

SkyWay-MAX: Indoor Controller

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3.5 and 3.65 GHz WiMAX Indoor Controller



Solectek WiMAX™: Powerful & Affordable

The SkyWay-MAX™ system provides for extremely low cost of entry, requiring only a single outdoor Base Station Unit to begin service. As the number of subscribers grows, sectorization of the base site enables easy growth of your network. With the SkyWay-MAX Indoor Controller (IDC), additional sectors can be added to enhance performance, management and reliability while protecting your investment.

The Indoor Controller cards are housed within a compact 2U 19" rackmount chassis. Each card delivers a unique and independent function for the Base Site. These flexible cards can be added and arranged to suit your specific base station size and desired features.

Indoor Controller Components:

Flexible Uplink Card

The Uplink Card (3000902) is used to aggregate data and power from the Base Station ASN gateway site and deliver it to the Outdoor Base Station Units (BSUs). Each Uplink Card can support up to four (4) BSU sectors and provides monitoring of BSU power, Ethernet connectivity and GPS status. To power the outdoor BSUs, Solectek's Uplink Card can be interfaced to an external -48V rectifier or alternative source of -48V power. Integrated management of the external rectifier is provided through a -48V status connection, supplying I/O for both I2C and open-collector based rectifier models.

Optimized pre-built Uplink cables, routed between the Uplink Card and BSU, are available from Solectek in

lengths from 15 to 85m (50 to 270 ft). Please contact Solectek for more information.

GPS to Synchronize Sectors and Sites

For multiple sector Base Sites, a GPS Kit (3000903) provides each BSU with a GPS based synchronization pulse. By precisely aligning the intra- and inter-sector transmit and receive slots, spectral efficiency and frequency reuse is maximized. The kit includes both a GPS card (supports up to 4 sectors) and an amplified outdoor GPS antenna and mounting kit.

Advanced IDC Manager (on-board computer)

The optional IDC Manager Card and Software (3000904) is a fully self-contained management node. Built upon an embedded Java/Linux Intel Pentium platform, the IDC Manager provides management access to all of the Indoor Controller functions, including the configuration and status of each of the Indoor Controller cards. Access is via Solectek's SkyWay-Max Manager GUI application, Solectek's EMS application, or via Telnet/SSH CLI interface.

Failover Switch for Optimum Reliability

BSU Failover functionality is provided by an optional Failover switch (3000905), an L2/L3 network device that detects a BSU failure and re-routes network traffic to a pre-provisioned, hot-standby BSU.

Easy, Pre-Configured Solutions

Solectek's Indoor Controller components are available a la Carte and in pre-assembled, pre-tested configurations.



SkyWay-MAX Indoor Controller: Technical Specifications

System	
Dimensions (W x H x D)	43.5 x 8.5 x 29 cm (17.25 x 3.25 x 11.75 in)
Rack Height	2U
Temperature Range	0 to 45C (operating) -20 to 60C (non-operating)
Humidity	0 – 95%, non-condensing
Vibration / Shock	1.0 Grms / 10G @ 11 ms
2U 19" Rackmount Chassis (3000901)	
Weight	6.7 kg (15.25 lbs)
Input Power	100-240VAC, 50-60 Hz
Chassis Power Dissipation	20W (See Note 1)
Regulatory	CE, FCC, UL
Uplink Card (3000902)	
Rack Size	6U x 8 HP
Weight	0.1 kg (0.2 lb)
Connectors	
Uplink to BSU	DB15 (x4)
Network/Gateway Connection	RJ45 (x4)
-48V External Rectifier Status	DB9
-48V External Rectifier Power	Phoenix Contact 1898839
Indicators	
Connectivity	Uplink Cable (x4) Ethernet Link (x4) GPS Sync (x4)
Status	Chassis Power -48V Rectifier Power/Failure
GPS Kit (3000903)	
Card	
Size	6U x 4 HP
Weight	0.1 kg (0.2 lb)
RF Input	SMB
Indicators	Tx, Rx, Sync pulse

GPS Kit (3000903) (cont'd)	
Antenna/Pre-amp	
Dimensions (H x Dia)	184 x 81 mm (7.25 x 3.2 in)
Weight	0.34 kg (0.75 lb)
Temperature	-40 to 85C
Humidity	0 – 95%
Regulatory	CE, RoHS
Frequency	1575 MHz
Antenna Gain	3.5 dBi
Amplifier Gain	40 dB
RF output connector	N-Type
Impedance	50 ohms
Mast Mounting Kit	Included
RF Cable	Not Included (See Note 2)
IDU Manager	
Rack	6U x 4 HP
Weight	0.1 kg (0.2 lb)
Connectors	
Local Keyboard/Mouse	USB x2
Monitor	VGA
Local 10/100 Ethernet	RJ45
Indicators	Power, Ethernet Link, Speed, Activity
Controls	Reset Button
Operating System	Linux
Management Functions	
Time of Day	Via GPS
Status	BSU Connectivity (Cable, Ethernet GPS sync) Uplink Card GPS card/Ant kit health -48V Rectifier Power/Status 2U Chassis

NOTES:

[1] Configured per P/N 3000920. Does not power outdoor BSU.

[2] For convenience, a short SMB to N-Female pigtail cable is included.

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