

Ligo PTP 620S

7-26 GHz 620 Mbps Digital Microwave Point-to-Point Device



Product Overview

The LigoPTP 620S is split architecture, 7-26 GHz product platform designed to provide high capacity transmission, flexibility, and convenience for wireless communication networks. The PTP 620S digital point-to-point radios represent a new microwave radio product line that is designed to address universal applications for both Ethernet and TDM platforms. This advanced technology platform is designed to provide a flexible, cost-effective platform for customers now and into the future.

The PTP 620S equipment is based upon a common platform to support a wide range of network interfaces and configurations, with capacities up to 2 E1 / T1 (optional) and Gigabit Ethernet Full Duplex capacity up to 310 Mbps (620 Mbps aggregate). The radio family is spectrum and data rate scalable, enabling service providers or organizations to employ appropriate system gain with spectral efficiency and channel availability for optimal network connectivity. The PTP 620S series digital radios enable network operators (mobile and private), government and access service providers to offer a portfolio of secure and scalable wireless applications for data, video, and voice services.

The PTP 620S digital radio family is composed of a LigoWave Software Controlled Smart IDU and an Outdoor Unit (ODU). The IDU is designed to be frequency independent, and the ODU is designed to be capacity independent. The PTP 620S IDU allows selection for multiple capacity options, modulation types, radio frequency channels and transmit output power levels to accommodate and adhere to world-wide regulatory and spectral efficiency requirements. The IDU supports 1 Gigabit Ethernet port for customer traffic as well as an additional Fast Ethernet port for management traffic. The IDU also supports an optional module for adding 2 E1 or 2 T1 ports to the unit for quick and easy provisioning of TDM traffic over the link.

The PTP 620S Digital Radio includes integrated Operations, Administration, Maintenance, and Provisioning (OAM&P) functionality and design features enabling simple commissioning when the radio network is initially set up in the field or at the customer's premises.

Key Features

- Cost Effective Design
- Up to 620 Mbps data throughput (310 Mbps full duplex)
- No speed-based license fees - get full capacity out of the box
- Wide frequency range support from 7-26 GHz
- Flexible channel sizes from 3.5MHz to 56MHz
- ANSI and ETSI channel plans supported enabling worldwide support
- Auto-rate support (ACM) enables robust links
- One Common IDU for all Capacities/Frequencies
- Optional cost effective E1/T1 module for up to 2 E1/T1 support
- Software Controllable Capacities between T1/E1 and Ethernet

- Antennas available*:
 - PTP X-620S-ANT-1: includes 1 ft. diameter, slip-fit waveguide antenna
 - PTP X-620S-ANT-2: includes 2 ft. diameter, slip-fit waveguide antenna
 - PTP X-620S-ANT-3: includes 3 ft. diameter, slip-fit waveguide antenna
 - PTP X-620S-ANT-4: includes 4 ft. diameter, slip-fit waveguide antenna
 - PTP X-620S-ANT-6: includes 6 ft. diameter, slip-fit waveguide antenna (special order)
- User-Friendly Management System with support for Telnet, Web, and SNMP
- Very compact, yet powerful IDU saves space

*antenna availability varies based on local regulations

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Performance

Frequency range (GHz)		7/8	11	13	15	18	23	26
Channel bandwidth (MHz)		3.5-56MHz						
Modulation		QPSK / 16QAM / 32QAM / 64QAM / 128QAM / 256QAM						
Full Duplex Capacity (Aggregate)		310 Mbps (620 Mbps)						
Frequency stability		± 5ppm						
Max Power (dBm), Adjustable	QPSK	25.5	24.5	24.5	24.5	22.5	22.5	23.5
	16/32QAM	21.5	20.5	20	20	19	19	19.5
	64/128QAM	18.5	17.5	17.5	17.5	17	16	15.5
	256QAM	16.5	15.5	15.5	15.5	15	14	13.5
Receive Sensitivity (dBm), BER 10 ⁻⁶ @ 56MHz (40MHz for 11GHz) Channel	QPSK	-82	-83	-82	-82	-82	-82	-82
	16 QAM	-75	-76	-75	-75	-75	-75	-75
	32 QAM	-73	-72	-73	-73	-73	-73	-73
	64 QAM	-70	-70	-70	-70	-70	-70	-70
	128 QAM	-66	-67	-66	-66	-66	-66	-66
Receive Sensitivity (dBm), BER 10 ⁻⁶ @ 28/30MHz Channel	256 QAM	-62	-64	-62	-62	-62	-62	-62
	QPSK	-84	-84	-84	-84	-84	-84	-84
	16 QAM	-78	-78	-78	-78	-78	-78	-78
	32 QAM	-74	-74	-74	-74	-74	-74	-74
	64 QAM	-71	-71	-71	-71	-71	-71	-71
Receive Sensitivity (dBm), BER 10 ⁻⁶ @ 14/20MHz Channel	128 QAM	-68	-68	-68	-68	-68	-68	-68
	256 QAM	-65	-65	-65	-65	-65	-65	-65
	QPSK	-86	-86	-86	-86	-86	-86	-86
	16 QAM	-79	-79	-79	-79	-79	-79	-79
	32 QAM	-76	-76	-76	-76	-76	-76	-76
Receive Sensitivity (dBm), BER 10 ⁻⁶ @ 7/10MHz Channel	64 QAM	-74	-74	-74	-74	-74	-74	-74
	128 QAM	-70	-70	-70	-70	-70	-70	-70
	256 QAM	-68	-68	-68	-68	-68	-68	-68
	QPSK	-89	-89	-89	-89	-89	-89	-89
Receive Sensitivity (dBm), BER 10 ⁻⁶ @ 7/10MHz Channel	16 QAM	-82	-82	-82	-82	-82	-82	-82
	32 QAM	-79	-79	-79	-79	-79	-79	-79
	64 QAM	-76	-76	-76	-76	-76	-76	-76
	128 QAM	-74	-74	-74	-74	-74	-74	-74

Environmental

Standards	FCC, ETSI
Operating temperature range	ODU: -40° to +65°C IDU: -5° to +55°C

Mechanical data

Dimensions: WxHxD, in / weight, lb	IDU: 8.5 x 1.7 x 8 / 2.6lbs ODU: 11 x 9.4 x 3.6 / 9.5lbs
Max. Power input (typical)	IDU: 22W ODU: 25W

Management Features

TCP/IP	WEB, SNMP, Telnet - local and remote
Monitoring	Via Telnet, WEB GUI, SNMP

Indoor Unit (IDU)

Data Interfaces TDM: Ethernet: Management: Serial:	2 x E1/T1 module (opt.) 1 x 10/100/1000 Base-T (RJ45) 1 x 10/100 Base-T (RJ45) USB or RS232
VLAN / QoS Support	IEEE 802.1Q, 802.1p QoS