station, supporting 2496 MHz to 2690 MHz	RUM:WIN7025	–	...
High power base station, supporting 3400 MHz to 3600 MHz	RUM:WIN7035	–	...
Ethernet interfaces			
Ethernet copper interface			PEC
Single-mode fiber optic interface – DC power			SFD
Single-mode fiber optic interface – AC power			SFA

RUGGEDCOM WIN7000 – Accessories	Article number
Antennas	
Omni antenna 1350-1500MHz 5dBi 360°, N-female (order 2 per base station)	RUM:ANTN0018
GPS antenna for WIN7000 omni 1575.42MHz, +/- 1.023 30dB 360 degrees 3V TNC	RUM:ANTN0023
Sector antenna 3.3-3.8GHz 17dBi 65° X-Pol	RUM:ANTN0027
Sector antenna BST 3.3-3.8GHz 17dBi 90° X-Pol	RUM:ANTN0029
Omni antenna 3.4-3.7GHz 8.5dBi 360° N-male (order 2 per base station)	RUM:ANTN0040
Sector antenna 2300-2700MHz 16dBi 90° X-Pol	RUM:ANTN0048
Omni antenna 2.3-2.7GHz 9dBi 360° N-female (order 2 per base station)	RUM:ANTN0050
Sector antenna 1350-1500MHz 12dBi 90° X-Pol	RUM:ANTN0054
High gain sector 1.71-1.88 GHz 17. 5 dBi 90° X-Pol	RUM:ANTN0060
Omni antenna 1.7-1.9 GHz - 10 dBi N-female	RUM:ANTN0061
Sector antenna 2.3-2.7 GHz, 16 dBi 65° X-Pol	RUM:ANTN0068
Dual slant sector 1.71-1.880 GHz 17dBi 90°	RUM:ANTN0070
Antenna 1390-1525MHz 16.0 dBi	RUM:ANTN0071
Power supply	
Power supply AC/DC 85-264V input, 48V output, 240W	RUM:WIN1210
WIN1210, surge protection and barrier card for hazardous locations	RUM:WIN1210
DC-DC converter 130 VDC – 48 VDC for WIN7000 series	RUM:DCPS0008
Power cables	
Combined cable (Power + Ethernet) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 30m	RUM:CBDC0110
Combined cable (Power + Ethernet) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 60 m	RUM:CBDC0111
Combined cable (power + Ethernet) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 80 m	RUM:CBDC0112
Combined cable (power + Ethernet) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 30 m	RUM:CBDC0113
Combined cable (power + Ethernet) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 60 m	RUM:CBDC0114
Combined cable (power + Ethernet) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 80 m	RUM:CBDC0115
Combined cable (power + Ethernet) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 2 m	RUM:CBDC0131
Combined cable (power + Ethernet) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 2 m	RUM:CBDC0133
Cable (power) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 30 m	RUM:CBDC0120
Cable (power) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 60 m	RUM:CBDC0121
Cable (power) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 80 m	RUM:CBDC0122
Cable (power) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 30 m	RUM:CBDC0123
Cable (power) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 60 m	RUM:CBDC0124
Cable (power) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 80 m	RUM:CBDC0125
Cable (power) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 2 m	RUM:CBDC0135
Cable (power) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 120 m	RUM:CBDC0136
Cable (power) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 30 m	RUM:CBDC0137
Cable (power) for WIN1210, WIN1212 and WIN7000 for +48 VDC – 60 m	RUM:CBDC0138

(1) Cables and antennas are recommended but need to be ordered separately

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RUGGEDCOM WIN7000 – Accessories	Article number
Sector antenna	
Fiber optic cable (Ethernet), single-mode, 1310 nm, sealed LC duplex connectors to LC duplex – 3 m	RUM:CBWR0009
Fiber optic cable (Ethernet), single-mode, 1310 nm, sealed LC duplex connectors to LC duplex – 30 m	RUM:CBWR0019
Fiber optic cable (Ethernet), single-mode, 1310 nm, sealed LC duplex connectors to LC duplex – 50 m	RUM:CBWR0020
Fiber optic cable (Ethernet), single-mode, 1310 nm, sealed LC duplex connectors to LC duplex – 100 m	RUM:CBWR0021
Fiber optic cable (Ethernet), single-mode, 1310 nm, sealed LC duplex connectors to LC duplex – 150 m	RUM:CBWR0022
Fiber optic cable (Ethernet), single-mode, 1310 nm, sealed LC duplex connectors to LC duplex – 200 m	RUM:CBWR0023
Mounting kit	
19“ rack mount kit for two WIN7000 base stations	RUM:MKIT0060

RUGGEDCOM WIN7200	Article number
Standard power base station, supporting 2483 MHz to 2690 MHz	RUM:WIN7225
Standard power base station, supporting 3300 MHz to 3400 MHz	RUM:WIN7233
Standard power base station, supporting 3400 MHz to 3600 MHz	RUM:WIN7235
Standard power base station, supporting 3550 MHz to 3720 MHz	RUM:WIN7237
Standard power base station, supporting 4900 MHz to 5000 MHz	RUM:WIN7249
Standard power base station, supporting 5000 MHz to 5150 MHz – AeroMACS	RUM:WIN7251
Standard power base station, supporting 5725 MHz to 5850 MHz	RUM:WIN7258

RUGGEDCOM WIN7200 – Accessories	Article number
Antennas	
Sector antenna 3.3-3.8GHz 17dBi 65° X-Pol	RUM:ANTN0027
Sector antenna BST 3.3-3.8GHz 17dBi 90° X-Pol	RUM:ANTN0029
Omni antenna 3.4-3.7GHz 8.5dBi 360° N-male (order 2 per base station)	RUM:ANTN0040
Omni antenna 3.4-3.6GHz 6dBi 360° (order 2 per base station)	RUM:ANTN0043
Sector antenna 2300-2700MHz 16dBi 90° X-Pol	RUM:ANTN0048
Omni antenna 2.3-2.7GHz 9dBi 360° N-female (order 2 per base station)	RUM:ANTN0050
Omni antenna 2.5-2.7GHz 5.5dBi 360° N-male (order 2 per base station)	RUM:ANTN0051
Omni antenna 3.6-3.8GHz 6dBi 360° (order 2 per base station)	RUM:ANTN0057
Sector antenna 2.3-2.7 GHz, 16 dBi 65° X-Pol	RUM:ANTN0068
Sector antenna (dual slant) 4.9-5.95 GHz 16dBi 90°	RUM:ANTN0074
Cables	
Outdoor combined cable (power + Ethernet) for WIN7200 for +48 VDC – 2 m	RUM:CBWR0014-02M
Outdoor combined cable (power + Ethernet) for WIN7200 for +48 VDC – 15 m	RUM:CBWR0014-15M
Outdoor combined cable (power + Ethernet) for WIN7200 for +48 VDC – 30 m	RUM:CBWR0014-30M
Outdoor combined cable (power + Ethernet) for WIN7200 for +48 VDC – 45 m	RUM:CBWR0014-45M
Outdoor combined cable (power + Ethernet) for WIN7200 for +48 VDC – 60 m	RUM:CBWR0014-60M
Outdoor combined cable (power + Ethernet) for WIN7200 for +48 VDC – 75 m	RUM:CBWR0014-75M
Outdoor combined cable (power + Ethernet) for WIN7200 for +48 VDC – 90 m	RUM:CBWR0014-90M
Outdoor combined cable (power + Ethernet) for WIN7200 for +48 VDC – 500 m (batch for self-connectorization)	RUM:CBWR0014-500
Serial cable UART 3P to DB9F for WIN7200	RUM:CBDC0017
Power Supplies	
See RUGGEDCOM RP100/RP110 ordering information on page 15	

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RUGGEDCOM WIN5100	Article number		
Vehicular subscriber unit, supporting 1350 MHz to 1525 MHz	RUM:WIN5114	–	...
Vehicular subscriber unit, supporting 1785 MHz to 1805 MHz	RUM:WIN5118-WR	–	...
Vehicular subscriber unit, supporting 1800 MHz to 1830 MHz	RUM:WIN5118	–	...
Vehicular subscriber unit, supporting 2300 MHz to 2400 MHz	RUM:WIN5123	–	...
Vehicular subscriber unit, supporting 2496 MHz to 2690 MHz	RUM:WIN5125	–	...
Vehicular subscriber unit, supporting 3300 MHz to 3600 MHz	RUM:WIN5135	–	...
Vehicular subscriber unit, supporting 3550 MHz to 3800 MHz	RUM:WIN5137	–	...
Vehicular subscriber unit, supporting 4900 MHz to 5000 MHz	RUM:WIN5149	–	...
Vehicular subscriber unit, supporting 5000 MHz to 5150 MHz – AeroMACS	RUM:WIN5151	–	...
Vehicular subscriber unit, supporting 5725 MHz to 5850 MHz	RUM:WIN5158	–	...
Power options			...
Direct 10-30 VDC input with separate Ethernet connector, equipped with DC power cable			DC
Standard commercial grade AC power injector – power			AC

RUGGEDCOM WIN5100-V	Article number		
Enhanced vehicular subscriber unit, supporting 3550 MHz to 3800 MHz, integrated 9-36 VDC power supply	RUM:WIN5137-V	–	...
Enhanced vehicular subscriber unit, supporting 4900 MHz to 5000 MHz, integrated 9-36 VDC power supply	RUM:WIN5149-V	–	...
Enhanced vehicular subscriber unit, supporting 5000 MHz to 5150 MHz, integrated 9-36 VDC power supply – AeroMACS	RUM:WIN5151-V	–	...
Enhanced vehicular subscriber unit, supporting 5725 MHz to 5850 MHz, integrated 9-36 VDC power supply	RUM:WIN5158-V	–	...
Add-on options			
No add-on			
Global Positioning System support for WAAS (USA system), EGNOS (European system), MSAS (Japanese system)			GPS

RUGGEDCOM WIN5100 & WIN5100–V – Accessories	Article number
Data / PoE cables	
Outdoor cable (Ethernet) for WIN5100 & WIN5100-V for +48 VDC – 2 m	RUM:CBWR0014-02M
Outdoor cable (Ethernet) for WIN5100 & WIN5100-V for +48 VDC – 15 m	RUM:CBWR0014-15M
Outdoor cable (Ethernet) for WIN5100 & WIN5100-V for +48 VDC – 30 m	RUM:CBWR0014-30M
Outdoor cable (Ethernet) for WIN5100 & WIN5100-V for +48 VDC – 45 m	RUM:CBWR0014-45M
Outdoor cable (Ethernet) for WIN5100 & WIN5100-V for +48 VDC – 60 m	RUM:CBWR0014-60M
Outdoor cable (Ethernet) for WIN5100 & WIN5100-V for +48 VDC – 75 m	RUM:CBWR0014-75M
Outdoor cable (Ethernet) for WIN5100 & WIN5100-V for +48 VDC – 90 m	RUM:CBWR0014-90M
Outdoor cable (Ethernet) for WIN5100 & WIN5100-V for +48 VDC – 500 m (batch for self-connectorization)	RUM:CBWR0014-500
Power cables	
Fiber optic cable (Ethernet), single-mode, 1310 nm, sealed LC duplex connectors to LC Duplex – 3 m	RUM:CBWR0009
Fiber optic cable (Ethernet), single-mode, 1310 nm, sealed LC duplex connectors To LC Duplex – 30 m	RUM:CBWR0019
Antennas	
Omni-directional antenna3.4-3.6GHz 6dBi 360°	RUM:ANTN0043
Omni-directional antenna 2.5-2.7GHz 5.5dBi 360° N-male	RUM:ANTN0051
Omni-directional antenna 3.6-3.8GHz 6dBi 360°	RUM:ANTN0057
Antenna (dual slant) 1.3-1.525GHz 10dBi	RUM:ANTN0063
Antenna flat 3.3-3.8GHz 18dBi 18° N-female	RUM:ANTN0064
Vehicular antenna 0.68-6.0 GHz, 6dBi	RUM:ANTN0065
Antenna (dual slant) 1.78-1.85GHz 12dBi N-female	RUM:ANTN0066
Sector antenna 2.3-2.7 GHz, 16 dBi 65° X-Pol	RUM:ANTN0068
Antenna (dual slant) 4.9-6.1GHz 22.5dBi N-female	RUM:ANTN0073
Omni-directional antenna 806-5935MHz 9.5 dBi N-female	RUM:ANTN0075
Omni-directional antenna 4.9-5.875GHz 9.5dBi N-female	RUM:ANTN0076
Vehicular antenna 2.3-6.1GHz 8dBi N-female	RUM:ANTN0077

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RUGGEDCOM WIN5200	Article number
Outdoor subscriber unit, supporting 1350 MHz to 1525 MHz	RUM:WIN5214
Outdoor subscriber unit, supporting 1785 MHz to 1805 MHz	RUM:WIN5217
Outdoor subscriber unit, supporting 1800 MHz to 1830 MHz	RUM:WIN5218
Outdoor subscriber unit, supporting 2300 MHz to 2400 MHz	RUM:WIN5223
Outdoor subscriber unit, supporting 2496 MHz to 2690 MHz	RUM:WIN5225
Outdoor subscriber unit, supporting 3300 MHz to 3600 MHz	RUM:WIN5235
Outdoor subscriber unit, supporting 3550 MHz to 3800 MHz	RUM:WIN5237
Outdoor subscriber unit, supporting 4900 MHz to 5000 MHz	RUM:WIN5249
Outdoor subscriber unit, supporting 5000 MHz to 5150 MHz – AeroMACS	RUM:WIN5251
Outdoor subscriber unit, supporting 5725 MHz to 5850 MHz	RUM:WIN5258

RUGGEDCOM WIN5200 – Accessories	Article number
Data / PoE cables	
Outdoor cable (Ethernet) for WIN5200 for +48 VDC – 2 m	RUM:CBWR0014-02M
Outdoor cable (Ethernet) for WIN5200 for +48 VDC – 15 m	RUM:CBWR0014-15M
Outdoor cable (Ethernet) for WIN5200 for +48 VDC – 30 m	RUM:CBWR0014-30M
Outdoor cable (Ethernet) for WIN5200 for +48 VDC – 45 m	RUM:CBWR0014-45M
Outdoor cable (Ethernet) for WIN5200 for +48 VDC – 60 m	RUM:CBWR0014-60M
Outdoor cable (Ethernet) for WIN5200 for +48 VDC – 75 m	RUM:CBWR0014-75M
Outdoor cable (Ethernet) for WIN5200 for +48 VDC – 90 m	RUM:CBWR0014-90M
Outdoor cable (Ethernet) for WIN5200 for +48 VDC – 500 m (batch for self-connectorization)	RUM:CBWR0014-500

RUGGEDCOM Power-over-Ethernet injector	Article number						
RUGGEDCOM RP100	6GK6010-0AP0	.	–	.	AA	.	
High voltage (85 – 264 VAC / 88 – 300 VDC), standard PoE (803.2at)		1		1			
High voltage (85 – 264 VAC / 88 – 300 VDC), for RUGGEDCOM WIN only		1		2			
Low voltage (10 – 60 VDC), standard PoE (803.2at)		2		1			
Low voltage (10 – 60 VDC), for RUGGEDCOM WIN only		2		2			
Manufacturing modification							
None							0
Conformal coating							1

RUGGEDCOM Power-over-Ethernet injector with built in serial server	Article number						
RUGGEDCOM RP110NC	6GK6011-0AP2	.	–	.	AA	.	
RUGGEDCOM RP110	6GK6011-0AP1	.	–	.	AA	.	
High voltage (85 – 264 VAC / 88 – 300 VDC), for RUGGEDCOM WIN only		1		2			
Low voltage (10 – 60 VDC), for RUGGEDCOM WIN only		2		2			
Manufacturing modification							
None							0
Conformal coating							1

With the RUGGEDCOM Selector you can transfer the order number to the Siemens Industry Mall and order your products.

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For more information, please visit:
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