SCORPION High Capacity Base Station
7000 SERIES

SCORPION

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Model Numbers: SA900

The best-in-class carrier grade wireless bridge

SCORPION High Capacity Base Station offers the most advanced features at most competitive price in market.

Wavesight Limited 13 Dencora Way, Sundon Business Park, Luton LU3 3HP. United Kingdom. www.wavesight.com

Wavesight

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SCORPION SA900 is a high capacity Point-to-MultiPoint (PtMP) Base Station that offers net aggregate throughput of 600 Mbps combined with ultra-low latency and best PPS delivery.

Designed for unmatched interference rejection, SCORPION's SA900 offers unique Automatic Interference Sensibility (AIS) technology guarantees stable performance with constant latency and throughput.

SCORPION proprietary transmission protocol set a benchmark of unrivaled performance and reliability, making it the ultimate choice for future-proof wireless systems and QoS (quality of service) mechanism allows prioritizing mission critical data and efficiently transmitting voice, video or other real time data over the wireless network.

High Performance Radio

- Aggregate net throughput – 600 Mbps
- Dynamic asymmetric capacity
- Best latency - <3 ms (typical per CPE)
- Spectral efficiency (net) 8.75 b/s/Hz
- Long range - antenna dependent**
- Configurable channel bandwidth – 5/10/20/40/80MHz
- 128-bit AES encryption & MAC level authentication
- Dynamic Frequency Selection (DFS)

Extremely Low CAPEX & OPEX

- Most competitive price
- Flexible capacity, software upgradeable
- Rugged & Reliable IP67 design
- Compact & Simple to install and maintain
- <10W 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.
- Higher capacity, longer range and diversity.
- The only solution with Hitless ACM - Adaptive Coding & Modulation.
- ACS – Automatic Channel Selection.

Advanced Networking

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

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Specifications

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Radio

Radio Frequency	4.8 - 6.0 GHz Country Dependent
Net Throughput	600 Mbps*
Channel Size	Automatic or configurable – 5/10/20/40/80 MHz
Waveform	Advanced OFDM dual polarization Modulations – BPSK, QPSK, 16QAM, 64QAM, 256QAM
Output Power	Configurable up to 30dBm***
Handling Interference	AIS - Automatic Interference Sensibility ACM - Adaptive Coding & Modulation ACS - Automatic Channel Selection FEC - Forward Error Correction, k = 1/2, 2/3, 3/4, 5/6
Encryption & Security	128-bit AES & MAC level authentication
DFS (ETSI)	Supported

Antenna Configurations

Model SA900	Connectors for external antenna (2 x TNC Female Socket)

Networking and Management

Topology	Base Station - PtMP
Access Technology	Time Division Duplex (TDD) - dynamic or symmetric
Data Latency	<3 ms (typical per CPE)
Network Modes	Layer 2 Bridge, VLAN, QinQ VLAN, NAT, DHCP server
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
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	2x 10/100/1000 Base-T (ODU)
Connector Type	2x RJ-45
Dimensions and Weight	195 x 185 x 52mm (without time synchronization connector), <1Kg (connectorized)
Power	Power over Ethernet (PoE) - 48 VDC
PoE Adapter AC-DC:	
• Input Power	100-240 VAC, 47-63 Hz
• Dimensions	120 x 60 x 35mm
PoE Adapter DC-DC:	
• Input Power	10-60 VDC
• Dimensions	160 x 60 x 30mm
Power Consumption	<10W
IP Rating	IP67
Operating Temperature	-40°c to 60°c
Operating Humidity	95% non condensing

** The actual throughput is depending on the quality of the radio link, distance and factors such as external interference.*
*** The actual radio link distance is depending on the LOS, RSSI and will result in lower MCS data rate at longer distance.*
**** The TX power should be set according to country specific regulatory requirements and should not exceed.*