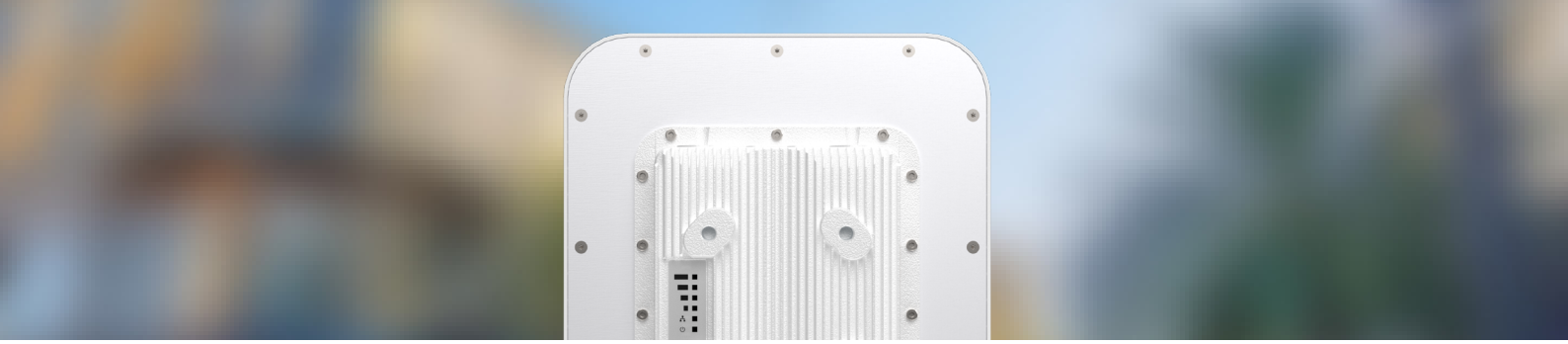
LigoWave

LigoDLB 5-20ax

High-Performance 802.11ax 5GHz Wireless Device for Point-to-Point & Point-to-Multipoint* Applications

Datasheet



Next-Gen Wireless Performance for Demanding Networks

The LigoDLB ax Series delivers high-performance Point-to-Point and Point-to-Multipoint* wireless connectivity with 802.11ax technology, delivering up to 1.5 Gbps throughput, 1024-QAM modulation, and up to 24 dBm output power for fast, stable, long-range links. A dual-core CPU, 2.5 Gbps Ethernet port, and 160MHz-wide channel support ensure exceptional data processing and high PPS rates—ideal for real-time transmission. Enclosed in a rugged IP67-rated housing, it offers reliable, all-weather performance in even the harshest environments.

Ultra High Performance Wireless Device

<1500 Mbps

Working Frequency

5.1-5.9 GHz

Distance Recommendations:

Maximum (10km/6.2mi)

Optimal (2km/1.24mi)

Improved Noise Immunity

The metal casing reduces interference and noise when multiple devices are mounted on the same pole. Its IP67-rated housing also acts as a heatsink, improving RF performance by dissipating heat.

Surge Protection

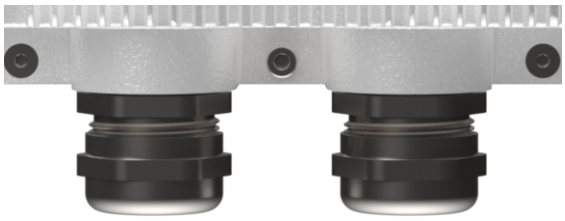
Complying with IEC 61000-4-5, it offers 6kV line-to-ground and 2kV line-to-line protection for reliable performance in harsh weather and unstable electrical conditions.

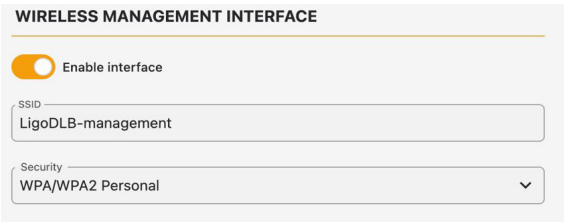
Design Built to Last

Designed for tough weather, it features an IP67-rated anticorrosive metal casing for long-lasting durability, making it a reliable choice for projects requiring standardized IP-rated equipment.

Second Ethernet Port

The Gigabit Ethernet port with software-enabled PoE powers external devices like 802.3af PoE CCTV cameras or other LigoWave gear, offering flexible integration. This eliminates the need for extra PoE switches, lowering deployment costs and simplifying installations.





Remote Management Radio

Built-in 2.4 GHz management radio enables wireless configuration from up to 20 meters away. Ideal for installations in hard-to-reach areas, reducing maintenance costs and improving operational safety.

Technical Specifications

Distance

Maximum	10km (6.2mi)
Recommended	2km (1.24mi)

Wireless

WLAN Standard	IEEE 802.11a/n/ac/ax
Radio Mode	Dual 2×2 MIMO
Radio Frequency Band	5GHz models: 5.150 - 5.850GHz (FCC 5.150 - 5.250 and 5.725 - 5.850GHz)
Transmit Power	Up to +24dBm (Country Dependent)
Out-of band management	2.4 GHz access radio
Channel Size	20, 40, 80, 160MHz
Receiver Sensitivity	From -96dBm (HE20, MCS0) to -55dBm (HE160, MCS11)
Modulation Schemes	802.11ax: OFDM** (1024 QAM, 256-QAM, 64-QAM, 16-QAM, QPSK, BPSK)
Data Rates	802.11ax @ 160MHz: 2402, 2161, 1921, 1729, 1441, 1297, 1152, 864, 576, 432, 288, 144Mbps 802.11ax @ 80MHz: 1201, 1080, 960, 864, 720, 648, 576, 432, 288, 216, 144, 72Mbps 802.11ax @ 40MHz: 573, 516, 458, 412, 344, 309, 275, 206, 137, 103, 68, 34Mbps 802.11ax @ 20MHz: 286, 258, 229, 206, 172, 154, 137, 103, 68, 51, 34, 17Mbps

Antenna

LigoDLB 5-20ax	Integrated directional panel antenna
Gain	20dBi
Second Antenna	Integrated 2.4GHz single-polarized omnidirectional patch antenna

Wired

First Interface	100/1000/2500 Base-T with PoE IN (RJ45)
Second Interface	10/100/1000 Base-T with PoE OUT (RJ45)

Physical

Dimensions without mount:

LigoDLB 5-20ax	Length 57 mm (2.2''), width 211 mm (8.3''), height 218 mm (8.5'')
Mount length to pole	130 mm (5.1'')

Weight including mount:

LigoDLB 5-20ax	1.97 kg (4.3 lb)

Power

Power Supply	802.3at or active in PoE (48–56 VDC) (AC to 48 VDC PoE Adapter Included)
Power Source	~100-240 VAC
Max Power Consumption	Up to 15W / 30W (with PoE out)
2nd Ethernet Port Power Supply	802.3af/at out 48VDC, up to 13W

Compatibility

Compatible with all LigoDLBn (802.11n) & LigoDLBac (802.11ac) devices (Wi-Fi mode)

Software features

- Bridge / Router IPv4 / Router IPv6
- Static / Dynamic IP modes with Built-in DHCP server
- NAT / Static routes / Port forward / DMZ
- Up to 8 SSID per radio
- Data and management VLANs (802.1q), with QnQ support
- Site survey, Ping / Traceroute, Spectrum analyser, Layer 3 / Layer 4 packet analyser
- Configurable hardware watchdog (ping, system health)
- User-Controlled PoE out (48V)

Duplexing Scheme	Time Division Duplex
Wireless Security	WPA/WPA2/WPA3 Personal, WPA/WPA2/WPA3 Enterprise (802.1x), WACL, Client isolation,

Services

Services	SNMP v1/2c/3, NTP client, system alerts
Discovery Services	SSDP, CDP/LLDP

Environmental Specifications

Outdoor Ingress Protection Rating:	IP67
Surge Protection	EN61000- 4-5, 10/700μs pulse
Operating Temperature	–40°C (–40°F) ~ +65°C (+149°F)
Humidity	0~95% (Non-Condensing)

Management

Dedicated 2.4GHz radio	For management from any Wi-Fi compatible client device
System monitoring	SNMP v3, Syslog, Web UI, Infinity Controller
Configuration	WebUI, Infinity Controller

Regulatory

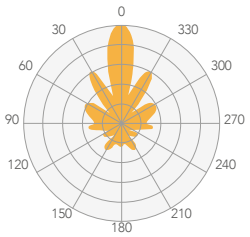
Certification	FCC/CE/UK CA

**PTMP mode – to be supported in a future firmware release.*
***OFDMA – coming soon.*

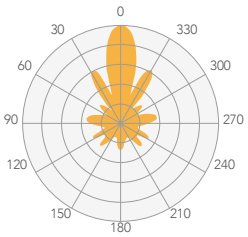
Antenna specifications

LigoDLB 5-20ax

V Pol

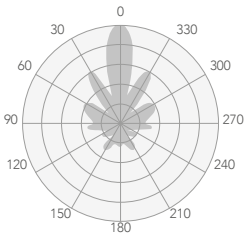


Azimuth

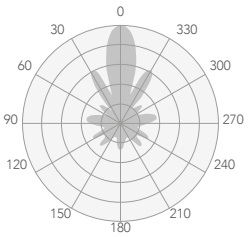


Elevation

H Pol



Azimuth



Elevation

Internal antenna

Model name	LigoDLB 5-20ax
Frequency range	5.1 - 5.9 GHz
Gain	20 dBi
Polarization	Dual linear
Cross-pol Isolation	>25 dBi
VSWR	<1.8
Azimuth 3dBm beamwidth (H pol)	16°
Azimuth 3dBm beamwidth (V pol)	16°
Elevation beamwidth	16°

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www.ligowave.com

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