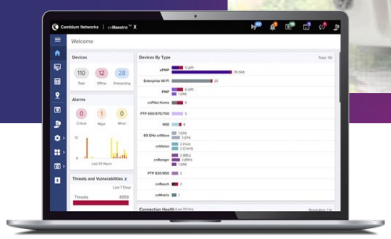
PTP 850CX Licensed Microwave Radio

PTP 850CX Quick Look

- All-outdoor dual-core, capable of 4096 QAM with ACM
- Supports:
  - 11 GHz, 18 GHz
  - 1+0 to 4+0, 1+1/2+2 HSB, 2+0 XPIC, 2 x 2+0* east-west configuration
  - Multi-band layer 1 link bonding (with PTP 850E)
- Standard license key included for easy deployment
- Compact form factor



cnMaestro

High-Capacity Microwave Radio

The Cambium Networks PTP 850CX is a next-generation ultra-high capacity microwave radio designed to meet the increasing demands for reliable, scalable wireless backhaul. As a compact all-outdoor solution, the PTP 850CX delivers multi-gigabit throughput with low latency and high spectral efficiency, enabling wireless ISPs, municipality, public safety, and enterprises to build resilient networks with simplified architecture.

With support for layer 1 (L1) link aggregation, PTP 850CX can deliver multi-gigabit speeds across dual- or quad-radio configurations, without requiring additional VLAN or queuing logic. The platform is highly adaptable with licensed band support, multiple interface options including 25 GbE, and seamless integration into Cambium's ONE Network architecture through centralized management in cnMaestro™.

The 850CX is engineered to deliver the performance and reliability of fiber, without the deployment hurdles.

Key Advantages

- **Flexible Deployment:** All-outdoor radio with scalable configurations including 2+0 and 4+0 setups for increased capacity and link reliability.
- **License Keys Already Installed and Activated:** All of the most requested features are pre-loaded for simplified provisioning and deployment. Keys for 650 Mbps capacity, 2nd core activation, XPIC, MC-ABC, and 10 GbE port are included at no extra cost.
- **Layer 1 Link Aggregation:** True physical layer bonding for ultra-low latency multi-gigabit performance without VLAN complexity.
- **Cambium ONE Network Integration:** Fully managed via cnMaestro Network Management, unifying wireless, wired, and security infrastructure under a single platform.

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Radio

Frequency Range	11 GHz, 18 GHz
Configurations	1+0 up to 4+0 single/dual polarization, 1+1/2+2 HSB, 2+0 XPIC, 2x2+0 east/west single/dual polarization*
Features	4+0 layer 1 aggregation
	Layer 1 link bonding with PTP-820A†
	Enhanced multi-carrier ABC (up to 2+0)
	Protection: 1+1 HSB/2+2 HSB
	High spectral use: BPSK to 4096 QAM w/ACM
	Channel bandwidth: 14 to 224 MHz
	XPIC
	Multiband with layer 1 link bonding (with PTP 850E)

*Some features are planned for future release.

Ethernet

Interfaces*	Port 1: DC port	Port 4: SFP28 – 1/10/25G traffic
	Port 2: RJ45 – Electric 100 Mbps/1 Gbps traffic/PoE	Port 5: RJ-45 – Management/protection/100 Base-T
	Port 3: SFP+ - 1/2.5/10 traffic	
MTU	9,612 bytes	
Ethernet Services	Up to 1024 Ethernet services, plus one pre-defined management service	
	MAC address learning with 32K MAC addresses	
Quality of Service	Multiple classification criteria (VLAN ID, p-bits, IPv4 DSCP, IPv6 TC, MPLS EXP)	
	8 CoS queues per port	
	WRED	
	P-bit marking/remarking	
VLAN	VLAN add/remove	
Ethernet Protocols	G.8032 Ethernet ring protection switching (ERPS)	
	MSTP	
	Y.1731 Ethernet OAM	
	Y.1731 Ethernet bandwidth notification (ETH-BN)	

*SFP and SFP+ devices must be industrial grade (-40°C to +85°C/-40°F to 185°F)

Management Protocols

Management Protocols	SNMP
	REST
	NETCONF/YANG

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Synchronization Protocols

Enhanced Ethernet equipment clock (eEEC) specification (G.8262.1)
PTP telecom boundary clock (T-BC) and time save clock (T-TSC) specification (G.8273.2)
PTP telecom transparent clock (T-TC) specification (G.8273.3)
Enhanced SyncE network limits (G.8261, clause 9.2.1)
Enhanced PTP network limits (G.8271.1)
Ethernet synchronization messaging channel (ESMC) (G.8264, clause 11)
PTP telecom profile for phase/time synchronization with full timing support from the network (G.8275.1)
PTP telecom profile for phase/time synchronization with partial timing support from the network (G.8275.2) as T-TC
Precision time protocol (version 2, IEEE1588-2008)

Standards

Supported Ethernet Standards:	10/100/1000base-T/X (IEEE 802.3)
	10Gbase-LR (IEEE 802.3ae)
	Ethernet VLANs (IEEE 802.3ac)
	Virtual LAN (VLAN, IEEE 802.1Q)
	Class of service (IEEE 802.1p)
	Provider bridges (Q-in-Q – IEEE 802.1ad)
	Link aggregation (IEEE 802.1ax)
	Auto MDI/MDIX for 1000baseT
	RFC 1349: IPv4 TOS
	RFC 2474: IPv4 DSCP
	RFC 2460: IPv6 traffic classes

Security

Radio Encryption	AES 256	
Secured Protocols	HTTPS	SFTP
	SNMPv3	RADIUS authentication and authorization
	SSH	TACACS+ authentication, authorization, and accounting (session-based)

Standards Compliance

Radio Spectral Efficiency	FCC Part 101, EN 302 217-2
Compliance	EMC: EN 301 489-1, EN 301 489-4, Class B (Europe) FCC 47 CFR, part 15, class B (US), ICES-003, Class B (Canada) TEC/EMI/TEL-001/01, Class B (India)
Surge	EN61000-4-5, Class 4 (for PWR and ETH1 ports)
Safety	EN 60950-1, IEC 60950-1, UL60950-1, CSA C22.2 60950-1, EN60950-22, UL 60950-22, CSA C22.2 60950-22
Storage	ETSI EN 300 019-1-1 Class 1.2
Transportation	ETSI EN 300 019-1-2 Class 2

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Technical	
Dimensions	270 mm x 230 mm x 98 mm, 5.3 kg
Pole Diameter Range	8.89 cm – 11.43 cm (for remote mount installation)
Environmental	-33°C to +55° (-27°F to +131°F)
Standard Input	-48 VDC, PoE
DC Input Range	-40.5 to -60 VDC

Typical Power Consumption*	
2+0 Operation	6–11 GHz: 85W 13–15 GHz: 66W
1+0 Operation (one carrier muted)	6–11 GHz: 66W 13–15 GHz: 58W
Both Carriers Muted	6–11 GHz: 41W 13–15 GHz: 43W

*The maximum power consumption can be up to ≈20% higher than typical figures listed above.

Standard License Keys Included

2 x capacity 650M with ACM enabled, per Tx channel
2 x MC-ABC, per Tx channel
1 x 2nd core activation
1 x 10GE port
2 x XPIC, per Tx channel

ABOUT CAMBIUM NETWORKS

Cambium Networks enables service providers, enterprises, industrial organizations, and governments to deliver exceptional digital experiences and device connectivity with compelling economics. Our ONE Network platform simplifies management of Cambium Networks' wired and wireless broadband and network edge technologies. Our customers can focus more resources on managing their business rather than the network. We make connectivity that just works.

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