wavesight

Specialists in Professional - Industrial Wireless Transmission Solutions

Designed and Manufactured in the United Kingdom

SCORPION SA450

Optimized as a Standalone Base station for short to mid range point-to-multi-point and Long Haul point-to-point applications, subject to antenna selection

The Scorpion SA450 delivers a professional grade wireless bridging solution, optimized for Data and CCTV services capable of Data Rates up to 870Mbps, at various ranges, subject to antenna selection. Utilizing the IEEE 802.11a/n/ac standards and MIMO technology, based on the latest generation Quallcomm chipsets, the SA450 is a highly integrated design optimized for Industrial and Professional applications.

Although our products operate on standard Wi-Fi spectrum 802 .11 a/n/ac spectrum they also have the capability to be operated on a new mode of operation that deviates from the IEE802.11 CSMA CA standards. Our innovative solution uses a state-of-art proprietary technique based on TDMA technology. This solution is designed to overcome the limitations of traditional CSMA/CA wireless communications at long distances, and reduce the noise and interference in surrounding radio environment.

Configurable as a point-to-point or point-to-mufti-point base station capable of receiving video feeds from multiple satellite units. The SA450 achieves exceptionally low latency and jitter transmission, critical for high quality 24/7 video delivery typical in CCTV applications.

Ideal for use with high-resolution megapixel cameras, Wavesight's Scorpion SA450 delivers consistently high bandwidth at short and medium range and is exceptionally simple to configure and install.

Key Features:

- ✓ Base station / Satellite, PtP, PtMP
- ✓ N-Type bulkhead RF connectors, 2x2 MIMO
- ✓ Operating range subject to antenna pairing
- ✓ Up to 870Mbps data rates*
- ✓ Up to 430Mbps compressed video throughput*
- ✓ 20/40/80MHz Channelization support
- ✓ User configurable gain up to 23dBm* (30dBm max)
- ✓ Screened FD GbE Interface, 48VDC POE Compliant (802.3af/at)
- ✓ Extremely compact and light
- ✓ Intelligent Channel Management
- ✓ IP67 Rated Enclosure
- ✓ Industrial Grade -20C / +70C

SCORPION SA450 Specifications

PRODUCT CODE	SC-SA450
WIRELESS INTERFACE	
Operating Frequency Range	5.150-5.350GHz - 5.470-5.725GHz - 5.725-5.825GHz (country dependant)
Operating Range	1m up to 60Km
Operating Modes	
- Single-Point Base Station	Yes
- Single-Point Satellite Station	Yes
- Multi-Point Base Station	Yes
- Multi-Point Satellite Station	Yes
- Max Satellites Supported	1~15+* (PtMP Video/WDS mode, subject to Resolution+FPS+Bandwidth+Total No. of Streams*) / 200* (AP/Client mode*)
Modulation Types & MSC Schemes	OFDM - BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM - MCS-0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15
Wireless Standards	IEEE 802.11a/ac and TDMA
Maximum RF Output Power	4W EIRP* (at +18dBm radio gain* Capable of +30dBm radio gain in IEEE non-compliant applications)
Wireless PHY Data Rate	IEEE 802.11a/n/ac version 2.0, up to 870Mbps
Wireless Data Throughput	up to 550Mbps TCP Unicast* (MCS15 256-QAM 5/6 80MHz)
Wireless Compressed Video Throughput	up to 430Mbps UDP Unicast* (MCS15 256-QAM 5/6 80MHz)
Frequency & Power	Dynamic Frequency Selection (DFS) IEEE 802.11h, Automatic Transmit Power Control (ATPC) IEEE 802.11-2007
Channelization	20MHz/40MHz/80MHz support
SECURITY FEATURES	
Encryption	Open, WPA-AUTO-PSK, WPA-PSK, WPA2-PSK, AES/TKIP
Wireless MAC Filtering	Open, Allow, Deny, Flush, Disable
Wireless SSID Suppress	Yes
Authentication	802.1x with Radius Authentication EAP-Transport Layer Security (TLS)
PLATFORM ENHANCED FEATURES	
CDD	cyclic-delay diversity
LDPC	low-density parity check
MRC	maximal ratio combining
STBC	space-time block code
TxBF	transmit beamforming & 8-bit spectral analysis resolution
iHE	integrated hardware encryption
EVMr	error vector magnitude reporting
hBBF	hardware baseband filtering
FIPS140	hardware support for FIPS140 AES certification
DTO	Intelligent Channel Management
ICM	dynamic transmit optimization
ANTENNA FEATURES	
Integrated 2x2 MIMO	N/A
N-type Bulkhead	2 x N-Type Female
MANAGEMENT FEATURES	
IEEE Standards support	802.1d, 802.1p, 802.1q, 802.11e, 802.11h, 802.11i, 802.11-2007
Management Tools	Secure Web-Server Interface, Discovery & Configuration Software, Paessler PRTG Network Monitor
Protocol Support	SNMPv1/v2/v3, HTTP, FTP, IPv4, IPv6
VLAN support	IEEE 802.1Q
QoS support	IEEE 802.1P
STP support	IEEE 802.1D
PHYSICAL INTERFACE	
Ethernet	10/100/1000 BaseT Auto Sensing, Full-Duplex, All ports screened
Optical	N/A (optional in other chassis)
Surge Protection	PoE & Data to IEC61000-4-2, 61004-4 and 61000-4-5, POE up to 58vdc, transient clamp at 65vdc
POWER SUPPLY FEATURES	
POE Input	110VAC - 240VAC, 47Hz - 63Hz
POE Output	Min. 38Vdc, Typ. 48Vdc, Max. 56Vdc, IEEE 802.3af/at compliant
DC Input	N/A (optional in other chassis)
Power Consumption	9 Watts (typ)
ENCLOSURE	
Dimensions (HxWxD)	190mm x 190mm x 75mm
IP Rating	IP67 Impact resistant ABS & Aluminium
Weight	1.5Kg
Mounting	Wall / Pole mount bracket
ENVIRONMENTAL	
Operating Temperature	-20C/+70C
Storage Temperature	-40C/+90C
Humidity	5% to 95% Relative Humidity
REGULATORY	
Approvals	EN 301-893, EN 300-328, EN 302 502, EMC 301-489/17, IEC 60950-1/-22 CB SCHEME, UK Approval to IR2007

Distributed By:

When operating radio equipment in the 5GHz spectrum please consider the local governing radio authority legislation in the design of your radio network. Global harmonized standards by FCC & ETSI exist within the 5GHz radio spectrum, however there are worldwide variances in adoption of the harmonized standards.

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