

SkyLink-CGI

All-Indoor High-Capacity Microwave Link
For Long-Haul Backbone Connectivity

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NETWORKS

Features

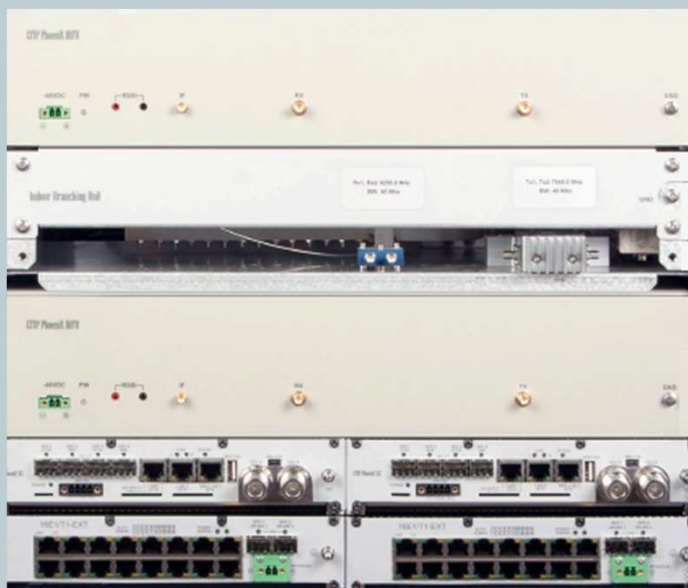
- All indoor digital microwave system (SPU, RFU and IBU) for ultimate reliability
- High-capacity up to 1Gbps and long distance over 30 miles
- Up to 1024QAM with hitless ACM and bandwidth up to 80MHz
- Available in all FCC/NTIA/ETSI configurations in 2, 4, 6, 7, 8, and 11GHz
- Mixed traffic of n x ASI signals along with Fast /Gigabit Ethernet
- Dynamic Hitless Adaptive Modulation and advanced forward error correction techniques
- 1+0, 1+1 hot-standby, 2+0, and 2+2 XPIC configurations
- 16 x T1/E1 or 2 x STM-1 native transport with prioritization
- Compact size - from 3U (basic 1+0) to 8U (full options, shown below)
- Expandable to 64 x T1/E1 and 16 x ASI interfaces

Applications

- Long-haul, high-capacity backbone radio links with mission-critical reliability for public safety, military, government, and telecom carrier applications.

Component Details

- RFU (radio frequency unit – top unit): Radio front end with input from SPU and output to IBU
- IBU (interconnection branching unit): provides diplexer and signal combining functions. 2U rack mount. Waveguide output
- SPU (signal processing unit – second from bottom): houses digital, modem and IF sections. 1U and half rack so two units can be installed side by side)
- SIU (signal interface unit – bottom): provides interface and processing for 16xT1/E1 and 2xSTM-1 circuit



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Technical Specifications

SkyLink-CGI

Signal Processing Unit (SPU)

Radio Link Capacity	Up to 1Gbps (2+0), using 80MHz BW XPIC, 512QAM
Modulation	Up to 1024QAM, hitless adaptive modulation
Configuration	1+0, 1+1 HSB/FS/SD, 2+0 (L1 aggregation), 2+2 (with two SPUs)
Channel Bandwidth	3.5MHz to 56MHz (ETSI), 5MHz to 80MHz (FCC)
Ethernet Interface	3 x 1000Base-T, 4 x SFP ports, 1 x 1000Base-T (management)
RF port	2 x N-Type Female
Temperature / Humidity	-5 °C to 45 °C. 0 to 95%
Size / Weight	½ width 1U, 2.2kg / 4.9lbs
Power Consumption	30W Max (RFU only), 180W Max (SPU + 2x RFU)

Radio Frequency Unit (RFU)

Frequency Band	2, 4, 6L, 6U, 7, 8, 11 GHz					
Antenna port (with diplexers)	N-type (6L/6U GHz), UBR84 (7.8GHz), UBG100 (11GHz)					
Antenna port (without diplexers)	2 x SMA ports for Tx and Rx					
SPU port	SMA port					
RSSI port	BNC for multimeter					
Frequency stability	± 10 ppm					
Temperature / Humidity	-5 °C to 55 °C. 0 to 95%					
Input DC Voltage	-40 to -57V DC					
Size / Weight	2U, 5.8 kg / 12.8 lbs					
Power consumption	39 – 55W					
Tx / Rx Parameters	2 GHz	4 GHz	6L/6U GHz	7 GHz	8 GHz	11 GHz
Tx Power (dBm)						
Minimum Power Setting	14	14	13	12	11	9
4QAM	35	33	33	32	31	29
16QAM	34	32	32	31	30	28
32QAM	33	31	31	30	29	27
64QAM	32	30	30	29	28	26
128QAM	32	30	30	29	28	26
256QAM	31	29	29	28	27	25
512QAM	30	28	28	27	26	24
1024QAM	27	25	25	24	23	21
Rx Sensitivity (dBm) @ 30MHz BW						
4QAM	-86	-85	-84	-82.5	-83.5	-83
16QAM	-79.5	-79.5	-78	-77.5	-76.5	-76.5
32QAM	-76.5	-76.5	-75	-74	-73.5	-74
64QAM	-73.5	-73.5	-72	-71.5	-71	-70.5
128QAM	-71	-70.5	-69.5	-68.5	-68	-68
256QAM	-68	-67.5	-66	-66	-63.5	-64.5
512QAM	-65	-64.5	-63	-61.5	-60.5	-61.5
1024QAM	-61	-61.5	-59.5	-59.5	-57.5	-58.5
Frequency Range (GHz)	1.9 – 2.4	(A) 3.6 – 4.2 (B) 4.4 – 5.0	5.925 – 6.425 6.425 – 7.125	7.11 – 7.9	7.725 – 8.5	10.7 – 11.7
T/R Spacing options (MHz)	45, 175, 189	(A) 213, 320 (B) 100, 300, 312	(6L) 252.04, 266 (6U) 160. 170, 200, 340	154, 161, 168, 196, 245	119, 126, 154, 160, 208, 266, 300, 310, 525, 550	490, 500, 530

Interconnection Branching Unit (IBU)

Antenna port	Waveguide flange
RFU port	2 x SMA Female
Temperature	-33 °C to 55 °C
Size / Weight	2U, 3.5 kg / 7.7 lbs