

SkyLink CG2X

Compact High Capacity Gigabit Ethernet PTP Radio System

Delivering High Bandwidth Licensed Microwave Solutions

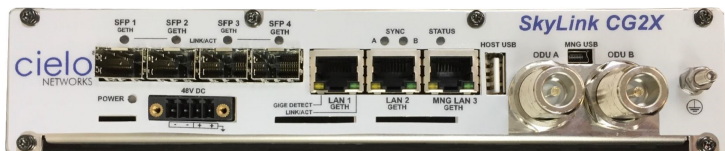
Features

- Newest member of the SkyLink CG2 Family — SkyLink CG2X
- High Capacity Digital Microwave System — over 980 Mbps
- NTIA bands at 7/8/15 GHz
- Scalable GigE IP bandwidth - up to 494 Mbps Ethernet for 1+0, 988 Mbps for 2+0
- Payload: Six GigE User Ports and One GigE NMS Port with integrated Ethernet Switch
- Scalable modulation - QPSK, 16, 32, 64, 128, 256, 512, and 1024 QAM
- Dynamic Hitless Adaptive Modulation and advanced forward error correction techniques for improved link performance
- AES 128-bit / 256-bit Encryption
- ATPC Support
- 1+1 Hot-Standby and 2+0 Operation
- Compact IDU size of one RU height & one half 19-inch rack width
- Common compatible IDU for all ODU RF bands
- SNMP remote management
- User friendly Web GUI management solution



Applications

- Fixed Wireless Access & Fiber Network Extension
- Cellular, WiMAX, and WISP Backhaul
- Enterprise and Private Networks
- Government, Defense, and Public Safety Networks
- Critical Infrastructure Communications Redundancy
- Star, Cascade (“daisy chain”), or Ring/Consecutive Point Network Topologies



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Technical Specifications

SkyLink CG2X

General Information	7 GHz	8 GHz	15 GHz
Frequency Range	7.1 - 7.9 GHz	7.9 - 8.5 GHz	14.4 - 15.4 GHz
T-R Spacing	300 MHz	360 MHz	315/322/420/475/490/ 640/644/728 MHz
RF Channel Spacing	10/20/30/40/50/56 MHz	10/20/30/40/50/56 MHz	10/20/30/40/50/56 MHz
Frequency Accuracy	7 PPM		

* NTIA specific, other bands available for FCC/ETSI

Radio Information	7/8 GHz							
Modulation	QPSK	16QAM	32QAM	64QAM	128QAM	256QAM	512QAM	1024QAM
Transmit Power	30 dBm	28 dBm	28 dBm	24 dBm	24 dBm	24 dBm	21 dBm	21 dBm
Receiver Sensitivity (BER 10e-6)	-80 dBm	-77 dBm	-75 dBm	-70 dBm	-67 dBm	-64 dBm	-61 dBm	-60 dBm
Receiver Overload (BER 10e-6)	-20 dBm	-20 dBm	-20 dBm	-23 dBm	-23 dBm	-23 dBm	-23 dBm	-23 dBm

Radio Information	15 GHz							
Modulation	QPSK	16QAM	32QAM	64QAM	128QAM	256QAM	512QAM	1024QAM
Transmit Power	26 dBm	23 dBm	23 dBm	18 dBm	18 dBm	18 dBm	15 dBm	15 dBm
Receiver Sensitivity (BER 10e-6)	-83 dBm	-78 dBm	-74 dBm	-71 dBm	-69 dBm	-64 dBm	-62 dBm	-61 dBm
Receiver Overload (BER 10e-6)	-20 dBm	-20 dBm	-20 dBm	-23 dBm	-23 dBm	-23 dBm	-23 dBm	-23 dBm

RF Channel Size	Capacity Bandwidth - Maximum							
	Modulation	QPSK	16QAM	32QAM	64QAM	128QAM	256 QAM	1024 QAM
10 MHz		17 Mbps	34 Mbps	43 Mbps	52 Mbps			
20 MHz		34 Mbps	69 Mbps	86 Mbps	104 Mbps	121 Mbps		
30 MHz		52 Mbps	104 Mbps	130 Mbps	156 Mbps	182 Mbps	208 Mbps	260 Mbps
40 MHz		69 Mbps	138 Mbps	173 Mbps	208 Mbps	243 Mbps	277 Mbps	347 Mbps
50 MHz		86 Mbps	172 Mbps	215 Mbps	258 Mbps	301 Mbps	344 Mbps	430 Mbps
56 MHz		98 Mbps	197 Mbps	247 Mbps	296 Mbps	346 Mbps	395 Mbps	494 Mbps

Payload

Ethernet: 15 to 988 Mbps

Physical Interfaces

Ethernet

4xSFP Slot (1Gbps/2.5Gbps)
2xRJ-45 10/100/1000Base-TX
1xRJ-45 10/100/1000Base-TX (NMS or User)

Modem/IF Module

IDU: 2 x N - Female
ODU: N - Female
Frequency: TX: 350 MHz / RX: 140 MHz

Power

Input Voltage

-48VDC: -36 to -60 VDC

Power Consumption

IDU: 30W
ODU: 55W (per ODU)

Encryption

AES: 128 or 256 bit

Management

Remote Access

SNMP V2, V3
Web-Based GUI (HTTP/HTTps)
Telnet/SSH - Command Line Interface
Interface: 10/100/1000Base-TX, RJ-45

Local Access

Ethernet: GUI/Telnet
Interface: USB

Topology

In-Band and Out-of-Band Management with embedded switch

RSL Measurement

Voltage output at ODU with BNC Interface and Web-GUI

Environmental

Indoor Unit

Operating Temperature: -5° to +45°C
Relative Humidity: 0 to 95%, non-condensing
Altitude: 4,500 m

Outdoor Unit

Operating Temperature: -33° to +55°C
Relative Humidity: 0 to 100%
Altitude: 4,500 m

Mechanical

Indoor Unit

Size: 8.5W x 9.9D x 1.8H inches (1RU)
Weight: 5.0 pounds

Outdoor Unit

Size: 10.0 diameter x 3.6 deep inches
Weight: 8.6 pounds

Data Capacity

SkyLink CG2X

	Capacity Bandwidth - Strong FEC								
	Modulation	QPSK	16QAM	32QAM	64QAM	128QAM	256 QAM	512 QAM	1024 QAM
RF Channel Size	10 MHz	15 Mbps	30 Mbps	38 Mbps	46 Mbps				
	20 MHz	30 Mbps	61 Mbps	77 Mbps	92 Mbps	107 Mbps	123 Mbps	138 Mbps	154 Mbps
	30 MHz	46 Mbps	92 Mbps	115 Mbps	138 Mbps	161 Mbps	184 Mbps	208 Mbps	231 Mbps
	40 MHz	61 Mbps	123 Mbps	154 Mbps	184 Mbps	215 Mbps	246 Mbps	277 Mbps	308 Mbps
	50 MHz	76 Mbps	152 Mbps	190 Mbps	229 Mbps	267 Mbps	305 Mbps	343 Mbps	381 Mbps
	56 MHz	87 Mbps	175 Mbps	219 Mbps	263 Mbps	307 Mbps	351 Mbps	394 Mbps	438 Mbps

	Capacity Bandwidth - Medium FEC								
	Modulation	QPSK	16QAM	32QAM	64QAM	128QAM	256 QAM	512 QAM	1024 QAM
RF Channel Size	10 MHz	16 Mbps	33 Mbps	41 Mbps	49 Mbps				
	20 MHz	33 Mbps	66 Mbps	82 Mbps	99 Mbps	115 Mbps	132 Mbps	148 Mbps	165 Mbps
	30 MHz	49 Mbps	99 Mbps	123 Mbps	148 Mbps	173 Mbps	198 Mbps	223 Mbps	247 Mbps
	40 MHz	66 Mbps	132 Mbps	165 Mbps	198 Mbps	231 Mbps	264 Mbps	297 Mbps	330 Mbps
	50 MHz	81 Mbps	163 Mbps	204 Mbps	245 Mbps	286 Mbps	327 Mbps	368 Mbps	409 Mbps
	56 MHz	94 Mbps	188 Mbps	235 Mbps	282 Mbps	329 Mbps	376 Mbps	423 Mbps	470 Mbps

	Capacity Bandwidth - Light FEC								
	Modulation	QPSK	16QAM	32QAM	64QAM	128QAM	256 QAM	512 QAM	1024 QAM
RF Channel Size	10 MHz	17 Mbps	34 Mbps	43 Mbps	52 Mbps				
	20 MHz	34 Mbps	69 Mbps	86 Mbps	104 Mbps	121 Mbps	138 Mbps	156 Mbps	173 Mbps
	30 MHz	52 Mbps	104 Mbps	130 Mbps	156 Mbps	182 Mbps	208 Mbps	234 Mbps	260 Mbps
	40 MHz	69 Mbps	138 Mbps	173 Mbps	208 Mbps	243 Mbps	277 Mbps	312 Mbps	347 Mbps
	50 MHz	86 Mbps	172 Mbps	215 Mbps	258 Mbps	301 Mbps	344 Mbps	387 Mbps	430 Mbps
	56 MHz	98 Mbps	197 Mbps	247 Mbps	296 Mbps	346 Mbps	395 Mbps	445 Mbps	494 Mbps

Medium FEC - reduce receiver sensitivity by 1dB from specification

Light FEC - reduce receiver sensitivity by 2 dB from specification