

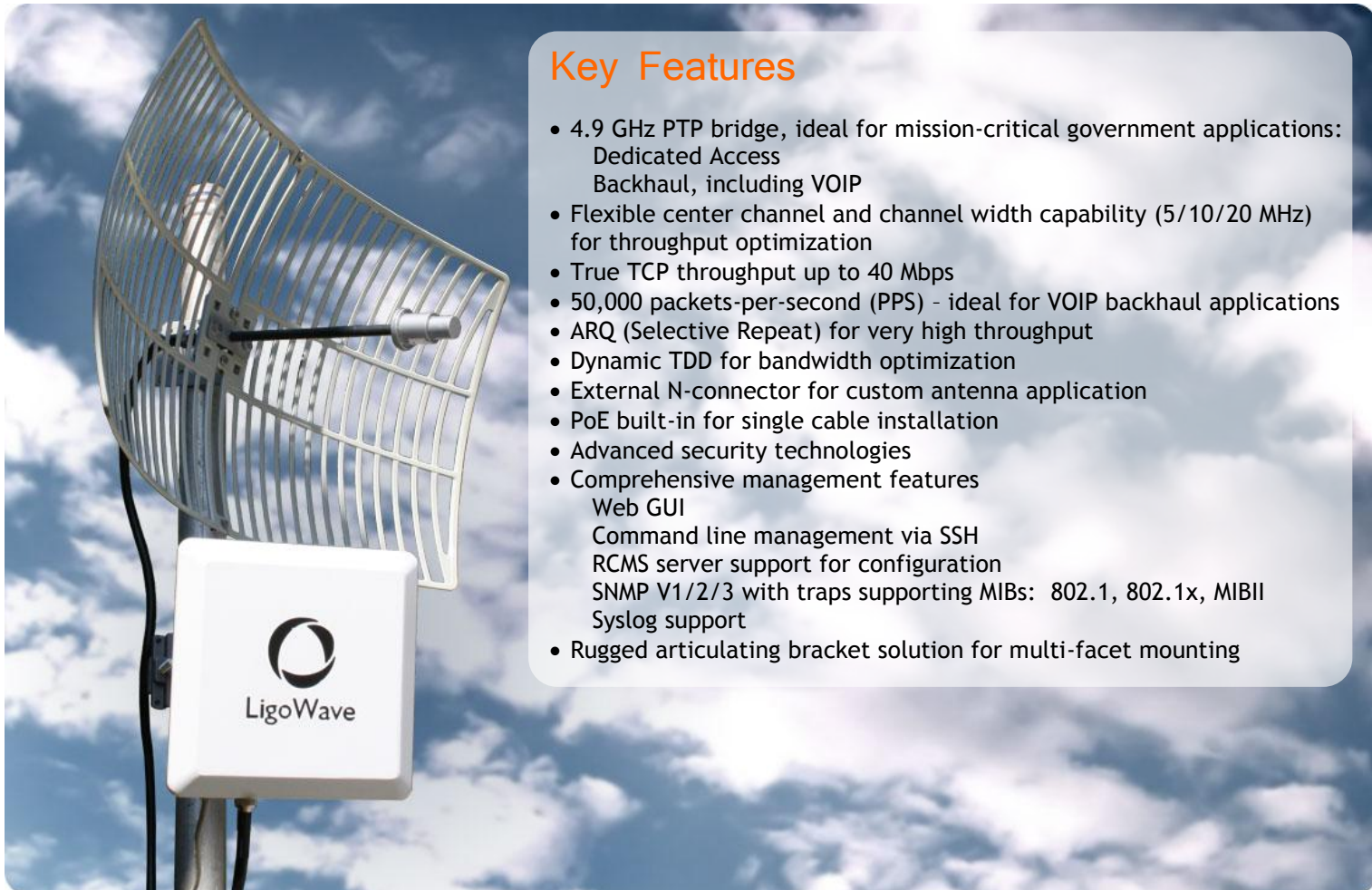
# LigoPTP 4-N

4.9 GHz Public Safety Connectorized Point-to-Point Device



## Key Features

- 4.9 GHz PTP bridge, ideal for mission-critical government applications:
  - Dedicated Access Backhaul, including VOIP
- Flexible center channel and channel width capability (5/10/20 MHz) for throughput optimization
- True TCP throughput up to 40 Mbps
- 50,000 packets-per-second (PPS) - ideal for VOIP backhaul applications
- ARQ (Selective Repeat) for very high throughput
- Dynamic TDD for bandwidth optimization
- External N-connector for custom antenna application
- PoE built-in for single cable installation
- Advanced security technologies
- Comprehensive management features
  - Web GUI
  - Command line management via SSH
  - RCMS server support for configuration
  - SNMP V1/2/3 with traps supporting MIBs: 802.1, 802.1x, MIBII
  - Syslog support
- Rugged articulating bracket solution for multi-facet mounting



## Product Overview

LigoWave offers public safety officers a seamless 4.9 GHz point-to-point bridge solution with the release of the LigoPTP 4-N integrated backhaul device. Designed with mission-critical reliability in mind, the LigoPTP 4-N delivers true TCP throughput up to 40 Mbps, at a packets-per-second performance of 50,000 PPS. Even in challenging RF conditions, the LigoPTP 4-N delivers unparalleled performance by combining robust hardware technologies and unique, industry-leading software mechanisms. The LigoPTP 4-N product is perfect for public safety applications, delivering wireless dedicated access or backhaul solutions for police and fire departments, search and rescue teams, and other government agencies. The LigoPTP 4-N product features an external N-connector for custom antenna application and is housed in a rugged, cast aluminum enclosure.

The LigoPTP 4-N showcases an array of advanced software mechanisms that provide optimal point-to-point connectivity for high-throughput, long distance links. LigoWave's proprietary PTP mechanisms utilize techniques such as Dynamic Time Division Duplexing (TDD) to dynamically allocate bandwidth in the direction needed, thus increasing link efficiency and greatly decreasing the impact that distance has on throughput of the link. The LigoWave point-to-point products also feature selective repeat ARQ technology, an enhanced error-correction software mechanism that optimizes data traffic to provide reliable, very high throughput over high-bandwidth, long-range links even in the presence of interference. The LigoPTP 4-N is also compatible with RCMS, a centralized configuration, firmware, and statistics server offered by LigoWave for carrier class diagnostic and configuration management capabilities.

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To learn more about LigoWave products, visit [www.ligowave.com](http://www.ligowave.com).



# LigoPTP 4-N

## 4.9 GHz Public Safety Connectorized Point-to-Point Device



### Specifications

#### WLAN Standard

Proprietary 4.9 GHz

#### Radio Scheme

OFDM - Variable modulation range (64QAM, 16QAM, QPSK, BPSK)  
ARQ (Selective Repeat)

#### Error Correction

FEC, ARQ (Selective Repeat)

#### Duplexing Scheme

Dynamic Time-Division Duplexing (TDD)

#### Frequency Range

4.940 - 4.990 GHz

#### Channel Size

5/10/20 MHz

#### RF Output Power

24 dBm Peak - Adjustable

#### Receiver Sensitivity

BPSK:  $-93 \pm 2$  dBm, QPSK:  $-92 \pm 2$  dBm  
16QAM:  $-87 \pm 2$  dBm, 64QAM:  $-78 \pm 2$  dBm

#### Operating Mode

Point-to-Point

#### Power System

Power over Ethernet, 9-48V DC  
18V/1.0 A Integrated PoE Power Supply Included  
Dual-layer ethernet surge protection

#### Antenna

External N-Connector for Custom Antenna Application

#### Security

Password Protection  
AES Encryption  
SSH Configuration Option

#### Operating Environment

Temperature:  $-20C \sim 65C$   
Humidity: 0 - 90% (non-condensing)

#### Mechanical

Dimensions: 8.75 in. x 8.75 in. x 3.5 in.  
Weight: 7 lb. (mount included)  
Wind Load: 0.53 ft.<sup>2</sup>

#### Warranty

2-Years

#### Certification

FCC

### Test Results

TCP Throughput based on channel size\*\*

	5 MHz	10 MHz	20 MHz
5 Miles	10 Mbps	20 Mbps	40 Mbps
20 Miles	5 Mbps	10 Mbps	20 Mbps
30 Miles	3 Mbps	6 Mbps	12 Mbps

\*\*Note: Throughput results were measured using 23dBi Panel Antennas on each side of the PTP link

