



**SkyWay-XM Split Architecture with IDU, ODU, and Antenna shown.**

## Technical Summary

- Frequency Bands: 6 – 38 GHz
- Channel BW  
10 to 30 MHz (FCC)  
7 to 56 MHz (ETSI)
- Tx Power: 16 to 30 dBm
- Interface Options:  
100/1000Base-T, SFP option  
Up to 63 T1/E1  
3 x STM-1 transport
- Modulation: up to 256 QAM
- Temp Range: -40 to 55 C
- Power Consumption: 80W, typical.

## Applications

- Carrier PDH/SDH backhaul
- Backhaul for video surveillance monitoring
- Government inter-building networks
- Connection of industrial sites for voice and data

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## Feature Summary

- ODU-IDU split architecture with an RF cable connection
- Modular design for flexible configuration and maintenance
- Data throughput 700 Mbps aggregate (56 MHz channel)
- Configuration mode support for 1+0, 1+1, 2+0, 2+2, and 4+0
- Adaptive coding and modulation (ACM)
- Adaptive transmit power control (ATPC)
- Out-of-band management with NMS
- Rapid spanning tree mode (RSTP) - IEEE802.1w
- Multiple spanning tree mode (MSTP) - IEEE802.1s
- Support for LACP (Link Aggregation Control Protocol) - IEEE802.3ad
- Support for XPIC (Cross pol interference cancellation) - Optional
- Ring architecture support with built-in management software
- 2+0 East-West repeater operation with a single IDU
- Support for both PDH and SDH operation with built-in ADM
- Built-in Crosspoint switch for efficient T1/E1 routing
- Voice/data orderwire and Form-C relay alarm output

## Product Description

Solectek's SkyWay-XM Series is an ultra-flexible, high performance licensed microwave backhaul solution for mobile and private network applications. The product is designed to provide carrier-grade reliability and future-proof infrastructure scalability.

The SkyWay-XM Series can support up to 700Mbps aggregate throughput using 56MHz channel and 256QAM modulation. With the addition of 2+0 operation within one IDU, the link can achieve full Gigabit capacity.

The SkyWay-XM Series packs high-end features into a single 1U chassis. Modular configuration allows users to deploy a low cost basic system and the upgrade to richer capabilities as needed.

For applications requiring additional performance and reliability, SkyWay-XM can be configured in various topologies, including 1+0, 1+1, 2+0, 2+2, and 4+0. Support for ring topology is native to the system and provides configurable ring failover, traffic grooming and Layer 2/3 QoS functions.

SkyWay-XM is equally ready for carrier-grade PDH/SDH circuits as well. Users can expand from basic Ethernet to 63 T1/E1 lines and 3xSTM-1 circuits with built-in T1/E1 mapping and add/drop multiplexer (ADM).

Latest feature sets include support for XPIC (Cross Polarization Interference Cancellation) for flexible dual-polarization antennas, and support for 2+0 Link aggregation protocol, and Layer 2 protocol tunneling (L2PT).

	6 GHz	7 GHz	8 GHz	11 GHz	13 GHz	15 GHz	18 GHz	23 GHz	32 GHz	38 GHz
Freq.	5.9 – 7.12	7.1–7.9	7.7–8.5	10.7-11.7	12.7-13.3	14.4–15.4	17.7-19.7	21.2-23.6	31.8-33.4	37.0-40.0
TR Spacing (MHz)	150, 160, 170, 240, 252, 340	154, 160, 161, 168, 190, 254	119, 126, 151, 208, 266, 311	490, 500, 530	266	315, 322, 420, 475, 490, 640	1008, 1010, 1560	1008, 1200, 1232	812	700, 1260

System	
Frequency Bands	FDD / Full-Duplex
Modulation Mode	QPSK, 16QAM, 32QAM, 64QAM, 128QAM, 256QAM
Channel Bandwidth	
CEPT/ETSI	7, 14, 28, and 56 MHz
ANSI/FCC	10, 20, 30, 40 and 50 MHz
Data Rate	700Mbps aggregate (56MHz, 256QAM)
Tx Power	Up to 30 dBm, Depends on Frequency and Modulation
RF Sensitivity	-66dBm @128QAM, -70dBm@64QAM, -73dBm@32QAM, -78dBm@16QAM, -85dBm@QPSK (BER=1E-6, 28MHZ BW)
IF Frequency	350 MHz for Tx, 140 MHz for Rx
Protocol Support	Adaptive coding and modulation (ACM) Automatic Tx Power Control (ATPC) Rapid spanning tree mode (RSTP) Multiple spanning tree mode (MSTP) Link aggregation control protocol (LACP) Layer 2 protocol tunneling (L2PT)
Management	<ul style="list-style-type: none"> <li>• HTTP web server, Telnet</li> <li>• SNMP Traps</li> <li>• Solectek EMS Support</li> </ul>
Latency	150 to 600 µsec, typical Ethernet config/traffic dependent
Power Consumption	60W to 180W Configuration dependent
Power Supply	-38.4 V to -60V DC (ODU powered by RF cable from IDU)
MTBF	30 years
Compliance	FCC part 101, ETSI EN302 217-2-2

Outdoor Unit (ODU)	
Configuration	Direct Mount to Antenna
Size	11 in (28 cm) diameter 5.5 in (14 cm) height
Weight	9.5 lbs (4.3 kg))
Temperature	-33 to 55C
Indoor Unit (IDU)	
Configuration	1U 19" Rack Mount
Size (H x D x W)	17.5 x 9.4 x 1.75 in (45 x 24 x 4.5 cm)
Weight (POE)	7.5 lbs (3.4 kg), fully loaded
Temperature	-5 to 55C
Interface	
IDU to network	Fast or GigE Ethernet, (TX or SFP) Up to 63 T1/E1 (Breakout cable required) Up to 3x STM-1 (Optical, Electrical or SFP)
IDU/ODU	N-type Female for LMR cable
LEDS	Multi-state indicators for Power, Alarm, Fault

Note: Contact Solectek Sales for details on the Tx Power and Rx Sensitivity specifications

