

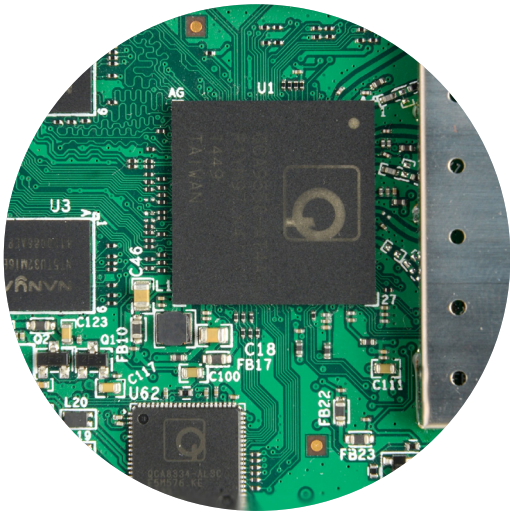


LigoWave



LigoDLB PRO

Powerful, integrated antenna base-stations



Powerful hardware platform

Based on a QCA 9557 chipset (720 MHz) and 128 MBytes of RAM/Flash memory the LigoDLB PRO series access points are an ideal solution for resource demanding installations with a high number of clients connected to a single AP. The 48V Gigabit Ethernet port (802.3af) allows utilizing the full capacity of the base-stations.



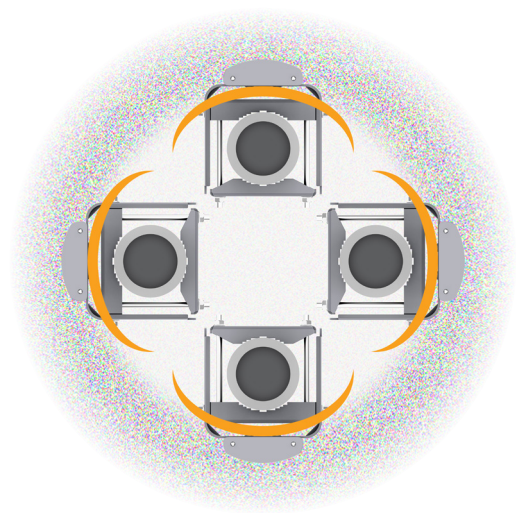
Integrated antenna design

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.



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

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.

Specifications

Model name	Coverage recommendation
LigoDLB PRO 2-90-16	10 km (6.2 mi)
LigoDLB PRO 2-90-19	14 km (8.7 mi)
LigoDLB PRO 5-90-17	7 km (4.3 mi)
LigoDLB PRO 5-90-20	12 km (7.5 mi)

Wireless

WLAN standard	IEEE 802.11 a/b/g/n, iPoll 2 & 3
Radio mode	MIMO 2x2
Radio frequency band	2 GHz models: 2.402 – 2.492 GHz (FCC 2.412 – 2.462 GHz) 5 GHz models: 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 MHz
Modulation schemes	802.11 a/g/n: OFDM (64-QAM, 16-QAM, QPSK, BPSK) 802.11 b: DSS (CCK, DQPSK, DBPSK)
Data rates	802.11 n: 300, 270, 240, 180, 120, 90, 60, 30 Mbps 802.11 a/g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11 b: 11, 5.5, 2, 1 Mbps
Error correction	FEC, Selective ARQ
Duplexing scheme	Time division duplex

LigoDLB PRO 2-90-16/ LigoDLB PRO 2-90-19:

Receive sensitivity (dBm)	802.11N/ iPoll (20/ 40 MHz)	15 Mbps	30 Mbps	45 Mbps	60 Mbps	90 Mbps	120 Mbps	135 Mbps	150 Mbps
		-89	-88	-87	-83	-80	-76	-74	-77
802.11g	802.11N/ iPoll (20/ 40 MHz)	30 Mbps	60 Mbps	90 Mbps	120 Mbps	180 Mbps	240 Mbps	270 Mbps	300 Mbps
		-85	-85	-83	-80	-77	-73	-72	-70
802.11g	802.11g	6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
		-89	-88	-88	-87	-84	-81	-77	-75
Output power (dBm - combined)	802.11N/ iPoll (20/ 40 MHz)	15 Mbps	30 Mbps	45 Mbps	60 Mbps	90 Mbps	120 Mbps	135 Mbps	150 Mbps
		30	30	30	29	29	29	28	27
802.11g	802.11N/ iPoll (20/ 40 MHz)	30 Mbps	60 Mbps	90 Mbps	120 Mbps	180 Mbps	240 Mbps	270 Mbps	300 Mbps
		30	30	29	29	29	29	28	27
802.11g	802.11g	6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
		30	29	29	29	29	29	29	29

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

Receive sensitivity (dBm)	802.11N/ iPoll (20/ 40 MHz)	15 Mbps	30 Mbps	45 Mbps	60 Mbps	90 Mbps	120 Mbps	135 Mbps	150 Mbps
		-97	-93	-91	-86	-83	-79	-77	-76
		30 Mbps	60 Mbps	90 Mbps	120 Mbps	180 Mbps	240 Mbps	270 Mbps	300 Mbps
	802.11g	-94	-91	-88	-84	-81	-77	-75	-73
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
		-97	-96	-94	-92	-88	-85	-81	-79
Output power (dBm - combined)	802.11N/ iPoll (20/ 40 MHz)	15 Mbps	30 Mbps	45 Mbps	60 Mbps	90 Mbps	120 Mbps	135 Mbps	150 Mbps
		30	30	30	30	30	30	29	29
		30 Mbps	60 Mbps	90 Mbps	120 Mbps	180 Mbps	240 Mbps	270 Mbps	300 Mbps
	802.11g	30	30	30	30	30	29	29	28
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
		30	30	30	30	30	30	30	30

Antenna

Type	Integrated dual-polarized 90 degree sector antenna
Gain	LigoDLB PRO 2-90-16 - 16 dBi LigoDLB PRO 2-90-19 – 19 dBi LigoDLB PRO 5-90-17 -17 dBi LigoDLB PRO 5-90-20 – 20 dBi

Wired

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

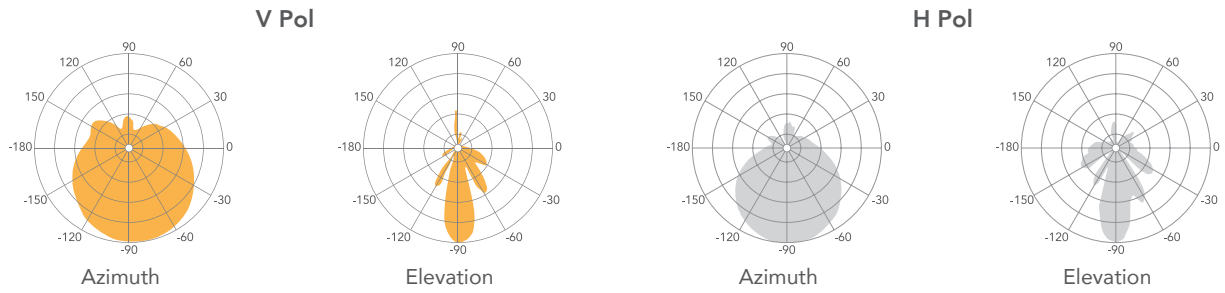
Certification	FCC/IC/CE
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*Dimensions exclude pole mount

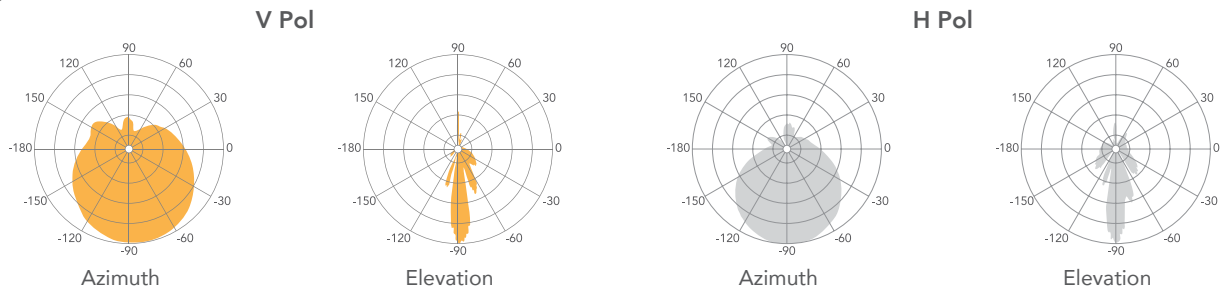
**Weight includes pole mount

Antenna specifications

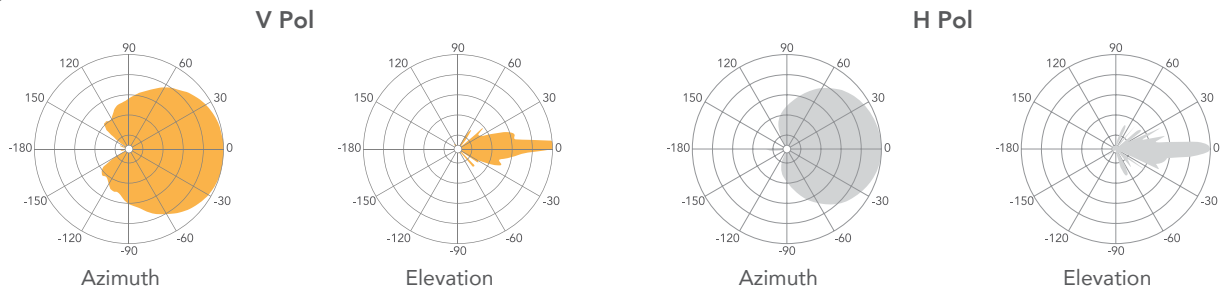
LigoDLB PRO 2-90-16



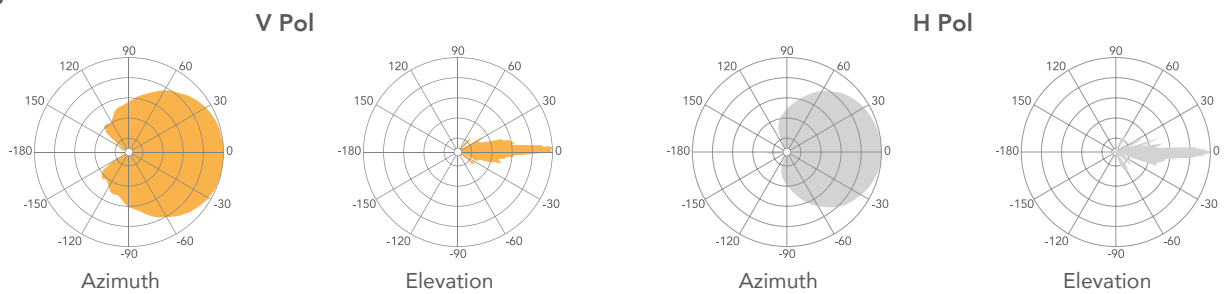
LigoDLB PRO 2-90-19



LigoDLB PRO 5-90-17



LigoDLB PRO 5-90-20



Internal Antenna

Model name	LigoDLB PRO 2-90-16	LigoDLB PRO 2-90-19	LigoDLB PRO 5-90-17	LigoDLB PRO 5-90-20
Frequency range	2.4 – 2.5 GHz	2.4 – 2.5 GHz	5.1 - 5.9 GHz	5.1 - 5.9 GHz
Gain	16	19	17	20
Polarization	Dual linear	Dual linear	Dual linear	Dual linear
Cross-pol Isolation	25 dBi	25 dBi	24 dBi	24 dBi
VSWR	<1.6	<2	<1.8	<1.8
Azimuth beamwidth (H pol)	90 deg	90 deg	90 deg	90 deg
Azimuth beamwidth (V pol)	100 deg	100 deg	90 deg	90 deg
Elevation beamwidth	24 deg	24 deg	20 deg	20 deg



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LigoDLB PRO

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