



ATEX



Model Number: SA100 / SA102



Stay safe and connected

The oil and gas industry which fuels our global economy necessitates the highest level of engineering, productivity and safety. Every aspect of exploration, extraction and refinement must be carefully orchestrated to operate continuously and maximize profits. Achieving this high level of operational excellence is not possible without advanced data, voice and video communications. Wireless Ethernet is fast becoming the preferred communication delivery system due to its excellent reliability, adaptability and affordability. However, your communication systems should be ATEX and HAZLOC certified to assure safe operations in your potentially hazardous environments.

Market-leading wireless

Our license-exempt 5.8 GHz Wireless Ethernet Bridges are excellent connectivity and backhaul solutions to support your communication requirements. The systems are engineered to provide you with carrier-grade, high-speed, secure connectivity in virtually any environment. You can establish communications in non-line-of-sight (NLOS), long-distance line-of-sight (LOS) and high-interference environments, as well as over water and desert terrain. This unrivalled performance is possible due to our unique combination of technologies. These technologies work together to overcome obstacles, mitigate interference and enable long-distance communications with high spectral efficiency and up to five-times of reliability. The systems routinely operate in some of the most hostile environments on earth, including icy mountaintops, hot and dusty deserts, turbulent seas and congested cities.

ATEX certified radio series

Our range of explosion proof radio series are intended for use in areas made potentially hazardous by the presence of flammable liquids , gases , vapours and dust (Zone 1 ,2 , 21 and 22).

Flexibility and product support

The SCORPION Ex Radio series is a suitable radio system meant for deployment in multi-mode scenarios using a variety of approved antennas. The NMS network management application provides full element and provisioning management and software upgrades.



Our ATEX Radios are intended for use in a potentially hazardous environment fully tested to meet the ATEX and IECEx Directive standards, and approved to be intrinsically safe. This ensures that it won't cause a spark or reach a high temperature, which could ignite in an explosive atmosphere. Hazardous areas may differ as the risk present in the form of flammable gases or dust materials. ATEX zones therefore denote the type and level of risk in an area, our ATEX radios can be deployed in Zone 1, 2, 21 & 22.

Scorpion Ex introduces superior dynamic net throughput of 300Mbps combined with ultra-low latency and best PPS delivery.

Designed for unmatched interference rejection, Scorpion Ex's unique Automatic Interference Sensibility (AIS) technology guarantees stable performance with constant latency and throughput.

Scorpion Ex Base Station and Point to Point solutions set a benchmark of unrivalled performance and reliability, making it the ultimate choice for futureproof wireless systems.

High Performance Radio

- Superior net throughput – 300 Mbps
- Dynamic asymmetric capacity
- Best latency <3 ms typical
- Spectral efficiency 6.75 b/s/Hz
- Configurable channel bandwidth - 3.5-50Mhz
- 128-bit AES encryption & MAC level authentication
- TDD and FDD modes - software configurable
- Base Station with Integrated GPS Synchronization
- Range up to 60 Km

Extremely Low CAPEX & OPEX

- Most competitive price
- Flexible capacity, software upgradeable
- Rugged IP66 design with ATEX certified models
- Compact & Simple to install and maintain
- <6.5Watt power consumption
- Multiple frequency bands in one radio
- State-of-the-art NMS

Unmatched Interference Rejection

- AIS (Automatic Interference Sensibility) technology makes SCORPION the most stable wireless solution in the market.
- Time Synchronization eliminates self-interference and allows frequency reuse.
- MIMO Radio – higher capacity, longer range and diversity.
- The only solution with Hitless ACM - Adaptive Coding & Modulation.
- ACS - Automatic Channel Selection.

Advanced Networking

- VLAN tagging/stripping & QinQ
- Uplink and downlink bandwidth control
- Over the air remote management
- HTTP, EMS, SNMP and Telnet management
- QoS based on 802.1p, TOS & DSCP
- Support IPv4 & IPv6 dual stack



ATEX



Radio

Radio Frequency	4.8GHz to 6GHz
Net Throughput	Base Station or Point to Point - Net Aggregate throughput up to 300 Mbps.
PPS	Up to 400,000 Packets Per Second
Channel Size	Configurable - 3.5/5/7/10/14/20/28/40/50 MHz
Waveform	Advanced OFDM 2x2 dual polarization MIMO - BPSK, QPSK, 16QAM, 64QAM: <ul style="list-style-type: none"> • Adaptive Coding & Modulation (ACM) • Fixed modulation mode • LDPC coding • Configurable modulation thresholds (minimum / maximum)
Output Power	Max EIRP is as per the Zone Area (as per EN/IEC 60079-0)
Handling Interference	<ul style="list-style-type: none"> • AIS – Automatic Interference Sensibility • Hitless ACM – Adaptive Coding & Modulation • ACS – Automatic Channel Selection • FEC – Forward Error Correction, k = 1/2, 2/3, 3/4, 5/6 • TDD and FDD modes - software configurable
Encryption & Security	128-bits AES & MAC level authentication

Networking and Management

Topology	Base Station or Point to Point
Access Technology	Time Division Duplex (TDD) & Frequency Division Duplex (FDD) Time Division Multiple Access (TDMA) - dynamic or symmetric
Data Latency	<3 ms typical per SU
Network Modes	Layer 2 Bridge, VLAN, QinQ VLAN / broadcast / IP filters, Layer 3 Routing, NAT, DHCP server , DHCP Relay, Support IPv4 & IPv6 dual stack
VLAN	Transparent, VLAN filter, tagging/stripping, QinQ
QoS	8 priority queues based on 802.1p, TOS and DSCP
Traffic Shaping	Bandwidth control for uplink and downlink independently
SLA (Service Level Agreement)	MIR/CIR/BE/CBR, configurable per SU
Management	Cloudstream NMS (path profiling tool), Telnet, SNMP, HTTP, Built in throughput test and Spectrum Analyzer
Performance Management	Real time & history - logs and counters of traffic and radio data

Physical and Environmental

Physical Interface	1 x 10/100/1000 Base-T (PoE Power+Data)
Connector Type	1 x RJ-45
Antenna ports	2 x N-Female connectors
Dimensions and Weight	BS (GPS sync): 298 x 253 x 175 mm, <12Kg (connectorized) inc mounting brackets. BS/PTP: 298 x 253 x 156 mm, <12Kg (connectorized) inc mounting brackets.
Power	Power over Ethernet (PoE) - 48 VDC
PoE Adapter AC-DC:	<ul style="list-style-type: none"> • Input Power 100-240 VAC, 47-63 Hz • Dimensions 120 x 60 x 35mm
PoE Adapter DC-DC:	<ul style="list-style-type: none"> • Input Power 10-60 VDC • Dimensions 160 x 60 x 30mm
Power Consumption	<6.5Watt
Protection	Radio: IP66 and PoE Injector : suitable for safe area junction box & cabinets or ATEX enclosure.
Certification	WPC Compliance (India) Ex II 2 (1) G Ex d [ia] IIC T5/T6 Gb Ex II 2 (1) D EX tb [ia] IIIC T95°C / T80°C Db Ex d [ia] IIC T5/T6 Gb EX tb [ia] IIIC T95°C / T80°C Db - Zones: 1 & 2 and 21 & 22 - Equivalent Class : I & II
Operating Temperature	-40°C to 60°C
Operating Humidity	95% non Condensing
Environmental	RoHS Compliant

Ordering Details:

- Base Station (inc GPS sync) : SA100 • PtP: SA102