MAP-3100

802.11a/b/g Indoor MESH Access Point

For truly Wireless network connectivity, PLANET Mesh Access Point, MAP-3100 (layer 2, layer 3 supports) and MAP-3120 (layer 2 supports), are designed with IEEE 802.11a/b/g standards and addressed on providing a high performance wireless mesh network. It provides local wireless connectivity in any location over a self-adaptation mesh backhaul. All mesh nodes can operate at 2.4GHz for long range and better penetration or at 5GHz to minimize the frequency interference. The detachable antennas design allows users to use proper antennas for various deploying requirements.

Enhanced with the advanced OLSR (Optimal Link State Routing) protocol, the data is always transferred with the optimal path. The MAP-3100 offers a WAN interface for Internet connection and a LAN interface for Relay usage. Whenever a new mesh node is added, the redundant and multiple paths are also added accordingly for the network resiliency.

Except for the layer 3 routing capability, the MAP-3100 and MAP-3120 also supports layer 2 operation. The layer 2 infrastructure is suitable for smaller scale mesh network. Comparing with layer 3 operations, the configurations and installations of a layer 2 infrastructure will be simpler and easier. Without the extra resource consuming on routing, the overall performance of layer 2 operation is better than layer 3 operation.

To facilitate the administration task throughout the large scale mesh network, PLANET provides a centralized managing software: MAP Management System. This software is built based on SNMP protocol and can be installed in a computer. After launching, this software can locate and monitor all Mesh APs in the same network. The graphical interface allows administrators to understand the whole network status in seconds.
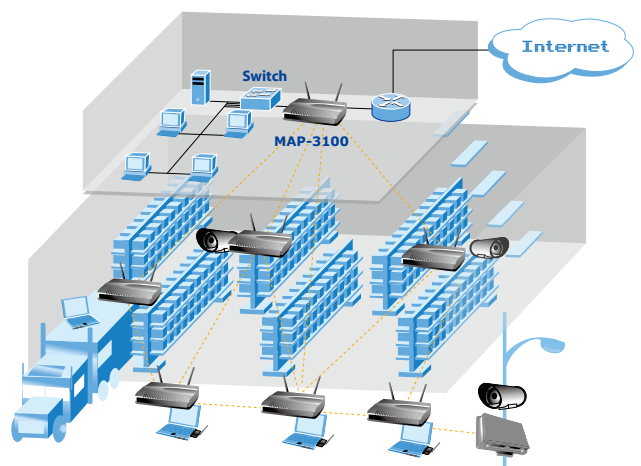
KEY FEATURES

- Dual wireless interfaces for independent Backhaul link and local clients connection
  - 2 x IEEE 802.11a/b/g adapters
  - 2 x reverse SMA connector
- Supports full dynamic routing (layer 3) among all node APs (MAP-3100)
  - OLSR, optimized link state routing protocol
  - Self-healing and Self-configuration, Plug and Play installation
- Supports layer 2 operation (MAP-3100 / MAP-3120)
- Adjustable output power
- Central management software
  - AES backhaul communication
- IEEE 802.1q VLAN, multiple VLAN/SSID supports
- IEEE 802.1x, IEEE 802.1i WPA/ WPA2, and VPN pass-through mechanisms
- Supports Wireless Separation, Watchdog mechanism
- QoS for bandwidth control or traffic prioritizing
- Supports SNMP v2c, v3
- IEEE 802.3af Power over Ethernet capable

APPLICATIONS

Enterprise / Warehouse Deployment

Each MAP-3100/3120 forms an individual operational node, and it will automatically locate and associate to the existing Mesh network. With the advanced OLSR protocol, the data is always transferred with the shortest and reliable route. Meanwhile, the network redundancy and high reliability are guaranteed. As more equipments installed, the infrastructure can be expanded more flexible and easier. Thus it makes the perfect solution for large scale deployment, such as warehouses, and the Enterprise buildings.

MAP-3100

SPECIFICATION

Product	802.11a/b/g Indoor Mesh AP
Model	MAP-3100
Wireless LAN	
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 Rate	802.11b: 11 / 5.5 / 2 / 1Mbps, Auto 802.11a/g: 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6Mbps, Auto
Transmit Power	20dBm max. Transmit Power levels adjustable

Sensitivity	802.11b:
	  -95dBm @ 1Mbps
	  -94dBm @ 2Mbps
	  -92dBm @ 5.5Mbps
	  -90dBm @ 11Mbps
	802.11g:
	  -90dBm @ 6Mbps
	  -89dBm @ 9Mbps
	  -87dBm @ 12Mbps
	  -85dBm @ 18Mbps
	  -82dBm @ 24Mbps
	  -79dBm @ 36Mbps
	  -76dBm @ 48Mbps
	  -74dBm @ 54Mbps
	802.11a:
	  -88dBm @ 6Mbps
	  -87dBm @ 9Mbps
	  -85dBm @ 12Mbps
	  -83dBm @ 18Mbps
	  -80dBm @ 24Mbps
	  -75dBm @ 36Mbps
	  -73dBm @ 48Mbps
	  -71dBm @ 54Mbps

Operating Channels	802.11a: 12 channels 802.11b/g: 11 / 13 / 14 channels
RF Connector	2 x Reversed SMA (WLAN1 / WLAN2)

Operating Mode	System
	  Layer 3 Gateway
	  Layer 3 Relay
	  Layer 3 Client Relay
	  Layer 2 Gateway
	  Layer 2 Relay
	WLAN1
	  Backhaul mode
	WLAN2
	  AP mode

Infrastructure Type	Layer 2 Repeating, Layer 3 Routing
Auto-Channel Selection	Yes
WLAN Security	WEP-64/128, WPA, WPA2
Hide SSID	Yes
Wireless Separation	Yes
Ethernet	
Ethernet Standard	IEEE 802.3, IEEE 802.3u, 10Base-T, 100Base-TX IEEE 802.3af Power over Ethernet
Operating Mode	WAN x 1, Internet connection LAN x 4, local service
Ethernet Connector	10/100Base-TX, auto-negotiation
	IEEE 802.3af compliant for WAN and LAN #1 ports (end-span device, powered via wire 1,2, 3 & 6)

MAP-3100

Software

Device Management Method	HTTP / HTTPS Windows Management Utility SNMP v2 / v3, Trap Firmware upgrade via utility / HTTPS Syslog
Windows Management Utility Features	Mesh AP discovery Mesh AP status Mesh AP setup, upgrade, reboot, reset User status, activity
WAN Connection Type (Gateway Mode)	Fixed IP PPPoE DHCP client
Security	MAC filtering IPSec Client L2TP Client PPTP Server
Supported User Amount	Per unit up to 250 users maximum
Login Service	Customize Login Page for service provider Walled garden Portal Page iPass
User Authentication	HTTP login HTTPS login 802.11i (WAP, WPA2) 802.1x (EAP-TLS / TTLS) 802.1Q VLAN, multiple VLAN / SSID client access Local database authentication Remote RADIUS server authentication Real time status display on Web / Syslog / Utility
QoS	Bandwidth Control per User Protocol-based, Port-based
Watchdog	Route Watchdog System Watchdog

Protocol Compliance

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 SNTPv2 RFC 1541 / 2131 / 3046 DHCP client / Server RFC 1631 NAT RFC 2068 / 2616 HTTP RFC 2516 PPPoE RFC 2865, 2866 RADIUS

Hardware

Dimension (W x D x H)	184 x 142 x 36 mm
Weight	435g
Power Requirement	12V DC, 1A
Environmental Specification	Operating Temperature: 0 ~ 50 Degree C Storage Temperature: -10 ~ 70 Degree C Relative Humidity: 0 ~ 90% non-condensing
Regulatory Compliance	FCC, CE

ORDERING INFORMATION

MAP-3100	Layer 2 / Layer 3 Indoor MESH AP, 2 x RF(802.11a/b/g), PoE
MAP-3120	Layer 2 Indoor MESH AP; 2 x RF (802.11a/b/g), PoE

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