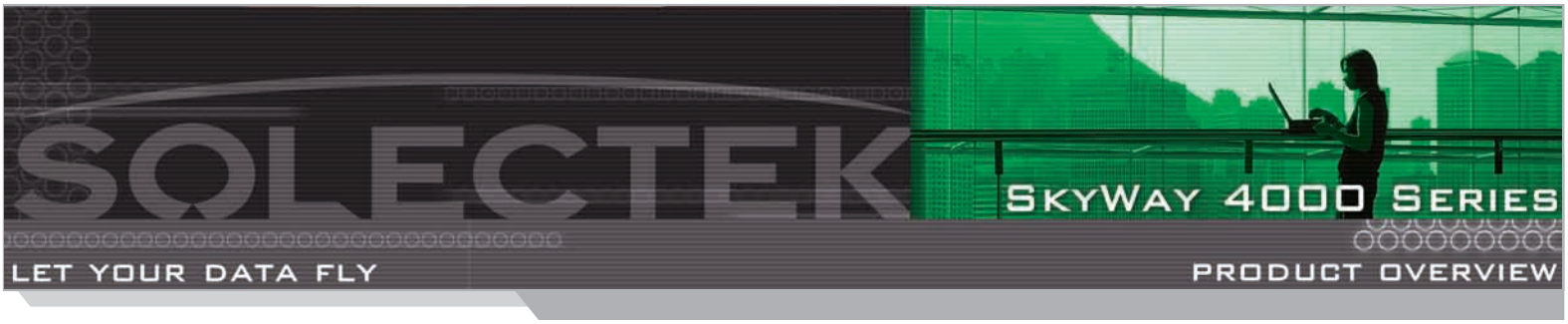

SkyWay 4000 Series

4.9GHz Broadband Wireless

Solectek, continuing to maximize the potential of wireless, offers the SkyWay 4000, an enterprise-class solution for superior range, throughput and functionality.

The SkyWay 4000 high powered bridge/router is equipped with a 400mW OFDM radio that provides a distinct advantage beyond what may be expected from other 4.9GHz products.

Product Summary

Operating in the 4.940 – 4.990 GHz frequency band, the Solectek Skyway 4000 Series allows US public safety agencies to build a secure, interference-free wireless communications infrastructure with best-in-class features and performance.

A SkyWay 4000 network can be quickly built and brought on-line for a variety public safety applications including short and long distance point-to-point and fixed multipoint configurations. Whether the end-use is file transfer, internet access, voice, or video transport, the SkyWay 4000 Series has been designed work seamlessly in your network.

The SkyWay 4000 is also available in foreign countries where the 4.9 GHz spectrum is available for licensed operation.

Features

Orthogonal Frequency Division Multiplexing (OFDM) – High spectral efficiency supports class leading data rates. 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 systems.

Power and Throughput – Delivering up to 400mW of RF power, SkyWay 4000's sophisticated radio allows long distance networks at data rates to 54 Mbps. Such capability allows end-users to download large data files, high resolution images and video clips within a matter of seconds. Streaming video and multiple VoIP connections can now be delivered or backhauled seamlessly.

Quality of Service (QoS) – features within the SkyWay 4000 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.

Security – The SkyWay 4000 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).

Ease of Installation – The SkyWay 4000 Series is fully integrated. The network engine, digital baseband, radio and antenna are all combined into a single, weatherized outdoor chassis (-30C to 60C operation), complete with **Power over Ethernet (PoE)** support.

Solectek Corporation
6370 Nancy Ridge Dr. STE 109
San Diego, CA 92121
main: 858.450.1220
fax: 858.457.2681
info@solectek.com

www.solectek.com

SOLECTEK
WIRELESS NETWORKING SOLUTIONS

SkyWay 4000 Series Specifications

4.9GHz Licensed Broadband Wireless System

POINT TO POINT PERFORMANCE	SkyWay 4101	SkyWay 4301	SkyWay 4501
Link Distance(1)	2 Miles	6 Miles	22 Miles
Radio Power	50 mW	400 mW	400 mW
MULTIPOINT PERFORMANCE	**SkyWay 4100**	**SkyWay 4300**	**SkyWay 4500**
Link Distance(1)			
using sectoral base station	1.2 Miles	3 Miles	6 Miles
using omni base station	0.6 Mile	1.6 Miles	3 Miles

RADIO	
Frequency Range	4.940 – 4.990 GHz(2), US public safety
Channel Bandwidth	5, 10, 20 or 40 MHz(3)
Channel Centers (US)	5 MHz: 4945, 4950, 4955, 4960, 4965, 4970, 4975, 4980, 4985 10 MHz: 4945, 4950, 4955, 4960, 4965, 4970, 4975, 4980, 4985 20 MHz: 4950, 4955, 4960, 4965, 4970, 4975, 4980 40 MHz: 4960, 4965, 4970
Modulation	OFDM - BPSK, QPSK, 16QAM, 64QAM
Data Rates	1.5 – 108 Mbps depending on Channel Bandwidth and Modulation selection
Media Access	Prioritized CSMA/CA
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
Security	
Encryption	Hardware accelerated, line speed 128-bit AES & 64, 128, 152-bit WEP
Authentication	MAC address-based access control

MECHANICAL			
Configuration	Outdoor, Integrated Unit	Outdoor, Integrated Unit	Outdoor Integrated Unit
Size	13" x 13" x 2.5"	13" x 13" x 2.5"	18" x 18" x 3.5"
Weight	7.5 lbs	8.0 lbs.	14 lbs.
Pole Mount Adapter	2-Axis Adjustment, Accommodates 1-3" pole diameter		

ENVIRONMENTAL			
Temperature	-30º to +60º C		
Humidity	0-100% condensing		
Water/Dust protection	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.

REGULATORY	
Radio Compliance	FCC Part 90

(1) Link distances are for 36 Mbps data rate setting and a channel bandwidth of 20 MHz. Other combinations of bandwidth and data rate will yield different link distance results. Throughput and link distances may be lower under NLOS conditions.

(2) Other frequency ranges are available for deployment in countries allowing radio operation between 4.90 and 5.35 GHz. Installers are urged to check with their country's regulations authority prior to equipment purchase and deployment.

(3) For US operation, 40 MHz bandwidth is allowable only for installations which have been granted an "experimental" license by the FCC.

SOLECTEK
WIRELESS NETWORKING SOLUTIONS