

# SkyWay™ Series

## High Speed/Long Range Wireless Bridge/Router

### Features:

- ❖ Up to 11 Mbps Wireless Data Rate (up to 64 Sub-Stations)
- ❖ Links Distances of up to 30 Miles (48 Km)
- ❖ Up to 4,000 ft (1.22 Km) of 10/100 Ethernet and RS-422 Connections
- ❖ Bridging and Static IP Routing
- ❖ Full SNMP Management
- ❖ Fiber and Copper 10/100 Ethernet Options
- ❖ Web-Based Management \*
- ❖ Remote Configuration via Telnet (over TCP/IP) \*
- ❖ Remote Software Updates via TFTP, X-modem, or Y-modem
- ❖ Single, ruggedized, mast-mounted unit (UL Outdoor rated)
- ❖ FCC, Industrie Canada, ETSI, and UL certified
- ❖ Milspec connectors for reliable service
- ❖ AC and DC power options

### Additional Features include:

- ❖ RF Anti-Interference (Reed-Solomon Coding) \*
- ❖ RF Data Encryption (31 bits)
- ❖ Bandwidth Mangement (Service Providers)
- ❖ Minimum Guaranteed Bandwidth (Private Networks)
- ❖ Voice over IP Support \*
- ❖ Routing Protocols such as RIP, RIPII, OSPF, IGMP and BGP4 \*

\* Only available with 2nd release products

### SkyWay – A Full-Function Unit

The SkyWay outdoor wireless bridge/router is capable of high speed data transfer for distances up to 30 miles (48 km) utilizing Solecetek's proven RF polling protocol. With SkyWay series products, there is no need for an indoor unit. SkyWay is user friendly, cost effective and can be easily mounted on a rooftop or on a mast or tower up to 4,000 feet. SkyWay Series' industrial grade, ruggedized unit is impermeable and designed to withstand all harsh environments for extended periods.

### Point-to-Point or Multi-Point Applications

SkyWay products can be used anywhere high speed data transfer or internet access is required including corporate offices, educational campuses, healthcare facilities, manufacturing, or retail. Configurations can be set for Point-to-Point or Multi-Point applications.

Each SkyWay unit can function as a base station (central site), a substation (remote site), or either end of a point-to-point link. Solecetek's broad selection of FCC and Industrie Canada certified antennas ensures that desired radio coverage can be obtained.

### Bandwidth Allocation

Solecetek's proprietary polling protocol allows for flexibility in bandwidth allocation. Separate models are designed for service providers and for private networks.

**Service Providers:** With the bandwidth management feature, service providers can set bandwidth variations dependant on specific customer requirements and billing arrangements.

**Private Networks:** For private networks, each remote location is guaranteed a minimum bandwidth allocation.

### Remote Operations

With SkyWay Series Products, all management functions, monitoring, and software updates can be performed remotely from any desired location.

### Support

Solecetek offers a world-wide network of factory trained resellers as well as on-site and on-line technical assistance programs.



P R E L I M I N A R Y

**SOLECTEK**  
"The Wireless Networking Company"

# SkyWay Specifications:

P R E L I M I N A R Y

## Features and Interfaces:

<b>RF Modem Speeds:</b>	11 Mbps, 5.5 Mbps and 2 Mbps (by menu selection).
<b>RF Protocol:</b>	Solectek polling protocol for reliable links of any distance without RF "signal capture" or "hidden node" effects.
<b>Wide Area Network Architectures:</b>	Point-to-Point (one-to-one) and/or Multi-Point (one-to-many), 64 substations max, standard with all SkyWay models. Multiple systems may be co-located and run back-to-back to extend link distances and/or cover multiple sectors from the same mast.
<b>Wireless Link Distance:</b>	Up to 30 miles (48 Km) per pair with clear radio line of sight depending on antenna selected. All equipment ( <i>except antennas and cables</i> ) included with standard system. No additional amplifiers required.
<b>Media Interfaces, Bridging, and Routing Protocols:</b>	IEEE 802.3 Ethernet; IEEE 802.1D Spanning Tree, transparent MAC layer bridging, IP static routing.
<b>LAN Operating System Compatibility:</b>	Compatible with all major Ethernet LAN operating systems including Novell Netware, Microsoft NT, DEC Pathworks, Banyan Vines, LAN Manager.
<b>LAN Interfaces:</b>	Ethernet only: 10/100 Mbps twisted-pair or 10/100 Mbps multi-mode fiber.
<b>Management Capabilities:</b>	<ul style="list-style-type: none"><li>- SNMP MIB II, Custom MIB in-band</li><li>- TFTP in-band</li><li>- RS-422 or RS-232 asynchronous console and/or modem out-of-band</li></ul>

## Radio Characteristics:

<b>Frequency:</b>	2.4 to 2.4835 GHz
<b>Radio Channels:</b>	From 2.4 to 2.475 GHz (5 MHz intervals)
<b>RF Coding:</b>	Direct Sequence Spread Spectrum (DSSS) using Solectek proprietary RF-DLC polling protocol to address multiple substations.
<b>Bit Error Rate (BER):</b>	<ul style="list-style-type: none"><li>- 11 Mbps - 1.10-8 @ -76 dBm</li><li>- 5.5 Mbps - 1x10-8 @ -79 dBm</li><li>- 2 Mbps - 1x10-8 @ -81 dBm</li></ul>
<b>RF Security Codes:</b>	128 variations available
<b>Radio Link Encryption:</b>	31 bit data encryption
<b>Radio License Required:</b>	No user license required. Certified for user installation and unlicensed operation per FCC 15.247 and FCC 15.203.

## Hardware:

<b>Chassis Type:</b>	Single, sealed, mast-mounted unit. UL Outdoor certifications
<b>Chassis Specifications:</b>	8.5" W x 14" L x 3.5" H (.21m W x .35m L x .08m)
<b>Chassis Environmental:</b>	-30C to +70C
<b>Power Supply:</b>	Autosensing 100-250 VAC, 50/60 Hz or 36-50 VDC
<b>Power Consumption:</b>	1.2 amps @ 120 VAC, .6 amps @ 240VAC, .5 amps @ 48 VDC
<b>Certifications:</b>	Power Supply: UL Chassis: FCC Class A, UL Outdoor
<b>SkyWay to Antenna Cable:</b>	8 foot (2m) chassis-to-antenna cable supplied
<b>SkyWay to Hub/Router:</b>	Up to 4,000 foot (3 to 1,200m) console; 10 to 300 foot (3 to 91m) Ethernet; 10 to 6,600 foot (3 to 2,000m) multi-mode fiber. Due to milspec connectors, approximate length, pre-terminated cable with milspec connectors must be ordered from Solectek. RJ-45 plugs and DC power terminals (if DC option) can be installed by customer after initial installation.
<b>Antennas:</b>	Various types of FCC certified grid, flat panel, sectoral, and omni directional antennas are available from Solectek depending on wireless link distance and application requirements. Antennas sold separately.
<b>Options:</b>	AC or DC power; 10/100 Base-TX twisted-pair or 100 Base-FX fiber, or country-specific power levels.

## Warranty:

One year limited warranty. Substitution of any component with non-Solectek certified components will void FCC certification and Solectek warranty. Solectek warranties do not cover outside radio (RF) interference, product performance negatively affected by RF interference, or suitability for a particular purpose.



SOLECTEK CORPORATION  
6370 Nancy Ridge Drive, Suite 109  
San Diego, CA 92121-3212  
(858) 450-1220 phone  
(858) 457-2681 fax  
e-mail: [inquiries@solectek.com](mailto:inquiries@solectek.com)

[www.solectek.com](http://www.solectek.com)