LigoWave

# LigoDLB PRO ac

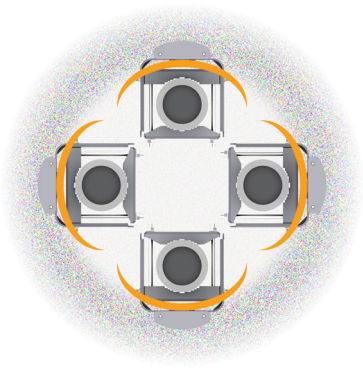
500+ Mbps integrated antenna base-stations


## Incredible performance

500+ Mbps throughput - the result of  a powerful hardware platform with an 802.11ac technology based radio and a proprietary data transmission protocol (iPoll). Incorporating a QCA 9557 CPU (720 MHz), a QCA 9882 radio and 128 MBytes of RAM/Flash memory the LigoDLB PRO ac series access points are an ideal solution for resource demanding installations. State of the art RF design with great output power and sensitivity parameters improve range and capacity over the highest modulation - 256 QAM. The 48V Gigabit Ethernet port (802.3af) allows utilizing the full capacity of the base-station. LigoDLB ac series devices are backwards compatible with LigoDLB devices using iPoll mode, which helps to expand or upgrade existing networks with the latest technologies over time.

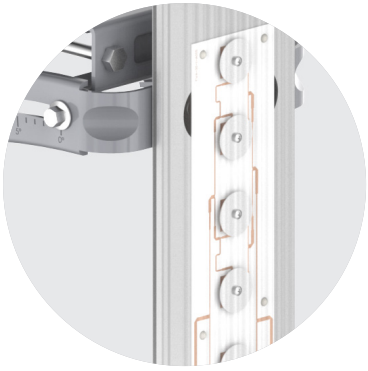
### Solid mount

The LigoDLB PRO mounting bracket allows 15° down-tilt when doing antenna alignment. Supported pole diameters are from 25 mm (0.98 inch) to 75 mm (2.95 inches). All devices have an IP-67 enclosure and integrated surge suppression to provide best in class protection from harsh weather conditions in any climate zone.



### Improved noise immunity

The metal enclosure works as a deflector eliminating interference caused by backlobes and rejecting noise when multiple base-stations are co-located on a single tower. Apart from RF shielding the metal housing works as a heatsink, allowing better RF performance by dissipating the heat generated by the radio.



### Integrated antenna design

The all-in-one design reduces the risk of cable failures and decreases the signal loss, as the radio is connected directly to the antenna. Such integration allows saving tower space and improves the cost which helps to speed up your ROI.

# Specifications

| Model name | Coverage recommendation |
|---|---|
| LigoDLB PRO 5-90-17ac | 7 km (4.3 mi) |
| LigoDLB PRO 5-90-20ac | 12 km (7.5 mi) |

## Wireless

| | |
|---|---|
| WLAN standard | IEEE 802.11 a/n/ac, iPoll 2 & 3 |
| Radio mode | MIMO 2x2 |
| Radio frequency band | 5.150 - 5.850 GHz (FCC 5.150 - 5.250 and 5.725 - 5.850 GHz) |
| Transmit power | Up to 30 dBm (country dependent) |
| Channel size | 5,10, 20, 40, 80 MHz |
| Modulation schemes | 802.11 a/n: OFDM (64-QAM, 16-QAM, QPSK, BPSK)<br>802.11 ac: OFDM (256-QAM, 64-QAM, 16-QAM, QPSK, BPSK) |
| Data rates | 802.11 ac @ 40 MHz: 400, 360, 300, 270, 240, 180, 120, 90, 60, 30 Mbps<br>802.11 ac @ 80 MHz: 866, 780, 650, 585, 520, 390, 260, 195, 130, 65 Mbps |
| Error correction | FEC, LDPC |
| Duplexing scheme | Time division duplex |

## LigoDLB PRO 5-90-17ac/ LigoDLB PRO 5-90-20ac:

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 MHz | Modulation, Mbps | 400 | 360 | 300 | 270 | 240 | 180 | 120 | 90 | 60 | 30 |
| | TX Power, dBm | 26 | 27 | 28 | 29 | 30 | 30 | 30 | 30 | 30 | 30 |
| | Receive sensitivity, dBm | -70 | -72 | -76 | -78 | -80 | -84 | -87 | -92 | -94 | -95 |
| 80 MHz | Modulation, Mbps | 866 | 780 | 650 | 585 | 520 | 390 | 260 | 195 | 130 | 65 |
| | TX Power, dBm | 24 | 25 | 25 | 26 | 27 | 28 | 28 | 29 | 29 | 29 |
| | Receive sensitivity, dBm | -64 | -66 | -70 | -72 | -74 | -78 | -81 | -85 | -88 | -90 |

## Antenna

| | |
|---|---|
| Type | Integrated dual-polarized 90 degree sector antenna |
| Gain | LigoDLB PRO 5-90-17ac -17 dBi<br>LigoDLB PRO 5-90-20ac – 20 dBi |

## Wired

| | |
|---|---|
| Interface | 10/100/1000 Base-T, RJ45 (802.3af) |

## Physical

| | |
|---|---|
| Dimensions* | 574 mm (22.6 ''), 114 mm (4.5 ''), 46 mm (1.8 '')/ 942 mm (37.1 ''), 114 mm (4.5 ''), 46 mm (1.8 '') |
| Weight** | 3000 g (6.6 lb)/ 3600 g (7.94 lb) |
| Mounting | pole mount included |

## Power

| | |
|---|---|
| Power supply | 37 - 56 VDC PoE 802.3af (AC to DC adapter included) |
| Power source | 100 – 240 VAC |
| Power consumption (max) | 10 W |

## Environmental

| | |
|---|---|
| Operating temperature | -40°C (-40 F) ~ +65°C (+149 F) |
| Humidity | 0 ~ 90 % (non-condensing) |

## Management

| | |
|---|---|
| System monitoring | SNMP, Syslog, Web UI, WNMS |
| Configuration | WebUI, WNMS |

## Regulatory

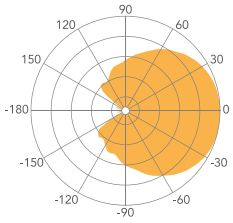
| | |
|---|---|
| Certification | FCC/IC/CE |

**Dimensions exclude pole mount* ***Weight includes pole mount*

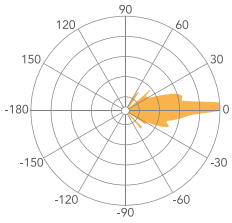
## Antenna specifications

### LigoDLB PRO 5-90-17

**V Pol**

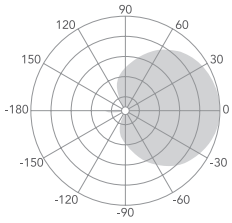



Azimuth

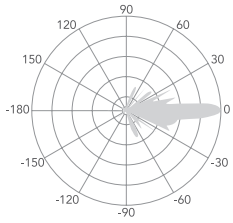



Elevation

**H Pol**



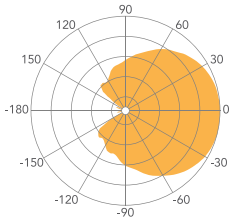

Azimuth



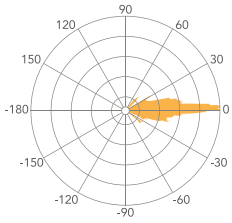

Elevation

### LigoDLB PRO 5-90-20

**V Pol**

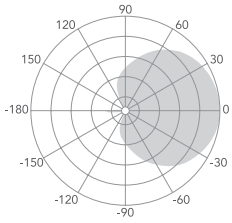



Azimuth

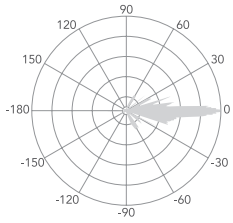



Elevation

**H Pol**




Azimuth




Elevation

| Model name | LigoDLB PRO 5-90-17 | LigoDLB PRO 5-90-20 |
|---|---|---|
| Frequency range | 5.1 - 5.9 GHz | 5.1 - 5.9 GHz |
| Gain | 17 | 20 |
| Polarization | Dual linear | Dual linear |
| Cross-pol Isolation | 24 dBi | 24 dBi |
| VSWR | <1.8 | <1.8 |
| Azimuth beamwidth (H pol) | 90 deg | 90 deg |
| Azimuth beamwidth (V pol) | 90 deg | 90 deg |
| Elevation beamwidth | 7 deg | 5 deg |