

Ligo Mesh Quad

2.4/5 GHz connectorized mesh node



Product Overview

The LigoMesh Quad is a carrier-class Mesh device capable of operating in high bandwidth demand, client-intensive environments. This robust product features three high-powered, Atheros-based mini-PCI radios that are each output power-adjustable and user-selectable between the 2.4 GHz and 5 GHz bands.

The unique three-radio design minimizes throughput loss and latency per hop by dedicating two radios for auto-negotiating meshing, while using the third radio as a dedicated access point for service set broadcasting.

The LigoMesh Quad features a powerful 266 MHz processing board, capable of maintaining a self-forming, self-healing Mesh network in even the most crowded, bandwidth-intensive WiFi applications.

The LigoMesh Quad features four N-Connectors for custom antenna application (allowing for diversity on the dual-service set antennas), and comes encased in a rugged cast aluminum enclosure.

The LigoMesh Quad features the customized LigoMesh software suite—a powerful core OS offering an abundance of flexibility, stability, and management features that are not present in other Mesh products on the market today.

LigoWave's proprietary Mesh technology is a unique, layer-2 based algorithm, thereby minimizing latency and throughput loss per node and maximizing bandwidth efficiency. This industry-leading software platform, accompanied by an array of robust hardware features, makes the LigoMesh Quad a powerhouse Mesh device—essential for all high-performance WiFi Mesh applications.

Ligo Mesh Quad

2.4/5 GHz connectorized mesh node

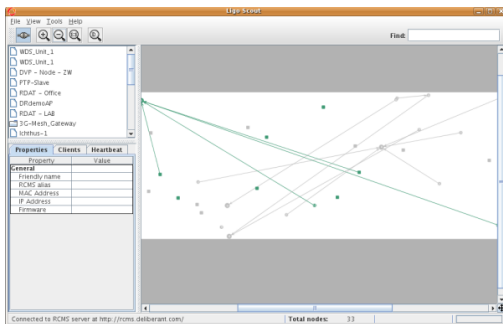


Key Features

- High output power radios (up to 250 mW—adjustable)
- Self-forming, self-healing network architecture
- Unique, layer-2 Mesh Topology - maximizes network efficiency
- Full, half, and quarter bandwidth channels
- Multi-BSSID support (VSSID) with VLAN tags
- PoE built-in for single cable installation
- Rugged cast aluminum enclosure
- Configurable Multi-mode Operation
 - Mesh Node/Gateway (802.11a + 802.11b/g)
- Captive Portal (hotspot) Configurable
- Latest security technologies
- Comprehensive software features
 - IP routing
 - DHCP client/server/relay
 - DNS relay/proxy
 - Stateful inspection firewall
 - MAC/IP filtering
 - Digital device certificates
- 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

LigoMESH Utilities

LigoScout



Integral to the LigoMesh product line, LigoScout provides a graphical representation of the Mesh network topology and status. LigoScout is integrated into RCMS and can be used as a standalone application.

LigoScout features:

- View of mesh network topology
- Ability to search mesh elements by MAC, IP or device name
- Capability of operating as a standalone application, without the existing RCMS server
- Ability to filter by part of the IP address, by Service Set, by part of the Firmware (includes ability to filter by hardware type), active nodes (inactive/offline nodes are hidden),
- Bird's eye view/navigation - ability to view all network at once
- Discovery tool - allows discovery of mesh devices within reach of a single multicast packet.

RCMS

LigoWave Remote Configuration Management System (RCMS) is a centralized monitoring and management solution for LigoWave wireless networking equipment. At the heart of RCMS there is a powerful and efficient engine that securely gathers, interprets and records information from registered network devices, and makes that information available to network administrators through a convenient, secure, and attractive Web interface. However, as the name implies, the most important feature of RCMS is configuration management. RCMS can retrieve and/or store configuration files from/to LigoMesh devices (that are online and connected to the server) at any time, turning management of large groups of devices from an administrative nightmare into a single click operation.

Main RCMS features:

- Continuous monitoring of device connectivity
- Wireless device configuration monitoring:
 - changes in device configuration
- Wireless device configuration management:
 - download current configuration from devices
 - upload complete or partial configuration to devices
- Wireless device firmware updating
- Automatic device registration and provisioning
- Multiuser environment with configurable access control
- Secure HTTPS based client-server communication and client.

Ligo Mesh Quad

2.4/5 GHz connectorized mesh node



Sales offices:

EMEA:

Veiveriu 150-IIIa. Kaunas,
LT-46931, Lithuania

Sauletekio al. 15-610, Vilnius,
LT-20000, Lithuania

Americas:

138 Mountain Brook Dr.
Canton, GA 30115, USA

984 Shetland Ave. Winter
Springs, FL 32708 USA

Asia Pacific:

China-Beijing

Room 602, Everlast Plaza, No.
39, Anding Road,
Chaoyang District, Beijing, China
100029

China-Shanghai

4H, No. 92, Guiping Road, Zuhui
District, Shanghai, China 200233

China-Huizhou

No. 6, Hui Feng East 2 Road,
Zhongkai Hi-Tech Industrial
Development Zone
Huizhou, Guangdong, China

China-Shenzhen

No. 9, Dragon Jade Industrial
District, Bantian Village Buji
Town Longgang District,
Shenzhen, China

Hong-Kong

B7, 6F., Chung Mei Centre, 15B
Hing Yip Street,
Kwun Tong, Kowloon, Hong
Kong

Singapore

60 Kaki Bukit Place, #08-04/05
Eunos Tech Park, Singapore
415979

Indonesia

Gedung Starpage Jl. Salemba
Tengah No. 5 Lt. 3, Jakarta
Pusat, Indonesia

Taiwan

12F., No.33 Sec. 2, Roosevelt
Road, Taipei, Taiwan

Malaysia

No. 17 Jalan P2/12, Bandar
Teknologi Kajang, 43500
Semenyih, Selangor, Malaysia

Philippines

3rd Floor. ETPI Bldg. #2161 Soler
St, Conner Calero St. Sta Cruz,
Manila City, Philippines

Thailand

169 Soi Sirindhorn 7,
Charansanitwong Road,
Bangbamru, Bangplad, Bangkok
10700, Thailand

India

New No. 6, Old No. 16,
Rajagopalan Street, Valmiki
Nagar, Thiruvanniyur, Chennai
600041, India

Radio specifications

Wireless technology	IEEE 802.11a, IEEE 802.11b, IEEE 802.11g
Operating mode	Proprietary layer-2 Mesh Gateway/Node
Radio frequency band	2.4 - 2.497 GHz (Country dependant) 4.9 - 5.85 GHz (Country dependant)
Channel size	Configurable 5, 10, 20 MHz
Max transmit power	24 dBm
Modulation schemes	CCK, DQPSK, DBPSK, BPSK, QPSK, 16QAM, 64QAM
Receive sensitivity	802.11a: -93 +/- 2dBm @ 6Mbps, -74 +/- 2dBm @ 54 MBps 802.11b: -99 +/- 2dBm @ 1Mbps, -90 +/- 2dBm @ 11 MBps 802.11g: -93 +/- 2dBm @ 6Mbps, -75 +/- 2dBm @ 54 MBps
Error correction	FEC
Duplexing scheme	Time division duplex

Antenna

Type	4 N-type connectors 4 dual-band outdoor omni-directional antennas are included
Gain	5 dBi

Data Interface

Physical interface	10/100 BaseT
Protocol	Ethernet IEEE 802.3
Connector type	RJ45
Surge protection	Built-in
VLAN	IEEE 802.1q

System performance

Real data (TCP) throughput	100 Mbps aggregate
Packet latency	3 ms (64 bytes packet)
Typical coverage radius	300 m (328 yd) (can be increased with additional antennas)

Security

Data encryption	Hardware based AES
WPA2 personal	Supported
WPA2 enterprise	Supported

Physical

Dimensions	Width 228 mm (9 "), height 165 mm (6.5 "), depth 51 mm (2 ")
Weight	2.5 kg (5.5 lb)
Power supply	9 - 48 VDC, passive PoE
Power source	100 - 240 VAC via included adapter
Power consumption	20 W

Environmental

Operating temperature	-30°C (-22 F) ~ +60°C (+140 F)
Humidity	10 - 90 % (non-condensing)

Management

System configuration interfaces	Web GUI, SSH CLI, SNMP v1/2c/3 with traps, centralized Remote Control Management System
---------------------------------	---

Regulatory

Certification	FCC/CE
Ingress protection	IP-67
Safety	RoHS compliant

Copyright © 2007-2009 LigoWave LLC. All rights reserved. LigoWave, the LigoWave logo, are trademarks of LigoWave LLC. All other company and product names may be trademarks of their respective companies. While every effort is made to ensure the information given is accurate, LigoWave does not accept liability for any errors or mistakes which may arise. Specifications and other information in this document may be subject to change without notice.

To learn more about LigoWave products, visit www.ligowave.com.