

# PTP 820

LICENSED ETHERNET  
MICROWAVE FOR  
MULTI-SERVICE NETWORKS



# Cambium PTP 820 Series

## A SINGLE PLATFORM SERVING ALL RADIO TRANSPORT REQUIREMENTS

**PTP 820 is a point-to-point licensed microwave backhaul platform** that integrates leading networking functionality with the industry's most advanced microwave technologies creating a superior microwave transport solution.

Supporting licensed frequency bands ranging from 6 to 42 GHz, the PTP 820 series delivers a wide range of configurations to offer a tailored solution for any deployment scenario. Composed of high-density multi-technology nodes and integrated radio units, the PTP 820 series offers flexibility in choosing all-indoor, split-mount and all-outdoor configuration options. Exploiting unique Line of Sight (LOS) Multiple Input Multiple Output (MIMO) technology, modulation up to 2048QAM and wider channel bandwidths, ensures Industry leading throughput and spectral efficiency.

The PTP 820C has dual-core functionality enabling the system to operate up to 2 Gbps via software upgrades, eliminating the need for future forklift upgrades, or major system overhaul by the network operator to deliver gigabit-plus capacity.

The series also offers both Synchronous Ethernet (SyncE) and IEEEv2 synchronization protocols required for large ISP and MPLS networks.

Operations, Administration and Maintenance (OA&M) tools coupled with a full suite of network and element management systems (NMS and EMS) simplify network provisioning and monitoring, reducing operators' total cost of ownership and enabling them to meet the most stringent service level agreements.

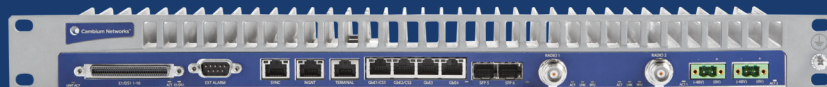
Combining technologies, equipment and services, PTP 820 enables network operators to meet accelerating demand for capacity cost-effectively under rapidly evolving conditions.



**PTP 820S**  
All-Outdoor



**PTP 820C**  
All-Outdoor / Multi-Core



**PTP 820G**  
Split-Mount / All-Indoor, Multi-Carrier Options



## LINK PLANNER

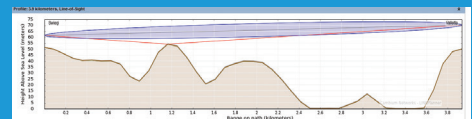
LINKPlanner is a free, easy-to-use link-design tool allows network operators to easily and quickly design networks. Microsoft® Windows® and Intel®-based Mac® versions of LINKPlanner can be downloaded from Cambium Networks' support pages.

### Key LINKPlanner features:

- Design a five-nines-reliable wireless link
- Plan and optimize a single link or multiple links simultaneously
- Perform calculations for both licensed and unlicensed products
- Automatically load path terrain profiles and environmental factors such as rain fade
- Display a comprehensive overview of your entire point-to-point wireless network via Google™ Earth
- Generate reports that validate projected performance and serve as time-saving deployment guidelines
- Create bill of materials for point-to-multipoint and point-to-point networks including accessories

## PTP 820 Product Series Highlights

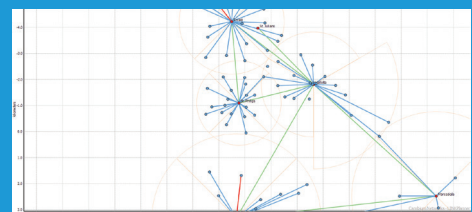
- Licensed frequency bands 6-42GHz
- Up to 2048 QAM, with 11-step hitless and errorless Adaptive Coding & Modulation (ACM) for high reliability
- Up to 80 MHz bandwidth supported
- Multi-gigabits radio capacity with high spectral efficiency
- TDM and/or packet supporting legacy services and evolution to all-packet
- Integrated Ethernet Switch, MEF Carrier Ethernet 2.0 compliant, MPLS-TP-ready
- Header De-duplication for additional capacity boost
- Intelligent service-centric management utilizing Hierarchical QoS and advanced OA&M capabilities
- Carrier-grade service resiliency (G.8032, MSTP)
- ITU-T Y.1731 Performance Management – MEF 35
- Integrated synchronization solution: Native/SyncE/IEEE 1588v2
- Lowest power consumption with adaptive green mode
- Low Latency with unique frame cut-through for latency sensitive services
- Industry leading system Gain



Path Profile with Obstructions



Google Earth Network View



Map of the Sites and Links in the Project

## Technical Specifications

	PTP 820S	PTP 820C	PTP 820G
Supported Frequency	6 - 42 GHz	6 - 42 GHz	6 - 42 GHz
Role in the Network	Compact all outdoor	Compact all outdoor w/multi-core	Split Mount or all indoor, multi-carrier options
Transport Technology	All packet	All packet	Hybrid and/or all packet
TDM Interface	None	None	16 x E1/T1
Modulation	QPSK to 2048 QAM w/ACM	QPSK to 2048 QAM w/ACM	QPSK to 2048 QAM w/ACM*
Channel Size	28,56,30,40,50,60,80 MHz	28,56,30,40,50,60,80 MHz	7,14,28,56,10,20,30,40,50 MHz
Capacity (Layer 2)	605 Mbps	1.21 Gbps	486 Mbps (1+0) 972 Mbps (2+0)
Capacity with Multi-Layer Compression	833 Mbps	1.66 Gbps	833 Mbps (1+0) 1.66 Gbps (2+0)
Configuration	1+0, 1+1 HSB	1+0 to 4+0, 1+1/2+2 HSB, 1+0 E/W	1+0 to 2+0, 1+1 HSB, 1+0 E/W
LOS MIMO	No	Yes, 4x4 or 2x2	No
XPIC	No	Yes	Yes
Ethernet Interface	1 x 10/100/1000Base-T and 2x1000base-X or 10/100/1000Base-T	1 x 10/100/1000Base-T and 1x1000base-X or 10/100/1000Base-T	4 x 10/100/1000Base-T and 2x1000base-X
Management Interface	1 x 10/100 Base-T	1 x 10/100 Base-T	1 x 10/100 Base-T
External Alarm	None	None	1 x DB9
Dimensions (HxWxD - mm)	230 x 233 x 98	230 x 233 x 98	IDU: 44 x 426 x 180 RFU-C: 200 x 200 x 85 RFU-A: 44 x 443 x 421
Environmental	-33C to +55C (-45C to +60C extended)	-33C to +55C (-45C to +60C extended)	IDU: -5C to +55C (-25C to +65C extended) RFU-C: -33C to +55C (-45C to +60C extended) RFU-A: -5C to +45C
Power Input	-48 VDC	-48 VDC	-48 VDC
PoE Injector Power Input	-48 VDC or +24 VDC	-48 VDC or +24 VDC	N/A
Maximum Power Consumption	32 W	Multi-Core Operation: 6 GHz: 70W 7-11 GHz: 65W 13-42 GHz: 55W	IDU Eth-only: 26 W plus 16 E1/DS1: +11w RFU-C: 6-26GHz, 1+0 22W, 1+1, 39W 28-38GHz, 1+0 26W, 1+1 43W RFU-A: 77 Watts

Additional bandwidth and configurations will be made available. Please contact Cambium Networks.



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