



LigoWave

Product Overview

Content

Solutions	4
Enterprise	4
Operators	5
Industrial	6
Security	7
LigoDLB Series	8
Product Summary (2GHz Outdoor)	9
Product Summary (5GHz Outdoor)	10
Product Comparison	11
LigoDLBac Series	12
Product Summary	13
LigoDLBac Performance Data	14
LigoPTP Series	17
Product Summary	18
Product Comparison	19
LigoPTMP Series	20
Product Summary	21
LigoPTMP Performance Data	22
NFT Series	23
Product Summary	24
Infinity Controller	25
Proximity	26

Solutions

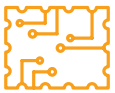
LigoWave has multiple product lines covering a variety of applications in different vertical segments. Many years of experience, unique proprietary technologies, and professional product design make our wireless equipment ideal for anyone seeking quality, high performance, and fast return on investment.

Enterprise



Powerful OS

The operating system installed on LigoWave devices is straightforward and intuitive. Each device group has a set of specifically-chosen functionality that is necessary for particular applications. The fast and responsive HTML5 user interface allows users to access the wireless equipment using a laptop, a smart phone, or a tablet.



Reliable Security Mechanisms

Hardware-based AES-128 encryption (compatible with the FIPS-197 standard) is an advanced data protection measure suitable for all types of networks—starting with basic home setups to those found in the banking and governmental sectors. Hidden SSID functionality to ensure privacy, HTTPS for secure user interface access, SSH for secure command line management, and SNMPv1 for secure data collection and monitoring make LigoWave devices ideal for enterprise networks.



High-Capacity Links

Great throughputs over long distances are achieved with high-output power coupled with high-gain antennas, enabling the transmission of hundreds of megabits over 50km (30mi) links. There are multiple models equipped with professional N-connectors to be used together with a variety of external, high-gain antennas to achieve remarkable results.





Operators



Variety of Devices

LigoWave offers a wide variety of products designed with different scenarios (PTP/PTMP), distance capabilities (short/mid/long-range), and operational capabilities (software and hardware) to provide the end-user with a high degree of flexibility and customization based on their situation.



Proprietary Protocols

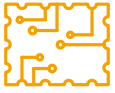
LigoWave's proprietary protocols—W-Jet and iPoll—maximize the performance of equipment designed for PTP and PTMP scenarios, even in RF-intense environments, to ensure greater bandwidth, higher packet per second rate, and low latency without limitations to distance. Automatic channel selection and transmit power control mechanisms allow users to avoid noisy channels, all the while optimizing the RF output power to maximize performance and to minimize undesirable noise emissions. The reliability and solid performance of these proprietary protocols ensure service provider success.



Quality of Services

Quality of Service (QoS) allows the equipment to prioritize voice and video data over other types of transferred information in real time, delivering triple play services to end users more effectively. QoS combined with the high packet per second rate provided by LigoWave devices guarantees impressive performance results.

Industrial



Professional Hardware Design

LigoWave hardware is designed in accordance with specialized standards for use in industrial applications (ATEX, etc.). IP6x-rated casings and professional mounting brackets make LigoWave devices the right choice for industrial applications. Integrated surge protection systems are designed with double the quality level of the top-class IEC standard requirements to survive extreme voltage surges and lightning.



Reliable Security Mechanisms

Security is an important factor for enterprise networks. Hardware-based AES-128 encryption (compatible with the FIPS-197 standard) is an advanced data protection measure suitable for all types of networks—starting with basic home setups to those found in the banking and governmental sectors. Hidden SSID functionality to ensure privacy, HTTPS for secure user interface access, SSH for secure command line management, and SNMPv1 for secure data collection and monitoring make LigoWave devices ideal for enterprise networks.



Quality of Service (QoS)

Not only does the hardware-based LigoWave Quality of Service (QoS) prioritize mission-critical data, but it also does not generate additional CPU loads because of it, preserving processing resources for other operations such as high-speed packet handling.





Security



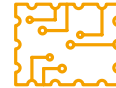
Professional Software

LigoWave's proprietary protocols—W-Jet and iPoll—maximize the performance of equipment designed for PTP and PTMP scenarios, even in RF-intensive environments, to ensure greater bandwidth, higher packet per second rate, and low latency without limitations to distance. Automatic channel selection and transmit power control mechanisms allow users to avoid noisy channels, all the while optimizing the RF output power to maximize performance and to minimize undesirable noise emissions.



Quality of Service (QoS)

Quality of Service (QoS) prioritizes mission-critical data. In the case of surveillance, video data will always be prioritized over other types of traffic to ensure minimized latency and a steady stream of video data.



Professional Hardware Design

IP6x-rated casings and professional mounting brackets make LigoWave devices the right choice for wireless surveillance applications. Integrated surge protection systems are designed with double the quality level of the top-class IEC standard requirements in order to survive extreme voltage surges and lightning.



DESIGNED FOR



Last-Mile
Wireless to the Building



Video Surveillance
Wireless Camera Infrastructure



Hotspot
Public Access Wi-Fi

LigoDLB Series

The DLB series is a line of PTP and PTMP base stations and customer premises equipment dedicated to last-mile and video surveillance applications. Being LigoWave's largest series, DLB offers a wide variety of devices ideal for Internet Service Providers and Operators running their networks using unlicensed bands.

Its powerful software platform with a proprietary communication protocol ensure smooth performance even in the most congested environments. The professional-grade integrated hardware design allows for quick return on investment and minimizes operational costs.

High-Performance (+170Mbps)

Scalability

Fast ROI

Large Selection of Devices

Product Summary (2GHz Outdoor)



Product	DLB 2-90	DLB 2	DLB 2-9B	DLB Propeller 2
Role Description	Extremely cost-effective base station with an integrated high-gain 90° sector antenna	High power multipurpose device with N-connectors for an external antenna	Small-size client device for high-capacity short-distance links	Unique client device with an antenna featuring a rotational characteristics-switching mechanism
Radio				
Frequency	2.402–2.492GHz			
Channel Size	5, 10, 20, 40MHz			
Stream	MIMO 2x2			
Wireless Protocol	Proprietary iPoll 3			
Operating Mode	Point-to-Point; Point-to-Multipoint			
Max Output Power	31dBm*			28dBm*
Receive Sensitivity at 20MHz Channel	-95dBm +/-2dB @BPSK -91dBm +/-2dB @QPSK -83dBm +/-2dB @16-QAM -78dBm +/-2dB @64-QAM			
Network				
Ethernet Interface	10/100 Base-T			
Aggregated Data Throughput	170Mbps			
Antenna				
Gain	16dBi (Dual-Pol)	-	9dBi (Dual-Pol)	11dBi (Dual-Pol)
Beamwidth Horizontal	100°	-	55°	70° or 35°
Beamwidth Vertical	17°	-	62°	35° or 70°
Mounting				
Pole Diameter	2.5–5cm (1–2in)	3.5–6cm (1.3–2.3in)	3.5–6cm (1.3–2.3in)	3–7cm (1.2–2.7in)
Tilting	+10°/– 30°	-	-	-
Powering				
Method	Passive PoE; 4, 5-pin (+) and 7, 8-pin (-)			
Input Voltage	12–24V			
Power Consumption	4.5W			

*Country-Dependent

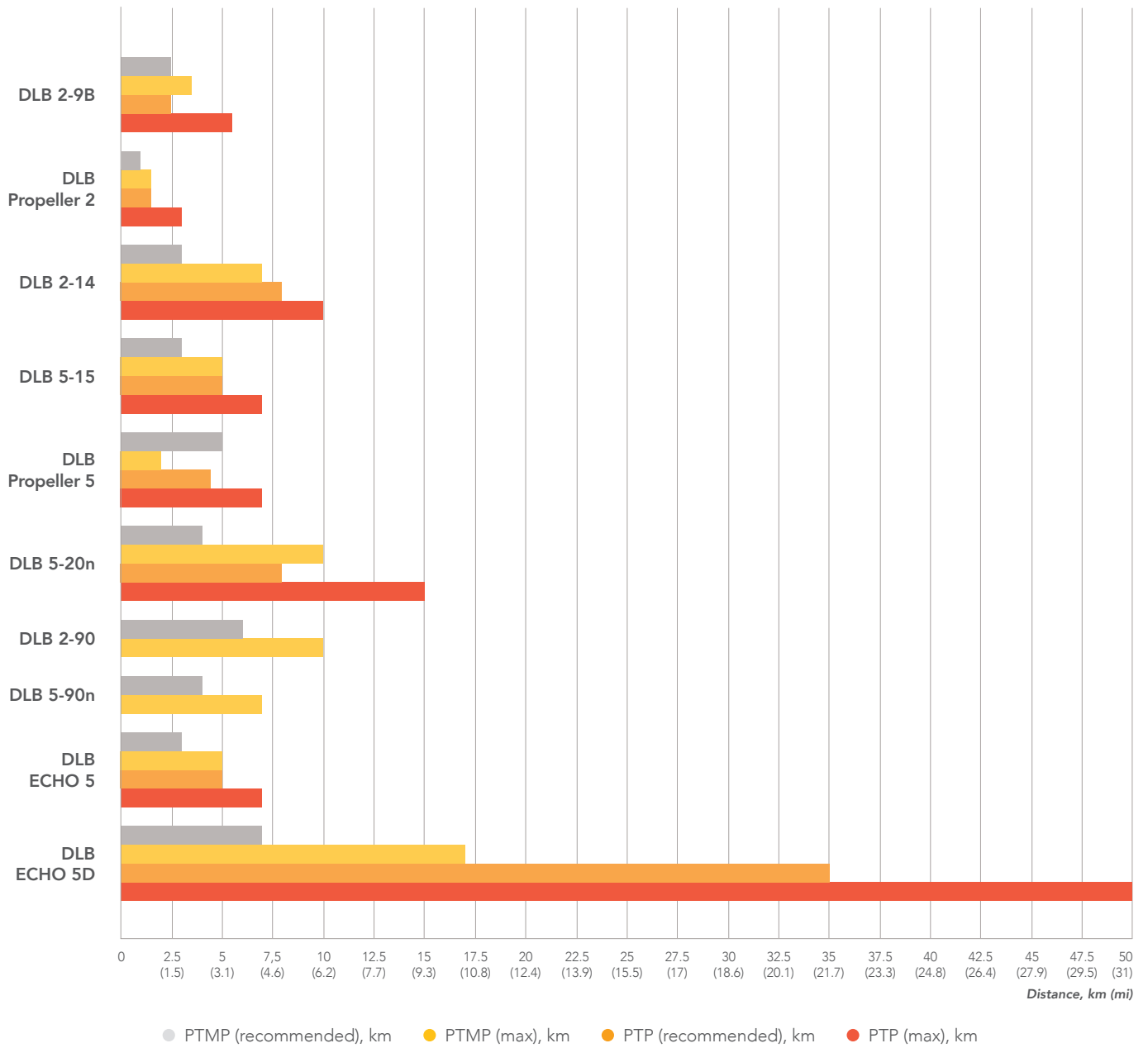
Product Summary (5GHz Outdoor)



Product	DLB 5-90n	DLB 5	DLB 5-20n	DLB 5-15n	DLB 5-15	DLB Propeller 5	DLB Echo 5	DLB Echo 5D
Role Description	Extremely cost effective base station with an integrated high gain 90° sector antenna	High power multipurpose device with 2 external N-connectors	Powerful client device with an integrated high gain antenna for mid-range links	Small size device for high capacity short distance links	Smallest, but yet powerful and the most cost effective client device	Unique client device with a mechanical antenna	Professional wireless device suitable for short to medium distances	Long-range and high-gain wireless device suitable to use with any standard offset satellite dish antenna
Radio								
Frequency	5.150–5.850GHz (FCC 5.150–5.250 and 5.725–5.850GHz)							
Channel Size	5, 10, 20, 40MHz							
Stream	MIMO 2x2							
Wireless Protocol	Proprietary iPoll 3							
Operating Mode	Point-to-Multipoint							
Max Output Power	29dBm*							
Receive Sensitivity at 20MHz Channel	-97dBm +/-2dB @BPSK -93dBm +/-2dB @QPSK -85dBm +/-2dB @16-QAM -75dBm +/-2dB @64-QAM							
Network								
Ethernet Interface	10/100 Base-T							
Aggregated Data Throughput	170Mbps							
Antenna								
Gain	18dBi (Dual-Pol)	-	20dBi (Dual-Pol)	15dBi (Dual-Pol)	15dBi (Dual-Pol)	15dBi (Dual-Pol)	15dBi (Dual-Pol)	27dBi (Dual-Pol)
Beamwidth Horizontal	90°	-	10°	30°	30°	60° or 15°	30°	6°
Beamwidth Vertical	10°	-	10°	30°	30°	15° or 60°	30°	6°
Mounting								
Pole Diameter	2.5–5cm (1–2in)	3.5–6cm (1.3–2.3in)	2–5cm (1–2in)	3.5–6cm (1.3–2.3in)	2–7cm (0.8–2.7in)	3–7cm (1.2–2.7in)	5–7cm (2–2.7in)	3–6cm (1.2–2.3in)
Tilting	+10°/-30°	-	+/-40°	-	-	-	+/-40°	+30°/-22°
Powering								
Method	Passive PoE; 4, 5-pin (+) and 7, 8-pin (-)							
Input Voltage	12–24V							
Power Consumption	4.5W							

*Country-Dependent

Product Comparison





**DESIGNED
FOR**



Last-Mile
Wireless to
the Building



**Video
Surveillance**
Wireless
Camera
Infrastructure



Hotspot
Public
Access
Wi-Fi

LigoDLBac Series

The DLBac series boasts ultra-high-performance point-to-multipoint systems that deliver up to 500Mbps of throughput—an ideal upgrade for service providers seeking to deliver more reliable connectivity and higher subscriber capacity. Backward compatibility with LigoDLB products simplifies upgrading and migration. The highly-functional operating system includes a user-friendly interface that makes it easy and intuitive to deploy and manage networks.

**Professional
Hardware Design**

**Simplified
Deployment & Use**

**Increased
Network Scalability**

**Ultra-High-Performance
(+500Mbps)**

Product Summary



Product	LigoDLB PRO 5-90-17ac	LigoDLB PRO 5-90-20ac	LigoDLB MACH 5ac	LigoDLB 5-90ac	LigoDLB 5-15ac	LigoDLB 5-20ac	LigoDLB 5ac
Role Description	A powerful base station with an integrated 90° sector antenna, weather-proof casing, metal backplate for improved noise immunity, and a robust mounting bracket for professional deployment		High-performance wireless bridge with a 23dBi directional panel antenna	A cost-effective base station with an integrated high-gain 90° sector antenna	High-performance wireless bridge with an integrated 15dBi directional panel antenna	High-performance wireless bridge with an integrated 20dBi directional panel antenna	A cost-effective outdoor device with N-connectors for external antenna support
Radio							
Frequency	5.150–5.850GHz (FCC 5.150–5.250 and 5.725–5.850GHz)						
Channel Size	5, 10, 20, 40, 80MHz						
Stream	MIMO 2×2						
Wireless Protocol	Proprietary iPoll 3						
Operating Mode	Point-to-Point; Point-to-Multipoint						
Max Output Power	30dBm*						
Receive Sensitivity at 40MHz Channel	-95dBm +/-2dB @BPSK -92dBm +/-2dB @QPSK -84dBm +/-2dB @16-QAM -78dBm +/-2dB @64-QAM -70dBm +/-2dB @256-QAM						
Network							
Ethernet Interface	10/100/1000 Base-T						
Aggregated Data Throughput	500Mbps						
Antenna							
Gain	17dBi	20dBi	23dBi	18dBi	15dBi	20dBi	-
Beamwidth Horizontal	90°	90°	7°	90°	30°	10°	-
Beamwidth Vertical	12°	8°	9°	10°	30°	10°	-
Mounting							
Pole Diameter	2.5–7.5cm (0.98–2.9in)	1–12.4cm (0.39–4.88in)	3.0–6.0cm (1.1–2.4in)	2–7cm (0.8–2.7in)	3–6cm (1.1–2.4in)	3.5–6.0cm (1.4–2.4in)	-
Tilting	+15°	+25/–45°	+43°/–43°	-	+20/–20°	-	-
Powering							
Method	802.3af/at			Passive PoE; 4, 5-pin (+) and 7, 8-pin (-)			
Input Voltage	37–56V			24V			
Power Consumption	10W						

*Country-Dependent

LigoDLBac Performance Data

Distance																	
Channel	Base	CPE	0.5km			1km			2km			5km			8km		
			CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30
40MHz	LigoDLB 5-90ac	LigoDLB 5-15ac	280	260	240	240	230	210	230	210	190	150	130	120	N/A	N/A	N/A
		LigoDLB 5-20ac	280	260	240	280	260	240	260	240	220	250	240	220	180	160	150

Distance																	
Channel	Base	CPE	0.5km			1km			2km			5km			8km		
			CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30
80MHz	LigoDLB 5-90ac	LigoDLB 5-15ac	400	380	360	360	340	320	350	320	300	180	160	140	N/A	N/A	N/A
		LigoDLB 5-20ac	400	380	360	400	380	360	390	370	350	340	320	300	270	250	240

Distance																	
Channel	Base	CPE	0.5km			2km			5km			10km			15km		
			CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30
	LigoDLB 5ac (23dBi)	LigoDLB 5-20ac	280	260	240	280	260	240	260	240	220	160	150	140	140	130	120
		LigoDLB 5ac (25dBi)	280	260	240	280	260	240	280	260	240	260	240	220	160	150	140

Distance																	
Channel	Base	CPE	0.5km			2km			5km			10km			15km		
			CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30
	LigoDLB 5ac (23dBi)	LigoDLB 5-20ac	400	380	360	400	380	360	390	350	330	340	320	300	240	210	200
		LigoDLB 5ac (25dBi)	400	380	360	400	380	360	400	380	360	39	350	330	290	270	250

Listed as true TCP values

Distance and throughput are estimated based on relatively low interference environments

Throughput is calculated on a theoretical basis and may vary from actual testing results depending on packet size and testing tools

Values indicate aggregate throughput on concurrent connected CPE

All listed throughput is calculated—not the theoretical link speed

CPE is located in the stated distance

N/A = Not Applicable

LigoDLBac Protocol: iPoll 3

Product Summary



Product	LigoDLB 6-15ac	LigoDLB 6-20ac	LigoDLB 6-90ac	LigoDLB 6ac
Role Description	High capacity wireless bridge with a 15dBi directional panel antenna	High capacity wireless bridge with a 20dBi directional panel antenna	A cost-effective base station with an integrated high-gain 90° sector antenna	A cost-effective outdoor device for PTP/PTMP scenarios
Radio				
Frequency	5.900–6.400GHz			
Channel Size	5, 10, 20, 40, 80MHz			
Stream	MIMO 2×2			
Wireless Protocol	Proprietary iPoll 3			
Operating Mode	Point-to-Point; Point-to-Multipoint			
Max Output Power	30dBm*			
Receive Sensitivity at 40MHz Channel	-95dBm +/-2dB @BPSK -92dBm +/-2dB @QPSK -84dBm +/-2dB @16-QAM -78dBm +/-2dB @64-QAM -70dBm +/-2dB @256-QAM			
Network				
Ethernet Interface	10/100/1000 Base-T			
Aggregated Data Throughput	500Mbps			
Antenna				
Gain	15dBi	20dBi	18dBi	-
Beamwidth Horizontal	30°	10°	90°	-
Beamwidth Vertical	30°	10°	10°	-
Mounting				
Pole Diameter	2–7cm (0.8–2.7in)	3–6cm (1.1–2.4in)	3.0–6.0cm (1.1–2.4in)	3.5–6.0cm (1.4–2.4in)
Tilting	-	+20°/-20°	+43°/-43°	-
Powering				
Method	Passive PoE; 4, 5-pin (+) and 7, 8-pin (-)			
Input Voltage	24V			
Power Consumption	10W			

*Country-Dependent

LigoDLBac Performance Data (6GHz)

Distance																	
Channel	Base	CPE	0.5km			1km			2km			5km			8km		
			CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30
40MHz	LigoDLB 6-90ac	LigoDLB 6-15ac	280	260	240	240	230	210	210	190	180	N/A	N/A	N/A	N/A	N/A	N/A
		LigoDLB 6-20ac	280	260	240	280	260	240	250	230	210	140	120	100	N/A	N/A	N/A
80MHz	LigoDLB 6-90ac	LigoDLB 6-15ac	400	380	360	360	340	320	250	230	210	N/A	N/A	N/A	N/A	N/A	N/A
		LigoDLB 6-20ac	400	380	360	400	380	360	380	360	340	190	170	160	N/A	N/A	N/A

Distance																	
Channel	Base	CPE	0.5km			2km			5km			10km			15km		
			CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30
	LigoDLB 6ac (23dBi)	LigoDLB 6-20ac	280	260	240	280	260	240	260	240	220	160	150	140	100	80	60
		LigoDLB 6ac (24dBi)	280	260	240	280	260	240	280	260	240	180	170	160	150	110	100
	LigoDLB 6ac (24dBi)	LigoDLB 6-20ac	400	380	360	400	380	360	200	180	170	190	170	160	120	90	70
		LigoDLB 6ac (24dBi)	400	380	360	400	380	360	370	350	330	220	200	190	160	120	100

Listed as true TCP values

This distance and throughput are an estimated based on a relatively low interference environment

The throughput is calculated theoretically, and may vary from the actual testing results due to packet size and the testing tool utilized

The throughput is the aggregate throughput of the concurrent CPEs connected

All throughputs listed are calculated throughputs, not the theoretical link speed.

The location of CPE is at the distance stated

NA = Not Applicable

LigoDLB ac protocol: iPoll 3



**DESIGNED
FOR**



PTP Backhaul

For WISP
& Telecom
Networks



**Industrial
Applications**

For Capacity-
Demanding
Scenarios



**Video
Surveillance**

Wireless
Camera
Infrastructure

LigoPTP Series

LigoPTP is LigoWave's flagship product line known for its quality and performance. The high-capacity wireless bridges are deployed in backhaul and last-mile scenarios by many Internet service providers and telecommunications operators (even Tier 1) worldwide because of the need for carrier-grade performance and link robustness. All LigoPTP bridges are equipped with W-Jet, LigoWave's proprietary data transmission protocol, developed to improve traffic flow and spectrum usage efficiency.

+700Mbps Performance

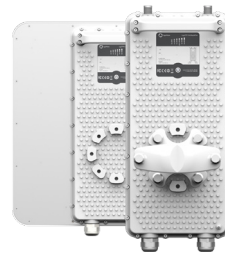
Carrier-Grade Hardware Design

Minimized Maintenance

Proprietary Protocol for PTP Scenarios

Simplified Setup & Management

Product Summary



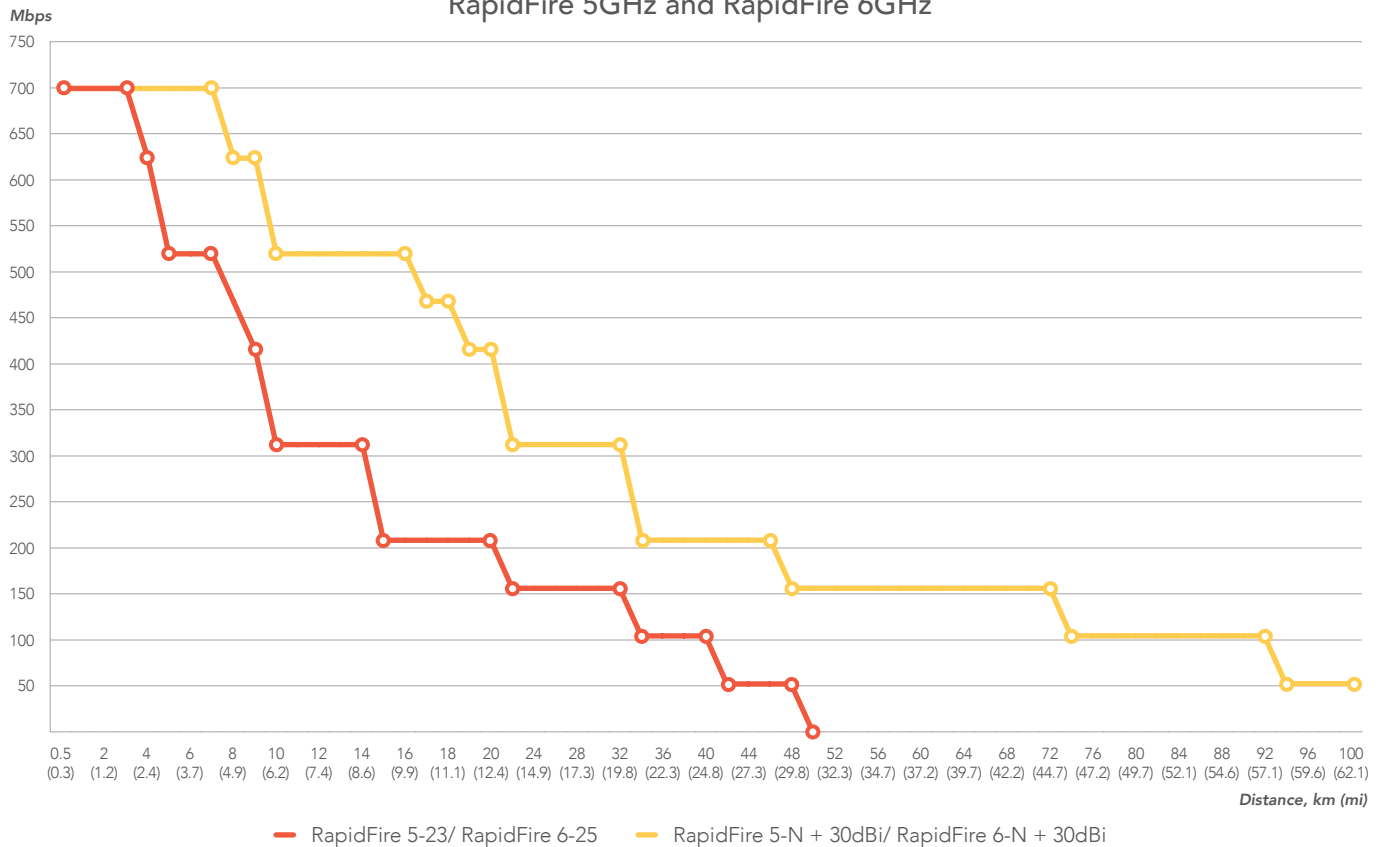
Product	RapidFire 4-N	LigoPTP 5-23 RapidFire/ LigoPTP 5-N RapidFire	LigoPTP 6-25 RapidFire/ LigoPTP 6-N RapidFire
Role Description	Professional wireless PTP bridge for public safety backhaul applications	Next generation PTP equipment for long-range links over the 5GHz frequency band	Next generation ultra-high-performance PTP equipment for long-range links over the 6GHz frequency band
Radio			
Frequency	4.800–5.000GHz*	4.900–6.100GHz*	5.900–6.400GHz*
Channel Size	5, 10, 20, 40, 80MHz		
Duplexing	TDD		
Stream	MIMO 2x2		
Wireless Protocol	Proprietary W-Jet V		
Max Output Power	27dBm**	31dBm**	30dBm**
Modulation Schemes	BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM	BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM	OFDM (256-QAM, 64-QAM, 16-QAM, QPSK, BPSK)
Network			
Ethernet Interface	2x 10/100/1000 Base-T		
Aggregated Data Throughput	700Mbps		
Antenna			
Type	N-type connectors for external antenna	Integrated dual pol directional panel; N-type connectors for external antenna	
Gain	-	23dBi	25dBi
Mounting			
Pole Diameter	1–12.4cm (0.39–4.88in)		
Tilting	+25°/–45°		
Powering			
Method	PoE 802.3af/at		
Input Voltage	+/-42–57VDC		
Power Consumption	8.6W		
Operating Temperature	–40°C~+65°C (–40°F~+149°F)		

* Power is lower at frequency edges

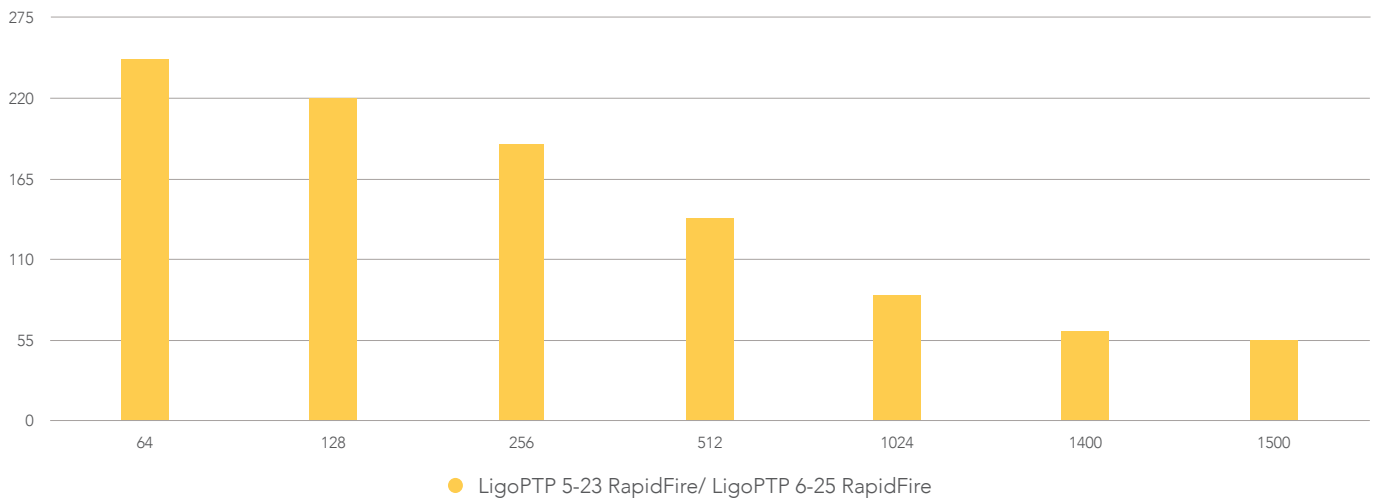
** Country-Dependent

Product Comparison

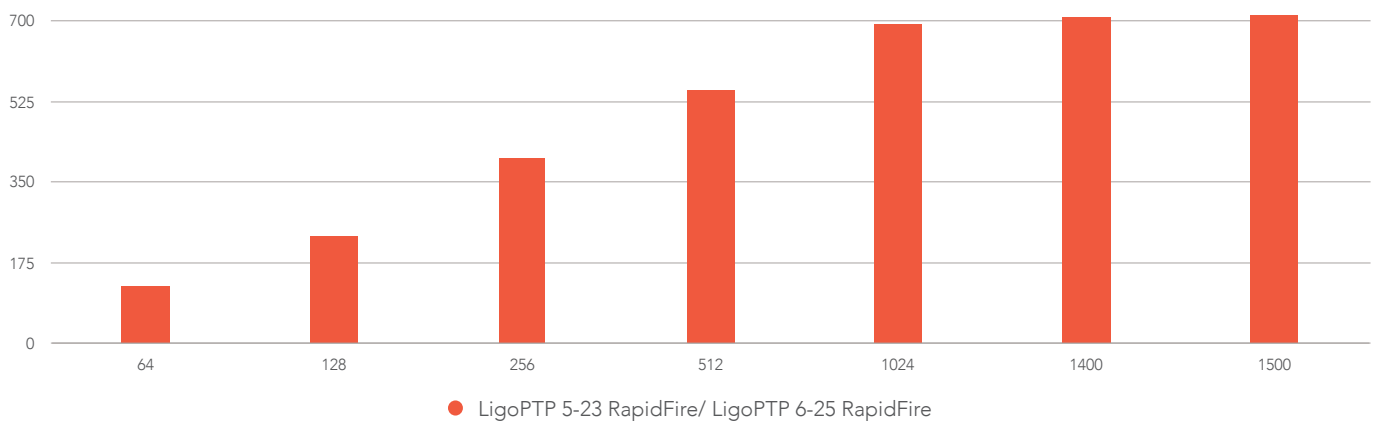
RapidFire 5GHz and RapidFire 6GHz

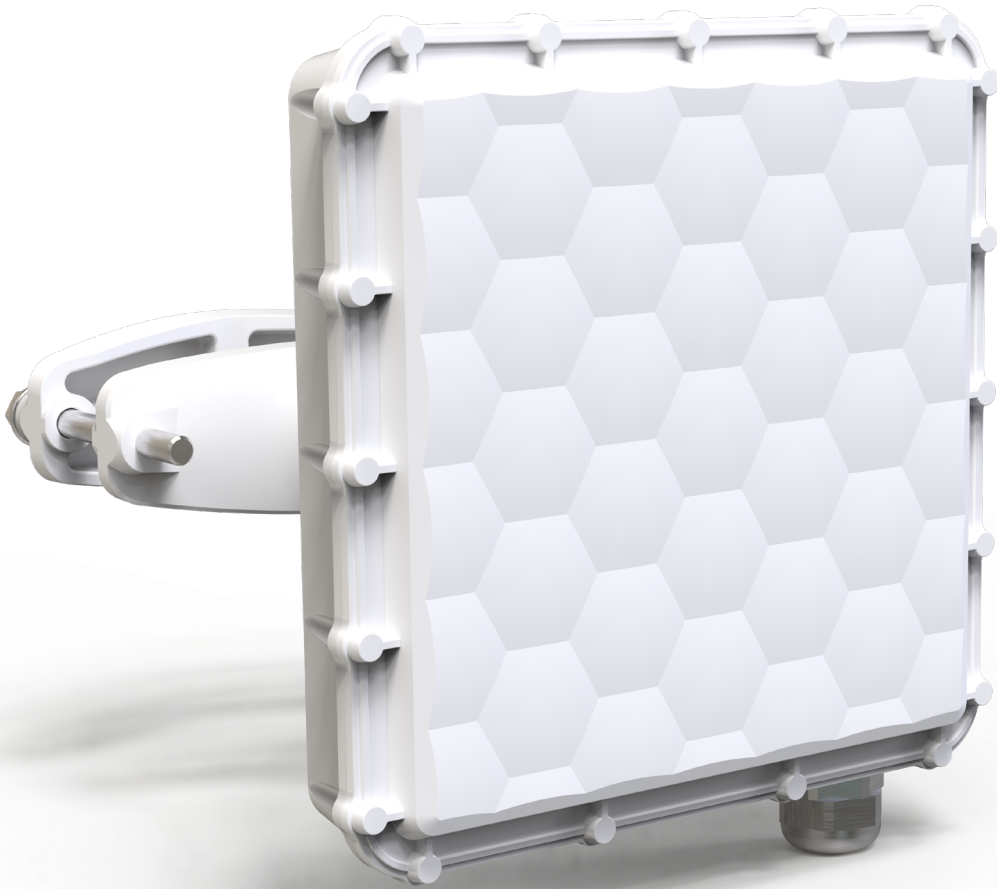


Packets per second, in thousands



Throughput, Mbps





**DESIGNED
FOR**



**Video
Surveillance**

Wireless
Camera
Infrastructure



**Industrial
Applications**

For Capacity-
Demanding
Scenarios



Last-Mile

Wireless to
the Building



**PTMP
Backhaul**

For WISP
& Telecom
Networks

LigoPTMP Series

The LigoPTMP series of devices are the next generation of point-to-multi-point wireless products dedicated to industrial and heavy-duty applications. LigoPTMP are extremely reliable and long-lasting solution suitable for a wide spectrum of capacity-demanding applications ranging from construction sites and racing tracks to seaports and oil fields. LigoPTMP comes with a durable metal casing, delivers high-speed performance, and allows for simplified deployment and configuration.

**Incredible Performance
(+600Mbps)**

**Simplified Deployment
& Configuration**

**Carrier-Grade
Design**

**Ideal for Capacity-
Demanding Applications**

Product Summary



Product	LigoBASE 5-N	LigoBASE 5-90	LigoSU 5-N	LigoSU 5-20	LigoSU 5-23
Role Description	Professional high-performance PTMP base station to be used with an external antenna	Professional high-performance PTMP base station with an integrated sector antenna	Professional high-performance PTMP subscriber unit to be used with an external antenna	Professional high-performance PTMP subscriber unit for short to mid-range connectivity	Professional high-performance PTMP subscriber unit for mid to long-range connectivity
Radio					
Frequency	4.900–5.850GHz (FCC: 4.940–4.990GHz, 5.150–5.250GHz, 5.725–5.850GHz)				
Channel Size	5, 10, 20, 40, 80MHz				
Duplexing	TDD				
Stream	MIMO 2x2				
Wireless Protocol	Proprietary W-Jet V				
Max Output Power	31dBm*		31dBm*		
Modulation Schemes	BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM				
Network					
Ethernet Interface	2x 10/100/1000 Base-T		10/100/1000 Base-T		
Aggregated Data Throughput	600Mbps				
Antenna					
Type	N-connectors for external antenna	Integrated 90° sector antenna	N-connectors for external antenna	Integrated directional panel antenna	Integrated directional panel antenna
Gain	Antenna-dependent	17dBi	Antenna-dependent	20dBi	23dBi
Beamwidth Horizontal	Antenna-dependent	90°	Antenna-dependent	10°	7°
Beamwidth Vertical	Antenna-dependent	12°	Antenna-dependent	10°	9°
Mounting					
Pole Diameter	1–12.4cm (0.39–4.88in)				
Tilting	+25/–45°				
Powering					
Method	PoE 802.3af/at				
Input Voltage	+/- 48VDC				
Power Consumption	8.6W				

*Country-Dependent

LigoPTMP Performance Data

Distance																				
Channel	Base	CPE	0.5km			1km			2km			5km			8km			12km		
			CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30	CPE ×10	CPE ×20	CPE ×30
40MHz	LigoBase 5-90	LigoSU 5-20	290	270	260	280	260	250	280	250	240	250	240	220	190	170	150	N/A	N/A	N/A
		LigoSU 5-23	290	270	260	280	260	250	280	250	240	260	250	240	250	220	200	190	170	150
80MHz	LigoBase 5-90	LigoSU 5-20	450	430	410	440	420	400	440	410	390	410	390	370	300	270	250	N/A	N/A	N/A
		LigoSU 5-23	450	430	410	440	420	400	440	410	390	420	410	390	330	300	280	260	230	200
40MHz	LigoBase 5N (23dBi)	LigoSU 5-N (25dBi)	290	270	260	280	260	250	280	260	250	270	260	240	260	230	210	200	180	160
80MHz	LigoBase 5N (23dBi)	LigoSU 5-N (25dBi)	450	430	410	440	420	400	440	420	400	430	410	390	380	360	340	300	280	260

Listed as true TCP values

Distance and throughput are estimated based on relatively low interference environments

Throughput is calculated on a theoretical basis and may vary from actual testing results depending on packet size and testing tools

Values indicate aggregate throughput on concurrent connected CPE

All listed throughput is calculated—not the theoretical link speed

CPE is located in the stated distance

N/A = Not Applicable

LigoPTMP Protocol: W-Jet V



DESIGNED
FOR



Small-
Medium
Businesses

Private
& Public
Business
Wi-Fi



Hotspot

Public
Access
Wi-Fi

Infinity Series

Infinity is a dedicated Wi-Fi access point product line offering a selection of devices for indoor and outdoor deployment. A flexible and intuitive controller solution makes network setup, management and monitoring simple and straightforward. Based on deployment size and requirements, the Infinity Series can support controller-less and controller-based setups with a free cloud version available to Infinity users.

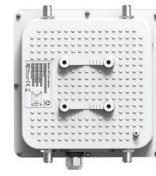
Wi-Fi Solutions
Ideal for Indoors &
Outdoors

Controller-Less
Scenario for Smaller
Networks

Cloud-Based
Controller with Extended
Functionality

Professional
Product Range

Product Summary



Product	NFT 1Ni	NFT 1N AF	NFT 2ac	NFT 3ac LITE	NFT 2ac outdoor	NFT Blizzard 2ac-90
Role Description	High-power 2.4GHz indoor access points with 2× Ethernet ports and PoE pass-through	2.4GHz indoor access point with 3× Ethernet ports and 802.3af	2.4/5GHz dual-radio (2×2) indoor access points with 3× Ethernet ports	High-performance 2.4/5GHz dual-radio (3×3) indoor access points with 2× Ethernet port	High-performance 2.4/5GHz dual-radio (2×2) outdoor access point with 1× Ethernet port	A 2.4/5GHz dual-radio 802.11ac outdoor sector access point
Radio						
Frequency	2.402–2.484GHz		2.402–2.484GHz; 5.170–5.875GHz			
Channel Size	20, 40MHz		20, 40, 80MHz			
Stream	MIMO 2×2		DUAL MIMO 2×2	DUAL MIMO 3×3	DUAL MIMO 2×2	
Wireless Protocol	802.11b/g/n		802.11a/b/g/n/ac			
Max Output Power	31dBm*	28dBm*	27dBm*	29dBm*		25dBm*
Receive Sensitivity at 20MHz Channel	-93dBm +/-2dB @BPSK -87dBm +/-2dB @QPSK -82dBm +/-2dB @16-QAM -76dBm +/-2dB @64-QAM	-90dBm +/-2dB @BPSK -87dBm +/-2dB @QPSK -82dBm +/-2dB @16-QAM -76dBm +/-2dB @64-QAM	-93dBm +/-2dB @BPSK -87dBm +/-2dB @QPSK -82dBm +/-2dB @16-QAM -76dBm +/-2dB @64-QAM	-93dBm +/-2dB @BPSK -87dBm +/-2dB @QPSK -82dBm +/-2dB @16-QAM -76dBm +/-2dB @64-QAM		-92dBm +/-2dB @BPSK -89dBm +/-2dB @QPSK -83dBm +/-2dB @16-QAM -75dBm +/-2dB @64-QAM -67dBm +/-2dB @256-QAM
Antenna Gain	3dBi	3dBi	3dBi (2.4 and 5GHz)	5dBi (2.4 and 5GHz)	N - connectors for external antenna	2.4GHz–9dBi 5GHz–11dBi
Powering						
Method	Passive PoE; 4, 5 pin (+) and 7, 8 pin (-)	802.3af	802.3af/at			
Input Voltage	12–24V	48V	37–56V			
Power Consumption	4.5W	6.24W	14W	19W		12W

*Country-Dependent



Get your free account!

Infinity Controller

Simplicity of Use

The Infinity Controller is an intuitive network management platform designed for the NFT series. It allows for easy, simple, and fast network installation, configuration, control, maintenance, automation, and expansion using any web browser.

The Controller can function as an integrated and as an external (cloud-based) management platform, providing the optimal solution to network setup, management, and expansion.

Users can also set up and host the integrated controller on their servers.

The Infinity Controller provides a handful of practical features for the NFT series:



Automated Device Onboarding

Automated setup of NFT devices introduced to a network, simplifying deployment, saving time, and eliminating manual configuration errors.



Pay as You Grow

Network management and expansion at a touch of a button, without the need for extra staff or hardware. Users can get a free account for 10 Infinity devices and expand the network as the business grows with the paid version.



Predefined Scenarios

Configuration presets, such as Office AP, Hotspot, and Easy Mesh, designed to simplify wireless network setup, management, and expansion.



IP Session Logging

A system for tracking end-user credentials (source/destination IPs, ports, MAC address, etc.) on the Internet, allowing for a safer and transparent Internet service.



Easy Mesh

A LigoWave solution made for expanding network coverage wirelessly and automating the configuration of new devices in the network.



Proximity

Integrated Wi-Fi-enabled device detection that logs all devices within range by collecting MAC addresses, time stamps, and other data without any user interaction.



Client Statistics

Detailed device stats, e.g. general info (device names, speeds, etc.), periodic statistics (signal strength diagrams, etc.), and statistical history (last connected devices, etc.).



DLB/PTP Monitoring

The Infinity Controller supports DLB/PTP Series management and monitoring, giving complete device control and a better look at the stats.



Proximity

LigoWave access points have an integrated mobile device detection feature. This means that any device within range can be logged using the MAC address and date/time without any user interaction.

The data is exported in real time and can be used to improve the services of an enterprise or managed service provider by importing them into proprietary applications for analytics and insights. An API is available upon request.

Our website provides information on LigoWave's technological partners that are using this functionality.



LigoWave

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