



**AS 5800 Base Station (Ext Ant)**



**AS 5810 Client Unit  
(Integrated 23 dBi antenna)**



**AS 5830 Client Unit  
(Integrated 20 dBi antenna)**

## Feature Summary

- 2x2 MIMO OFDM Radio Technology
- 300 Mbps Data Rate for bandwidth hungry applications.
- High radio output power (400mW, 28 dBm) - extended coverage.
- Optimizable for video surveillance or enterprise applications.
- VideoCast™ – proprietary multicast support for video.
- Gigabit Ethernet Port (Base Station)
- Adaptive Coding and Modulation (ACM)
- PPM™ – Polling MAC Protocol for Multipoint
- Built-in Spectrum Analyzer
- Audio Tone Antenna Alignment Tool
- Wide Frequency range from 4.90 to 6.0 GHz.
- HyperARQ™ – Preserve system performance out to long distance

## Product Description

The SkyWay-Access Series, Solectek's third-generation OFDM multipoint product line in the 5GHz frequency band, represents a new class of last-mile connectivity solution for today's large bandwidth applications.

With MIMO data rates of 300 Mbps, the Access Series can serve a wide variety of bandwidth hungry applications, from transporting video traffic from a network of network video cameras to supporting enterprise connectivity.

At the heart of the system is the newly designed MAC protocol optimized for efficiency and scalability in dense subscriber deployments in multipoint systems. The PPM Protocol is based on deterministic polling algorithm that will enhance the system capacity and subscriber unit count per base station. This new protocol, based on Solectek's successful 802.11d WiMAX product lines, is designed to provide utmost performance for carriers and enterprises.

The improved RF link performance allows more flexible deployments as well. The industry-leading 400mW high-output power radio extends the coverage area for a base station, while the advanced MIMO-based OFDM technology enhances near line-of-sight connections. Solectek's HyperARQ protocol is designed to preserve the data throughput even at long link distances.

For data security, the SkyWay Access system incorporates 128-bit AES hardware-based encryption at full line speed, without loss of data throughput. The AES algorithm was selected to be the standard encryption method by the US National Institute of Standards and Technology (NIST). In addition, the Access Series provides up to two levels of AAA protection through the configurable use of 802.1x/RADIUS and RF MAC authentication.

## Applications

- Remote Video Surveillance
- Government Data Network
- Corporate Campus Network
- Industrial Connectivity

System	BS (AS 5800)	CPE (AS5810/ 5830)
Operating Mode	TDD / Half-Duplex	
Data Rate	300 Mbps	
Link Range (1)	Up to 10 miles, Antenna dependent	
<b>Radio</b>		
Frequency	5.35–5.85 GHz (2)	
RF Power	400mW Max	400mW Max (5810) 200mW Max (5830)
RF Channel Size	10, 20, and 40 MHz	
MIMO	2 x 2, 2 streams	
Modulation	OFDM – QAM64, QAM16, QPSK, BPSK	
Modulation Modes	Fixed or Adaptive Coding & Modulation (ACM)	
FEC	1/2, 2/3, 3/4	
Media Access	PPM™ – Multipoint Polling MAC	
Antenna	External Antenna	23 dBi (5810) 20 dBi (5830)
<b>Networking</b>		
Ethernet	Gigabit Ethernet	Fast Ethernet
	Auto-negotiation, Full/Half Duplex, Max 100m separation between radio and shelter/closet.	
QoS	<ul style="list-style-type: none"> <li>Proprietary frame aggregation</li> <li>HyperARQ™ – intelligent packet correction</li> <li>Line speed packet inspection of 802.1p tags</li> <li>4 queue prioritization engine</li> </ul>	
Protocol Support	<ul style="list-style-type: none"> <li>Transparent MAC layer bridging</li> <li>Transparent VLAN (802.1q)</li> </ul>	
Management	<ul style="list-style-type: none"> <li>HTTP web server &amp; Telnet</li> <li>SNMP v1, v2c with private MIB</li> <li>NTP for server-based time support</li> <li>Filterable event log</li> </ul>	
Security	<ul style="list-style-type: none"> <li>Line speed 128bit AES encryption</li> <li>802.1x/RADIUS authentication</li> <li>MAC-based network access control</li> </ul>	

Electrical		
Voltage	48V DC, nominal	
Dissipation	10W (avg), 15W (peak)	
POE	Integrated POE/Power Supply	
AC/DC Power		
Voltage	100-240 VAC / 50-60 Hz	
Efficiency	> 85%	
AC Cord	3 prong, IEC 320 C13, country specific	
Mechanical	BS (AS 5800)	CPE (AS 5810/5830)
Dimensions	9" x 9" x 3" in	15" x 15" x 4.5" in (5810) 10.5" x 10.5" x 4" in (5830)
Weight	5.5 lb (2.5 kg)	6.5 lb (3 kg) (5810) 5 lb (2.3 kg) (5830)
Material	A380 Aluminum / ABS Plastic	
Finish	Powdercoat, Pantone 1C DuPont	
Network Ports	RJ45 via environmental seal, included	
Antenna Ports	2 N-type Conn.	None
Mounting Kits		
Dimensions	6.5" x 3.0" in	
Deg. Freedom	3 deg (elevation, azimuth, rotation)	
Adjust Range	Elevation: +/- 75 degrees Azimuth: +/- 90 degrees Polarization: 360 degrees	
Mast Mount	Mast Diameter: 0.75 to 3 inches	
Wall Mount	4 x clamps through holes	
Environmental		
Temperature	- 40 to 65 C	
Humidity	5-95%, condensing	
Protection	NEMA4 / IP67	
Regulatory		
FCC / IC	CFR47, Part 15, RSS-120	
EU	CE Mark	

Notes: 1. based on 20 MHz, QAM16-1/2, 2 stream. RF dependent.  
2. Country specific, depends on local regulations.