

**SCORPION Base Station**  
**3000 SERIES**

**SCORPION**



**SCORPION** **Model Number: SA450**

**The best-in-class carrier grade wireless bridge**

SCORPION SA450 is the most advanced Base Station and point-to-multipoint wireless solution at the most competitive price in the market.

# SCORPION SA450 Highlights

## 3000 SERIES

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SCORPION SA450 introduces superior dynamic net throughput of 300Mbps combined with ultra-low latency and best PPS delivery.

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

SCORPION Point-to-Multipoint solutions set a benchmark of unrivaled performance and reliability, making it the ultimate choice for future-proof wireless systems.



### High Performance Radio

- Superior net throughput – 300 Mbps
- Dynamic asymmetric capacity
- Best latency - <3 ms (typical per CPE)
- 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
- Dynamic Frequency Selection (DFS)

### 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.

### Extremely Low CAPEX & OPEX

- Most competitive price
- Flexible capacity, software upgradeable
- Rugged & Reliable IP67 design
- Compact & Simple to install and maintain
- <7Watt power consumption
- Multiple frequency bands in one radio
- State-of-the-art NMS

### 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

## Radio

Radio Frequency	4.8GHz to 6GHz
Net Throughput	Net Aggregate throughput 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 dual polarization - BPSK, QPSK, 16QAM, 64QAM: <ul style="list-style-type: none"> <li>• Adaptive Coding &amp; Modulation (ACM)</li> <li>• Fixed modulation mode • LDPC coding</li> <li>• Configurable modulation thresholds (minimum / maximum)</li> </ul>
Output Power	Up to 30dBm, configurable in 1 dB step
Handling Interference	<ul style="list-style-type: none"> <li>• AIS – Automatic Interference Sensibility</li> <li>• Hitless ACM – Adaptive Coding &amp; Modulation</li> <li>• ACS – Automatic Channel Selection</li> <li>• FEC – Forward Error Correction, k = 1/2, 2/3, 3/4, 5/6</li> <li>• TDD and FDD modes - software configurable</li> </ul>
Encryption & Security	128-bits AES & MAC level authentication
DFS (ETSI)	Supported

## Antenna Configurations

Model SA450	Connectors for external antenna (2 x TNC Female Socket)
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## Networking and Management

Topology	Base Station, Point to Multipoint (PTMP)
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
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, 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	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:	<ul style="list-style-type: none"> <li>• Input Power 100-240 VAC, 47-63 Hz</li> <li>• Dimensions 120 x 60 x 35mm</li> </ul>
PoE Adapter DC-DC:	<ul style="list-style-type: none"> <li>• Input Power 10-60 VDC</li> <li>• Dimensions 160 x 60 x 30mm</li> </ul>
Power Consumption	<7Watt
IP Rating	IP67
Operating Temperature	-40°C to 60°C
Operating Humidity	95% non condensing

Specifications are subject to change periodically