

SOLECTEK

SkyWay-MAX 3.65 GHz Base Station

An Affordable Base Station Optimized Specifically for WISPs

Designed and supported in the USA



Product Highlights

- High power radio
- Single, outdoor all-in-one architecture
- Optional variable-beamwidth sectoral antenna.
- Indoor base station controller
- SNMP and EMS management
- GPS synchronization
- Fujitsu MB87M3550 processor based

Designed, Manufactured and Supported by Solectek in the USA

Solectek hardware and software engineers, as well as technical support representatives, are located at our headquarters in San Diego, CA. Most of Solectek's competitors are based out of countries as far as Israel and India, and some competitors subcontract their engineering work and/or technical support. At Solectek, the people who designed and manufactured our 3.65 GHz base station are in the same building as sales, marketing and technical support personnel, and we're ready to help when you need us.

The Affordable WiMAX Platform — Optimized for WISPs

Solectek's end-to-end WiMAX platform has been designed from the ground up for small to mid-size WISPs, rather than large carriers. If one of our competitors has tried to sell you one of their "carrier-class" base stations, which can be 50% or more expensive per tower site, harder to install and even more challenging to operate, you will be pleasantly surprised when Solectek provides a quotation and detailed description of our platform's competitive advantages. Solectek understands that ROI is high on the list of priorities when it comes to operating a WISP. Our system is optimized for fixed broadband delivery to homes, business and municipalities within a WISP business model.

Scalability

Of critical concern to service providers both large and small is the ability to scale infrastructure investment with business growth. By taking advantage of Solectek's base station architecture, the SkyWay MAX series can be **rolled out initially as a simple, single sector base site**, then migrated seamlessly to a multi-sectored, fully functional, fully redundant managed base system.

As the customer base expands, base station sectors can be easily added and reconfigured. A **field adjustable, variable beamwidth sectoral antenna** is an integral part of the SkyWay-MAX architecture, allowing on-tower adjustment of sector pattern and eliminating the expense of stocking multiple antenna types.

Reliability

As a network expands, reliability becomes increasingly critical. The SkyWay MAX system can provide up to 2N reliability across all functional systems; each and every element in a site deployment has a backup or failover device. This approach is not only superior to the N+1 approaches used by other infrastructure architectures, but in the case of Solectek's base station architecture, also more cost effective.

Base Station Controller (IDU)

The base station controller provides for GPS synchronization, redundant power supply, base station fail-over switch as well as aggregating the traffic from base stations and aiding the remote management systems. The elements are modular and can be purchased as needed for your network growth.



SOLECTEK Specifications

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System	
Frequency	3650 – 3675 MHz
Bandwidth	3.5, 7.0 MHz
Modulation	Dynamic OFDM 256 - QAM64, QAM16, BPSK, QPSK
Spectral Efficiency	up to 5bps/Hz
Throughput	Up to 23 Mbps per sector, 208 Mbps per site
Protocol Compliance	IEEE 802.16-2004
Number of Clients	1024
Security	
Authorization	PKM, configurable credentials lifetime Key Management X.509 digital certificates, RSA (PKCS #1) public key algorithm
Encryption	3DES, AES
Base Station	
Sectorization	45-120 degree, field adjustable/ replaceable CS2 Sectoral Antenna Optional, external, narrow band RF cavity filter
RF Output Power	up to 4 Watts (see Note 1)
EIRP	up to 200 Watts (see Note 1)
Network	802.1d Transparent Bridging
Packet Classification	802.1p/q, TOS/Diffserv, L2/L3 Addressing
Management	
EMS	Customizable, full radio network management + control system Integrated IDU or NOC Server based
Access	SkyWay-Max Manager, Telnet/SSH, SNMP v1, v2

Control	Address/Port filtering
	QoS packet inspection + prioritization
	SLA bandwidth provisioning - CIR, EIR, best effort CoS partitioning for latency, jitter sensitive payload
Diagnostics	RF, Ethernet port status, Custom Event Log, Alarms and SNMP traps GPS derived, UTC network clock

Physical	
Size	Base Station 28" H x 8" W x 7" D Indoor Controller (optional) <ul style="list-style-type: none"> • 19" rackmount compatible cPCI cage • 4U high • 12" depth
	Weight

Power	
Power	-48 VDC, 100 W peak consumption

Environmental	
Operating Temperature	-40° to +60°C
Humidity	0-100%, condensing
Water/Dust	IP67
Lightning	Integrated, IEC 61000-4-5 Class 5 protection on all ports
Wind	110 MPH operation, 125 MPH survivability

Regulatory	
Regulatory	FCC Part 15, 90

Note 1: Actual maximum power may be federally regulated/limited. Consult appropriate regulatory agency for your country/region.

