LigoWave

LigoBASE 5-N/ 5-90

High-performance 5 GHz base-station

Available models

LigoBASE 5-N

Base-station with N-type connectors for the external antenna

LigoBASE 5-90

Base-station with and integrated 17 dBi 90 degree sector antenna.

Incredible performance

LigoPTMP series point to multipoint system delivers 600+ Mbps throughput via its unique and powerful RF design that supports up to 256QAM modulation and 31 dBm output power. 1.2 GHz dedicated CPU ensures swift data processing and high packet per second rate (PPS) which is important for real time data transmission applications. Equipped with two Gigabit Ethernet ports, one with PoE passthrough, the unit allows powering and connecting two devices on the tower (another LigoBASE or IP camera). LigoBASE incorporates integrated surge and ESD protection according to IEC standards passing Class 4 requirements. Additionally, weatherproof IP-67 standard rated enclosure design allows using the equipment in any climate conditions.

600

LigoWave OS

The full featured operating system makes LigoPTMP devices ideal not only for WISPs and operators, but also for security, enterprise or industrial applications. Proprietary data transmission protocol (W-Jet V) ensures smooth performance even in noisy areas at the same time delivering high capacity, low latency and high packet per second rate. QoS (quality of service) mechanism allows prioritizing mission critical data and efficiently transmitting voice, video or other real time data over the wireless network. Essential tools like spectrum analyzer, site survey, antenna alignment and others are included.
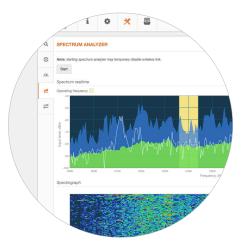
Easy pre-configuration and maintenance

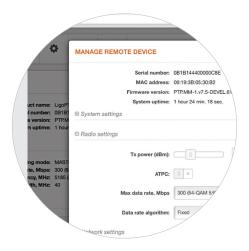A new approach to setting up and maintaining your network

Setup Wizard

Guides the installer through the important steps of the set-up process.

Single side configuration

Link parameters are automatically applied to subscriber units once set on the base-station side.

Spectrum analyzer

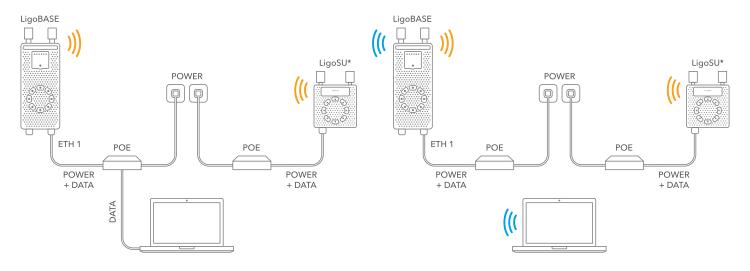Demonstrates the current noise floor in a waveform and waterfall graphs.

2.4 GHz access radio

An internal 2.4 GHz radio allows access into the LigoBASE GUI by wireless connection with any WIFI equipped device.
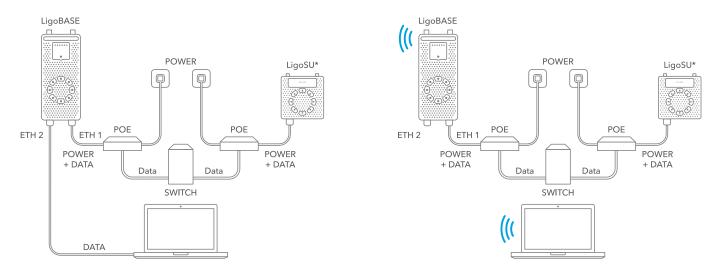
Pre-configuration

Multiple options to pre-configure LigoPTMP devices are displayed in a scheme below. Devices can be connected with each other using wired or wireless connectivity. End-user device can also connect to the LigoBASE device using 2.4 GHz access radio or using wire to the Ethernet port of the LigoBASE device. LigoPTMP devices can be discovered using Bonjour, CDP and SSDP protocols as well.

Wireless

LigoBASE
POWER
LigoSU*
ETH 1
POE
POE
POWER
+ DATA
POWER
+ DATA
DATA

LigoBASE
POWER
LigoSU*
ETH 1
POE
POE
POWER
+ DATA
POWER
+ DATA

Multiple LigoSU units can be connected to the LigoBASE

Wired

LigoBASE
POWER
LigoSU*
ETH 2
ETH 1
POE
POE
POWER
+ DATA
POWER
+ DATA
Data
Data
SWITCH
DATA

LigoBASE
POWER
LigoSU*
ETH 2
ETH 1
POE
POE
POWER
+ DATA
POWER
+ DATA
Data
Data
SWITCH

Multiple LigoSU units can be connected to the LigoBASE

802.3af/at inserter

DC input connector

Grounding pin

DIN rail mounting

Electrical specifications

DC input voltage range	44.0–57.0V
PoE output	IEEE 802.3af/at compliant
Output power	up to 28W
Power out pins	RJ45 1,2,4,5 (+) and 3,6,7,8 (-)
Data rate	10/100/1000Mbps
Surge protection	2kV line to line,
	6kV line to ground (output port)

Physical specifications

Data input jack	RJ45
Data + Power output jack	RJ45
Dimensions	117x87x34mm
Weight	270g
Operating temperature	-40 to +65C
UTP/FTP cable length	100m total
	(from switch to the device)

Radio

Wireless protocol	W-Jet V
Radio mode	MIMO 2x2
Frequency range	4.900 - 6.100 GHz (FCC: 4.940 - 4.990 GHz, 5.150-5.250 GHz, 5.725-5.850 GHz)
Channel size	5, 10, 20, 40, 80 MHz
Modulation schemes	OFDM (256-QAM, 64-QAM, 16-QAM, QPSK, BPSK)
Data rates @ 80 MHz	866, 780, 650, 585, 520, 390, 260, 195, 130, 65 Mbps
Duplexing scheme	TDD
Error correction	BCC, LDPC

Modulation, Mbps	866	780	650	585	520	390	260	195	130	65
TX Power, dBm	25	26	26	27	27	28	29	30	30	31
Receive sensitivity, dBm	-71	-73	-77	-79	-80	-84	-87	-92	-94	-97

Antenna

LigoBASE 5-90	Integrated 17 dBi dual-pol 90 degree sector antenna
LigoBASE 5-N	2 N-type connectors

Wired

First Interface	10/100/1000 Base-T with PoE IN (RJ-45)
Second Interface	10/100/1000 Base-T with PoE OUT (RJ-45)

Physical

Dimensions without mount:

LigoBASE 5-90	Length 389 mm (15.3''), width 174 mm (6.8''), height 51 mm (2'')
LigoBASE 5-N	Length 399 mm (15.7''), width 174 mm (6.8''), height 47 mm (1.8'')
Mount length till pole	124 mm (4.8'')

Weight including mount:

LigoBASE 5-90	2.77 kg (6.1 lb)
LigoBASE 5-N	3 kg (6.6 lb)

Power

Power input method, voltage	PoE 802.3af, isolated 42 - 57 VDC
Power consumption (max)	8.6 W
Power output method, voltage	PoE 802.3af, 48 VDC, 12.95W maximum

PoE inserter and AC/DC adapter are included

Environmental

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

Software features

- Wizard for fast link setup
- Centralized control from LigoBASE: A) Common wireless link parameters; B) Individual LigoSU parameters
- Smart Auto-channel
- Robust data security
- QoS with hardware acceleration
- Spectrum analyzer
- Wireless signal and device state indication on RGB LEDs
- Dual firmware image

Management
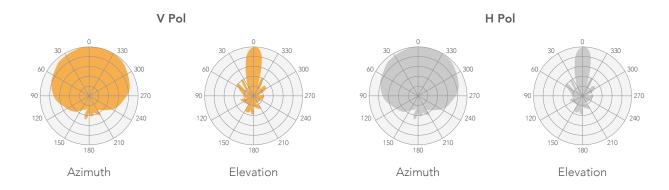
Dedicated 2.4 GHz radio for management

System monitoring	SNMP, GUI/HTTP(S), Shell/SSH and WNMS
System configuration	GUI/HTTP(S) and WNMS

Regulatory

Certification	FCC/IC/CE

Antenna specifications

V Pol		H Pol	
Azimuth	Elevation	Azimuth	Elevation

Frequency range	4.9 - 5.9 GHz
Gain	17 dBi
Polarization	Dual linear
Cross-pol Isolation	24 dBi
VSWR	<1.7
Azimuth beamwidth (H pol)	90 deg
Azimuth beamwidth (V pol)	90 deg
Elevation beamwidth	20 deg