

EnGenius Mesh AP is designed with IEEE802.11a/b/g standards and addressed on providing high performance mesh network. The product encased in the IP-68 protection enclosure and delivers the maximum scalability, high reliability at outdoor environment. Compared with expensive T1/E1 leased lines, the Mesh network offers a cost-effective last-mile connection.

EnGenius Mesh AP provides wireless connection over self-adaptation mesh backhaul (5GHz). The mesh AP can operate at both 2.4GHz for long range and 5GHz to reduce the frequency interference. The detachable antenna design allows users to use various antennas for different deployment.

The EOM-8670, including advanced OLSR (Optimal Link State Routing) protocol, is the industry and scalable mesh routing algorithm. It allows data to be transferred with the optimal path. WAN interface for Internet connection with Gateway mode; Power over Ethernet for both Gateway mode and Relay mode.

EnGenius Mesh AP provides the highest security mechanism to protect data information over wireless. The security feature include AES backhaul link, WPA2 client access, SSL for web management. To simplify the administration task throughout the large area, this product also provides centralized management software. This software is built based on SNMP protocol and can be installed in computer.



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Features	Benefits
Dual Radio for independent Backhaul and local access	Allow operators to set up at both 2.4GHz for long range and 5GHz to reduce the frequency interference.
Self Configuration and Healing	Automatically search and link with gateway AP and other nearest node Mesh AP for Ease of Deployment & Management
EnGenius Business Class High Power Technology	Get more coverage and distance to save the installation fee
Lightning Protector in both antenna ports and Ethernet port	Prevent a lightning stroke to damage the internal equipments
Wide temperature range and robust mechanical design (IP68)	Delivers reliable, top performance in the most demanding environments to Avoid water invaded and weather corroded
Power over Ethernet (PoE)	Easy installation and cost-effective
Support dynamic routing (layer3)	OLSR protocol provides optimized path of routing. The routing mechanism automatically finds the optimal link once the link status is changed or broken.
Supports NAT (Network Address Translation)/NAPT	Shares single Internet account and provides a type of firewall by hiding internal IP addresses for keeping hacker out
Static Route Support	Forwarding data in a network via a fixed path in multi-subnet
Support Multiple SSID for client access mode	Distinguish separate networks within the same wireless space to provide secure connection
Support VLAN (Wired, Wireless)	Reduce the size of each broadcast domain, which in turn reduces network traffic and increases network security
Support 802.1x (EAP-TLS/TTLS/SIM/PEAP), 802.11i (WPA/WPA2, AES), VPN pass-thru mechanisms	Provide mutual authentication (Client and dynamic encryption keys to enhance security
Hide SSID	Avoids unallowable users sharing bandwidth, increases efficiency of the network
Support MAC Address access control list	Ensures secure network connection
Support WMM Extension	Improve the user experience for audio, video, and voice applications by prioritizing data traffic
Bandwidth control	Enables operators to specify the maximum line bandwidth that a particular transfer operation can use
Support SNMP v2c/v3	Allow users to operate with existing network management tools
Centralized management software	Easy to manage volume Mesh AP via central control system to save the management cost

\*\*\* Subject to change without prior notice

2.4 GHz / 5 GHz

802.11 a/b/g

### Technical Specifications

#### Wireless Information

##### Wireless Standard

IEEE 802.11a

IEEE 802.11b/g

##### Media Access Protocol

CSMA/CA

##### RF Modulation

802.11a: OFDM

802.11g: OFDM

802.11b: DSSS

##### Data Rates

802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps

802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps

802.11b: 1, 2, 5.5, 11Mbps

##### Frequency Band

###### 802.11a:

5.15~5.35GHz,

5.47~5.725GHz, 5.725~5.825GHz

###### 802.11b/g:

U.S., Europe and Japan product covering 2.4 to 2.484 GHz, programmable for different country regulations

##### Modulation Technology

###### 802.11a/g:

OFDM (64-QAM, 16-QAM, QPSK, BPSK)

###### 802.11b:

DSSS (DBPSK, DQPSK, CCK)

##### Operating Channels

###### 802.11b/g

11 for North America, 14 for Japan, 13 for Europe

###### 802.11a

US/Canada:12 non-overlapping channel (5.15~5.35GHz, 5.725~5.825GHz)

Europe:19 non-overlapping channel (5.15~5.35GHz, 5.47~5.825GHz)

Japan:4 non-overlapping channel (5.15~5.25GHz)

China:5 non-overlapping channel (5.725~5.85GHz)

##### Receive Sensitivity (Typical)

###### 802.11a:

-88dBm @ 6Mbps,

-70dBm @ 54Mbps

###### 802.11g:

-90 dBm @ 6Mbps,

-74 dBm @ 54Mbps

###### 802.11b:

-95 dBm @ 1Mbps

-90 dBm @ 11Mbps

##### Available transmit power (Typical)

###### EOM-8670 (FCC)

•4.92~5.08 GHz

17 dBm @6~36Mbps

16 dBm @48Mbps

15 dBm @54Mbps

•5.26~5.32 GHz

20 dBm @6~24Mbps

18 dBm @36Mbps

16 dBm @48Mbps

15 dBm @54Mbps

•5.745~5.825GHz

18 dBm @6~24Mbps

16 dBm @36Mbps

14 dBm @48Mbps

13 dBm @54Mbps

•2.412~2.462 GHz (IEEE802.11g)

25 dBm @6~24Mbps

23 dBm @36Mbps

22 dBm @48Mbps

21 dBm @54Mbps

•2.412~2.462 GHz (IEEE802.11b)

25 dBm @1~11Mbps

##### EOM-8670 (ETSI)

•4.92~5.08 GHz

20 dBm @6~36Mbps

16 dBm @48Mbps

15 dBm @54Mbps

•5.18~5.32 GHz

20 dBm @6~36Mbps

16 dBm @48Mbps

15 dBm @54Mbps

•5.52~5.70 GHz

19 dBm @6~24Mbps

17 dBm @36Mbps

15 dBm @48Mbps

14 dBm @54Mbps

•5.745~5.825GHz

18 dBm @6~24Mbps

16 dBm @36Mbps

14 dBm @48Mbps

13 dBm @54Mbps

•2.412~2.472 GHz (IEEE802.11g)

25 dBm @6~24Mbps

23 dBm @36Mbps

22 dBm @48Mbps

21 dBm @54Mbps

•2.412~2.472 GHz (IEEE802.11b)

25 dBm @1~11Mbps

##### Security

- Authentication:
  - 802.11i (WPA, WPA2)
  - 802.1x (including EAP-TLS/TTLS)
- Encryption: Open, WEP-64/128, TKIP, AES
- MAC address access control list
- 802.1Q VLAN Support
- MSSID Support in client access mode
- VPN pass-through

- Hidden SSID
- HTTP login
- HTTPS login

##### QoS

- WMM
- Bandwidth control

##### Networking Standard Protocol / Standard

- IEEE 802.3 (Ethernet)
- IEEE 802.3u (Fast Ethernet)
- IEEE 802.11a (5GHz WLAN)
- IEEE 802.11b/g (2.4GHz WLAN)
- RFC 768 UDP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 1034, 1035 DNS
- RFC 1058 RIP
- RFC 1119 SNMPv2
- RFC 1541 / 2131 / 3046 DHCP client / Server
- RFC 1631 NAT
- RFC 2068 / 2616 HTTP
- RFC 2516 PPPoE
- RFC 2865,2866 RADIUS

##### General

##### Dimension

TBD

##### Weight

TBD

##### Power Connector

1 x Proprietary Ethernet / Power connector with water proof

##### Power Requirement

48V DC, 0.375A (proprietary PoE)

##### Environmental Protection Rating

IP 68

##### Environmental Specification

Operating Temperature: -20 ~ 70 Degree C  
Storage Temperature: -30 ~ 80 Degree C  
Relative Humidity: 0 - 90% non-condensing

##### Regulatory Compliance

FCC Part 15 B & C, R&TTE Directive 1999/5/EC, EN 300 328, EN 301 489, EN 60950

##### Package Contents

One 30M Ethernet cable with proprietary connector  
Two N-Type dual band antennas  
One mounting kit (Wall mount and Mast mont)  
One Ground Cable  
One proprietary PoE injector  
On 48V/ 0.375A power adapter  
One CD (User's Manual and Management software)

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