



**Short and Medium Range
Subscriber Unit**



**Long Range
Subscriber Unit**



**SkyWay 7800 Professional Series
Base Station**

Solectek Standard Antenna Options

- 9dBi Omni
- 15dBi 90 x 10 deg. Sector

Applications (PtMP)

- Efficient multicasting of video using the **SkyWay-Videocast™** feature
- Last mile access for carriers
- Wireless ISP subscriber networks
- Distribution networks for satellite service provider
- Government / military networks
- Private networks for schools and municipalities
- Enterprise and industrial connectivity
- Marine and seashore applications
- Security / surveillance video monitoring
- Any application using Ethernet data transport.

TECHNOLOGY SUMMARY

Continuing Solectek's tradition in high throughput, long distance wireless networking, the SkyWay 7000 Series builds upon the successful SkyWay Series products with a new, higher performance 5.8GHz wireless system.

With data rates to 108 Mbps and up to 400 mW of RF power, SkyWay 7000 delivers more capacity, farther than ever before. Such capability allows end-users to download large data files, high resolution images, video clips, and MP3 files within a matter of seconds. Streaming video and multiple VoIP connections can now be delivered or backhauled seamlessly.

Orthogonal Frequency Division Multiplexing (OFDM) technology delivers a wealth of benefits: high spectral efficiency supports class leading data rates while allowing multiple, nonoverlapping channels. OFDM is also capable of robust operation in near or non-line-of-sight (NLOS) link conditions, relaxing the stringent installation requirements associated with more traditional fixed wireless equipment.

Quality of Service (QoS) features within the SkyWay 7000 architecture allow tagged voice and video traffic to take priority over general data packet transfer, providing reliable, real-time capability even under congested link conditions. Priority privileges for marked frames are maintained from port to port: Ethernet through RF.

With security remaining a key consideration in many applications, the SkyWay 7000 delivers 128 bit AES encryption / decryption at full line speed. The AES algorithm was selected to be the standard encryption method of the US Government by the National Institute of Standards and Technology (NIST)

Physically, the SkyWay 7000 Series is fully integrated. The network engine, digital baseband, radio and antenna are all combined into a single, weatherized outdoor chassis, complete with Power over Ethernet (PoE) support. Guaranteed operational from -30C to +60C, the product can be installed at any convenient outdoor location needing only inexpensive Ethernet CAT5 cable for connection to an indoor network switch. To further assist installation, an integrated spectrum analyzer and audible antenna alignment function are provided as standard features.

The SkyWay 7000 is truly an enterprise class system that comes complete with full function bridge/router software and extensive network protocol and network management support.

Combining a high power, 108 Mbps OFDM radio with a high performance, QoS based bridge/router engine, the SkyWay 7000 Series is a powerful, yet easy-to-use product for all of your point-to-point and multipoint broadband wireless needs.

Specifications

SkyWay 7000 Professional Series PtMP

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Multipoint Performance	SkyWay 7100	SkyWay 7300	SkyWay 7500	SkyWay 7802
Link Distance ⁽¹⁾				
Using 7800 Sectoral Base	2 Miles	5 Miles	8 Miles	Antenna Dependent
Using 7800 Omni Base	1 Mile	3 Miles	4.5 Miles	Antenna Dependent
Radio Power ⁽¹⁾	50 mW	400 mW	400 mW	400 mW
Radio				
Data Rate ⁽¹⁾	108 Mbps, 72 Mbps, 54 Mbps, 36 Mbps, 18 Mbps, 12 Mbps, 9 Mbps, 6 Mbps			
Modulation	OFDM - BPSK, QPSK, 16QAM, 64QAM			
Channel Width	5,10, 20 or 40 MHz, country dependent			
Media Access	Prioritized CSMA/CA			
Frequency ⁽²⁾	5.470 - 5.875 GHz, country dependent			
DC Power	+48Vdc / 0.8A, via Power-over-Ethernet, indoor DC injector (included)			
Networking				
Ethernet	10/100Base-T, Auto-negotiating, Full/Half duplex, up to 100m separation between radio and network closet			
QoS	Line speed packet inspection of 802.1p, IP ToS, IP DiffServ tags			
	4 queue prioritization engine			
	RF MAC prioritization			
Frame Aggregation	Dynamic, User enable/disable			
Protocol Support	Transparent MAC layer bridging, IP Static Routing, RIP v1/v2 Transparent VLAN (802.1q)			
Management	HTTP Web Server, FTP, VLAN, SNMP v1/v2 with trap support and custom MIB, custom Event Log, Integrated Spectrum Analyzer, Audible Tone Alignment Function			
Security				
Encryption	Hardware accelerated, line speed 128-bit AES & 64, 128, 152-bit WEP			
Authentication	MAC address-based access control			
Channel Plan	Non-standard			
Mechanical – SkyWay 7800 Base Station				
Configuration	Outdoor, Type-N Connector			
Size	10.25" x 10" x 3"			
Weight	4.5 lbs.			
Pole Mount Adapter	2-Axis Adjustment, Accommodates 1-3" pole diameter			

Mechanical (Subscriber Units)	SkyWay 7100	SkyWay 7300	SkyWay 7500	SkyWay 7802
Configuration	Outdoor, Integrated Unit	Outdoor, Integrated Unit	Outdoor, Integrated Unit	Outdoor, Type-N Connector
Size	13" x 13" x 2.5"	13" x 13" x 2.5"	18" x 18" x 3.5"	10.25" x 10" x 3"
Weight	7.5 lbs	8.0 lbs.	14 lbs.	4.5 lbs.
Pole Mount Adapter	2-Axis Adjustment, Accommodates 1-3" pole diameter			
Environmental				
Temperature	-40° to +60° C			
Humidity	0-100% condensing			
Water/Dust	Meets IP67 requirements			
Lightning Suppression	Integrated, IEC 61000-4-5 Class 5 compliant			
Wind	125 MPH survivability, 110 MPH operation			
Wind Load @ 125 MPH	83 lbs.	83 lbs.	128 lbs.	83 lbs.
Base Station Antennas				
7008501	Omni directional antenna			
7021301	90 degree sectoral antenna			
Regulatory				
Radio Compliance	FCC CFR47, 15.247			
	Industrie Canada RSS 210			
	China MII [2002] 277			
	EU: EN 60950-1, EN 61000-3-2, EN61000-3-3, EN 301 489-1, EN 301 893			
	Mexico NOM; Cofetel			

(1) System performance and link distance for 36 Mbps/sec RF link rate setting. Throughput and link distance may be lower under NLOS conditions. Radio Power and data rate settings are subject to changes according to the country of installation.

(2) Other frequency ranges are available for deployment in countries allowing radio operation starting at 5.35 GHz. Installers are urged to check with their country's regulations authority prior to equipment purchase and deployment. Radio Power and data rate settings are subject to changes according to the country of installation.

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