

SkyLink AON DT

Next Generation Dual Transceiver All Outdoor PTP Radio System

Delivering Scalable Bandwidth Licensed Microwave Solutions

Features

- Up to 5.5 Gbps per radio using four sub-carriers without compression
- Dual transceivers with each transceiver supporting single carrier or dual sub-carrier operation to efficiently increase capacity without adding any more equipment
- QPSK to 4096QAM
- Licensed band PTP digital microwave system for all FCC bands at 6/11/18/23 GHz and ETSI bands from 6 to 42 GHz
- Ultra wide bandwidth operation to 160MHz ANSI and 112MHz ETSI
- Built-in Advanced Digital Pre-Distortion to drive higher transmission performance
- 2 x (1+0), 1+1 HSB, 2+0, 2+2 HSB, and 4+0 operation
- XPIC and MIMO operational support
- Customer replaceable diplexers to ease operational logistics and improve system flexibility
- AES256 encryption
- Different frequencies supported in single dual carrier radio (e.g. 6 GHz and 11 GHz)
- Integrated OMT, coupler, or dual waveguide RF output options
- POE and Direct DC Input



Applications

- 4G/5G backhaul
- 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
- Disaster Recovery

Cielo Networks, Inc.
8375 Camino Santa Fe, Suite A
San Diego, CA 92121
Tel: 1-817-488-9473
www.cielonetworks.com
info@cielonetworks.com

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NETWORKS

Technical Specifications

SkyLink AON DT

General Information	L6 / U6 GHz	11 GHz	18 GHz	23 GHz
Frequency Range	5.9-6.4 / 6.5-6.9 GHz	10.7 - 11.7 GHz	17.7 - 19.7 GHz	21.2 - 23.6 GHz
T-R Spacing	252.04 / 160 MHz	490/500 MHz	1560 MHz	1200 MHz
RF Channel Spacing	10/30/60 MHz	10/30/40/80 MHz	10/20/30/40/50/80 MHz	10/20/30/40/50 MHz
Emission Designator	10M0D7W/ 30M0D7W/60M0D7W	10M0D7W/30M0D7W 40M0D7W/80M0D7W	10M0D7W/20M0D7W/30M0D7W/ 40M0D7W/50M0D7W/60M0D7W	10M0D7W/20M0D7W/30M0D7W/ 40M0D7W/50M0D7W
Frequency Accuracy	± 10 PPM	± 7 PPM	± 7 PPM	± 7 PPM

Radio Information	6 GHz									
Modulation	QPSK	16QAM	32QAM	64QAM	128QAM	256QAM	512QAM	1024QAM	2048QAM	4096QAM
Transmit Power	27 dBm	26 dBm	26 dBm	25 dBm	23 dBm	23 dBm	23 dBm	22 dBm	21 dBm	20 dBm
Receiver Sensitivity (BER 10e-6) - 30 MHz	-86 dBm	-80 dBm	-75 dBm	-72 dBm	-69 dBm	-66 dBm	-65 dBm	-62 dBm	-57 dBm	-54 dBm
Receiver Sensitivity (BER 10e-6) - 60 MHz	-83 dBm	-77 dBm	-72 dBm	-69 dBm	-66 dBm	-63 dBm	-62 dBm	-59 dBm	-54 dBm	-51 dBm

Radio Information	11 GHz									
Modulation	QPSK	16QAM	32QAM	64QAM	128QAM	256QAM	512QAM	1024QAM	2048QAM	4096QAM
Transmit Power	26 dBm	25 dBm	25 dBm	24 dBm	24 dBm	22 dBm	22 dBm	21 dBm	20 dBm	19 dBm
Receiver Sensitivity (BER 10e-6) - 30 MHz	-86 dBm	-80 dBm	-75 dBm	-72 dBm	-68 dBm	-65 dBm	-64 dBm	-62 dBm	-57 dBm	-53 dBm
Receiver Sensitivity (BER 10e-6) - 40 MHz	-84 dBm	-78 dBm	-73 dBm	-70 dBm	-66 dBm	-63 dBm	-62 dBm	-59 dBm	-55 dBm	-51 dBm
Receiver Sensitivity (BER 10e-6) - 80 MHz	-81 dBm	-75 dBm	-70 dBm	-67 dBm	-64 dBm	-61 dBm	-60 dBm	-57 dBm	-52 dBm	-49 dBm

Radio Information	18 GHz									
Modulation	QPSK	16QAM	32QAM	64QAM	128QAM	256QAM	512QAM	1024QAM	2048QAM	4096QAM
Transmit Power	25 dBm	24 dBm	24 dBm	23 dBm	23 dBm	21 dBm	21 dBm	20 dBm	19 dBm	18 dBm
Receiver Sensitivity (BER 10e-6) - 50 MHz	-82 dBm	-76 dBm	-71 dBm	-68 dBm	-65 dBm	-62 dBm	-61 dBm	-58 dBm	-53 dBm	-50 dBm
Receiver Sensitivity (BER 10e-6) - 80 MHz	-81 dBm	-75 dBm	-70 dBm	-67 dBm	-63 dBm	-60 dBm	-59 dBm	-56 dBm	-51 dBm	-48 dBm

Radio Information	23 GHz									
Modulation	QPSK	16QAM	32QAM	64QAM	128QAM	256QAM	512QAM	1024QAM	2048QAM	4096QAM
Transmit Power	24 dBm	23 dBm	23 dBm	22 dBm	22 dBm	20 dBm	20 dBm	19 dBm	18 dBm	17 dBm
Receiver Sensitivity (BER 10e-6) - 50 MHz	-82 dBm	-76 dBm	-71 dBm	-68 dBm	-65 dBm	-62 dBm	-61 dBm	-58 dBm	-53 dBm	-50 dBm

Note - Receiver sensitivity shown for typical FCC channel size at operating frequency band

		Capacity Bandwidth (Mbps) - 1+0										
		Modulation	QPSK	16QAM	32QAM	64QAM	128QAM	256 QAM	512 QAM	1024 QAM	2048QAM	4096QAM
RF Channel Size	30 MHz		35	72	95	118	141	164	187	210	233	254
	40 MHz		48	93	128	156	189	220	250	287	312	340
	50 MHz		60	117	160	198	236	275	313	351	390	425
	60 MHz		72	140	192	237	284	330	375	422	468	511
	80 MHz		97	195	257	318	379	440	502	564	624	681

		Capacity Bandwidth (Mbps) - 2+0, XPIC										
		Modulation	QPSK	16QAM	32QAM	64QAM	128QAM	256 QAM	512 QAM	1024 QAM	2048QAM	4096QAM
RF Channel Size	30 MHz		70	144	190	236	282	328	374	420	466	508
	40 MHz		96	186	256	312	378	440	500	574	624	680
	50 MHz		120	234	320	396	472	550	626	702	780	850
	60 MHz		144	280	384	474	568	660	750	844	936	1022
	80 MHz		194	390	514	636	758	880	1004	1128	1248	1362

		Capacity Bandwidth (Mbps) - 4+0, 2 x (2+0) XPIC										
		Modulation	QPSK	16QAM	32QAM	64QAM	128QAM	256 QAM	512 QAM	1024 QAM	2048QAM	4096QAM
RF Channel Size	30 MHz		140	288	380	472	564	656	748	840	932	1016
	40 MHz		192	372	512	624	756	880	1000	1148	1248	1360
	50 MHz		240	468	640	792	944	1100	1252	1404	1560	1700
	60 MHz		288	560	768	948	1136	1320	1500	1688	1872	2044
	80 MHz		388	780	1028	1272	1516	1760	2008	2256	2496	2724



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Technical Specifications

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Features	
Data Throughput Rate	Up to 5.5Gbps per radio using quad sub-carriers or 3Gbps per radio using two carriers without compression
Configurations	2 x (1+0), 2+0 ACAP/ACCP, 4+0 ACAP/ACCP, 1+1, 2+2, 2+0 XPIC, 2 x (2+0) XPIC, 2x2 MIMO, 4x4 MIMO, 1+0 SD, 2+0 SD, 1+0 FD
Frequency Range	6-42GHz
Modulation	QPSK to 4096QAM
Air Interface	Full Duplex FDD
Channel Bandwidths per Carrier	10-160MHz ANSI and 7-112MHz ETSI
Diplexer	Customer replaceable
Tx Power (diplexer output)	Up to 27dBm with Built-In Advanced Digital Pre-Distortion
Interfaces	
Ethernet	1 x 1/2.5G RJ45 (POE), 2 x 1/2.5G SFP or 1 x 1/2.5G RJ45 (POE), 2 x 1/10G SFP+
CPRI	2 x CPRI (Modes 2, 3, and 4 - 1228.8Mbps, 2457.6Mbps, and 3072.0Mbps)
Console	<ul style="list-style-type: none">• USB serial port• WiFi for no-touch maintenance (optional)
Ethernet	
Max Packet Size	16000 bytes (Jumbo Frame)
Ethernet Timing and Synchronization	SyncE (G.8261), IEEE 1588V2 Transparent, Boundary, and Ordinary Clock support
Ethernet Features	<ul style="list-style-type: none">• IPv6, IPv4• L2- 16K MAC Addresses• 4096 VLAN (IEEE 802.1Q) with 1024 VLANs supported concurrently• VLAN tag translation on ingress or egress• Provider Bridging (IEEE 802.1ad, Q-in-Q)• RSTP / MSTP• Radio Link Aggregation
Ethernet Compression	Interface Gap and Pre-Ambles Suppression, Header Compression, Payload Compression
QoS Packet Classification	<ul style="list-style-type: none">• DiffServ (RFC 2475)• VLAN PRI (IEEE 802.1Q-2003)• MAC PRI• Port Priority• Port Number, Protocol• MPLS PRI
QoS Packet Scheduling	<ul style="list-style-type: none">• Port – Weighted Round Robin (WRR)• Logic Port (cluster) – Weighted Fair Queuing (WFQ) or Strict Priority (SP)• Priority Queue – WFQ, Strict Priority• 8 priority queues per logical port/queue
QoS Congestion Avoidance	Two-rate / three color marking, WRED, Policing, Flow-Control (PAUSE packets, back-pressure)
QoS Traffic Shaping	Configurable
Ethernet Protection	ITU-T G.8032 Ring
Encryption	AES256
OAM	ITU-T Y.1731, IEEE 802.1ag, 802.3ah, Radius, Syslog
MEF Compliance	MEF9 Services Test Suite, MEF14 Traffic Management Test Suite
GPS	Geo-location and advanced timing (optional)
Mechanical and Environmental	
Input Power Requirements	-48 VDC direct DC or PoE (-36 VDC to -60 VDC range)
Weight	9.2kg (20.3lbs) including internal OMT or coupler (2+0 configuration)
Size	23.9cm x 23.2cm x 12.5cm (9.42"x9.12"x4.94") not including antenna nose or handle
Operating Temperature	-33 °C to +55 °C (-27 °F to +131 °F) per ETS 300 019-2-4 Class 4M5
Humidity	5%-100%
Weather	IP67 / All Weather
Safety	IEC 60950-1, -22
Regulatory	US FCC Part 101, FCC Part 15B; ETSI EN 302 217