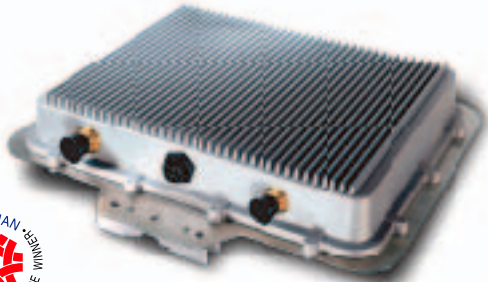


802.11a/b/g Outdoor MESH Access Point



The MAP-2000 and MAP-2000R are designed with IEEE 802.11a/b/g standards and addressed on providing a high performance mesh network. Both models are encased in the IP-66 protection housing and dedicated for outdoor installation. The PLANET Mesh family provides local wireless connectivity at 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 MDOLSR (Modified Dynamic Optimal Link State Routing) protocol, the data is always transferred with the optimal path. The MAP-2000 offers a WAN interface for Internet connection and the MAP-2000R provides a LAN interface for dedicate Relay usage. Whenever a new mesh node is added, the redundant and multiple paths are also added accordingly for the network resiliency.

The MAP-2000 and MAP-2000R incorporate the highest security mechanism to protect information over wireless links. The security features include AES backhaul link, WPA2 level client access, SSL for web management, and MAC filter.

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 administrator to understand the whole network status in seconds.

KEY FEATURE

Dual wireless interfaces for independent Backhaul link and local clients connection

- 2 x IEEE 802.11a/b/g adapters
- 2 x N-type connector

Supports full dynamic routing (layer 3) between all node APs

- MDOLSR, modified dynamic optimized link state routing protocol

Adjustable output power: 50mW, 25mW, 13mW, and 6mW

Central management software

- AES backhaul communication

Supports 802.1x / WPA / WPA2 mechanisms

Supports QoS, SNMP v2/v3

Power over Ethernet capable (with the proprietary injector)

IP-66 protection housing

Operating temperature: -20~70 Degree C

SPECIFICATION

Product	11a/b/g Outdoor Mesh AP Gateway / Relay	11a/b/g Outdoor Mesh AP Relay
Model	MAP-2000	MAP-2000R
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	17dBm max. Four levels adjustable (max/-3dB/-6dB/-9dB)	
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: 5 Channels 802.11b/b: 11/13/14 channels	
RF Connector	2 x N-type (WLAN1 / WLAN2)	
Operating Mode	WLAN1 WLAN2	Backhaul (WDS) mode AP mode
Auto Channel Selection	Yes	
WLAN Security	WEP-64/128, WPA, WPA2	
Hide SSID	Yes	
Ethernet		
Ethernet Standard	IEEE 802.3, IEEE 802.3u, 10Base-T, 100Base-TX	
Operating mode	WAN, Internet connection	LAN, local service
Ethernet Connector	1 x Proprietary connector with water proof 10/100Base-TX, auto-negotiation	

SPECIFICATION

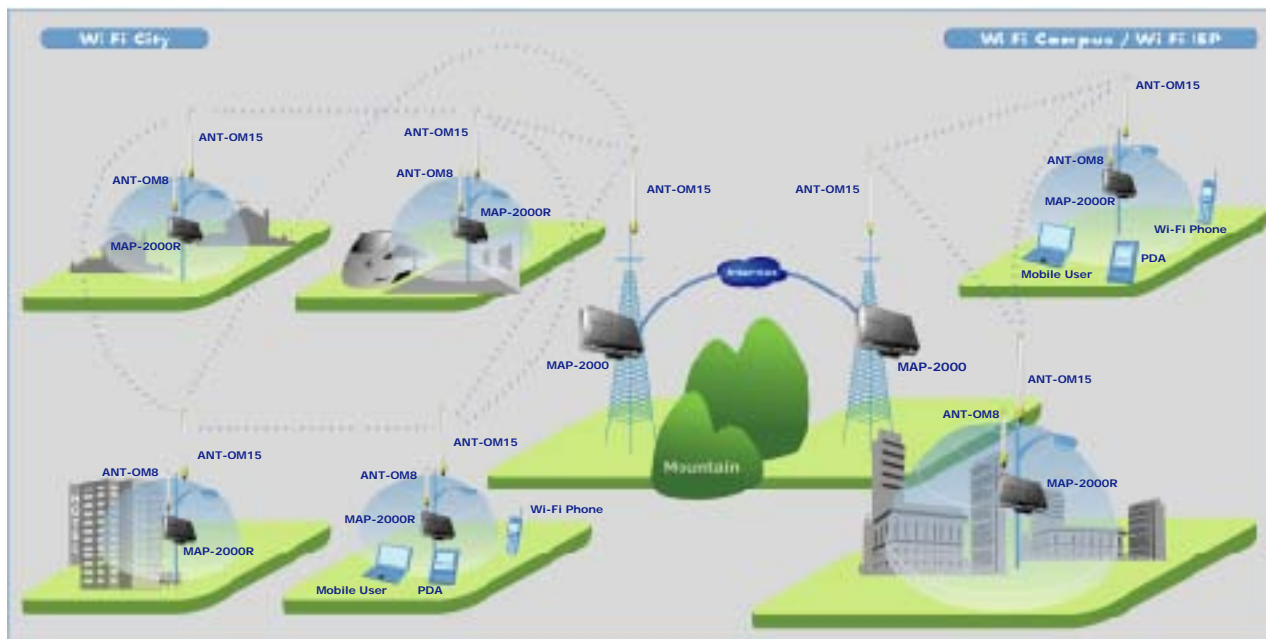
Product	11a/b/g Outdoor Mesh AP Gateway / Relay	11a/b/g Outdoor Mesh AP Relay
Model	MAP-2000	MAP-2000R
Software		
Device Management Method	HTTP / HTTPS Windows Management Utility SNMP v2/v3, private MIB, Trap Firmware upgrade via utility/HTTPS Syslog	
Windows Management Utility Features	AP discovery AP status AP setup, upgrade, reboot, reset User status, activity	
System Operating Mode	Gateway Relay*	Relay
WAN Connection Type (Gateway mode)	Fixed IP PPPoE DHCP client	
Security MAC filtering	MAC filtering VPN pass-through	
Supported User	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 802.1x Local database authentication Remote RADIUS server authentication Real time user activity, status can be found through Web / Syslog / Utility	
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	320 x 310 x 48 mm	
Weight	3.05 kg	
Power Connector	1 x Proprietary Ethernet / Power connector with water proof	
Power Requirement	48V DC, 1.37A (proprietary PoE)	
Environmental Protection Rating	IP 66	
Environmental Specification	Operating Temperature: -20 ~ 70 Degree C Storage Temperature: -30 ~ 80 Degree C Relative Humidity: 0 ~ 90% non-condensing	
Regulatory Compliance	FCC, CE	

*Remark: For MAP-2000, functionality of Ethernet interface will be disabled at this mode except power feeding

APPLICATIONS

Wi-Fi City Deployment

Each Mesh AP forms an individual operational node, and it will automatically locate and associate to the existing Mesh network. With the advanced MDOLSR 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 easily. Thus makes it the perfect solution for large scale deployment, such as WiFi city, and the Wireless ISP Local Loop.



ORDERING INFORMATION

MAP-2000	Outdoor MESH Gateway AP, 2*RF(802.11a/b/g), PoE, 108Mbps
MAP-2000R	Outdoor MESH Relay AP, 2*RF(802.11a/b/g), PoE, 108Mbps