

The APC 5M-12 delivers the highest performance and stability available in the 5 GHz CPE class. This product combines a robust IP-65 compliant enclosure with a highly advanced 802.11n radio core containing MIMO 2x2 technology along with an integrated mid-gain dual polarization directional antenna. The device is powered by a reliable, advanced, and feature-rich operating system, allowing the creation of very high throughput and stable wireless networks quickly, safely, and effectively. In addition, the APC 5M-12 supports access point operating mode which extends application scenarios and makes the APC 5M-12 suited

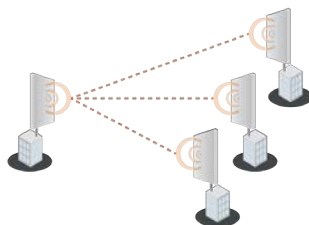
for both point to point and point to multipoint networks.

The robust software engine allows the APC 5M-12 to work as bridge or as a router, provides a user-friendly Adobe Flex - based GUI with instant changes, includes useful installation tools (Site survey, Antenna alignment, Delayed reboot, Spectrum analyzer, ping, traceroute) and also is compatible with Wireless Network Management System for one of the most advanced management tools on the market.

Usage examples

PTMP

Deliberant APC 5M-12 is an ideal device for point-to-multiple point applications as a medium to long range client device.



PTP

APC 5M-12 is a great device for medium to long range point-to-point applications.



Product/ distance recomendation	PTMP mode	PTP mode	PTP mode (full capacity)
APC 5M-12	5 km/ 3.1 mi	10 km/ 6.2 mi	1 km/ 0.6 mi

Wireless

WLAN standard	IEEE 802.11 a/n, iPoll (proprietary)
Radio mode	MIMO 2x2
Operating modes	Access point (auto WDS), Station, Station WDS, iPoll Access Point, iPoll Station
Radio frequency band	5.1 - 5.9 GHz (country dependent - FCC 5.745 to 5.825 GHz)
Transmit power	Up to 29 dBm (country dependent)
Receive sensitivity	Varying between -95 and -75 dBm depending on modulation
Channel size	20, 40 MHz
Modulation schemes	802.11 a/n: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Data rates	802.11 n: 300, 270, 240, 180, 120, 90, 60, 30 Mbps 802.11 a: 54, 48, 36, 24, 18, 12, 9, 6 Mbps
Error correction	FEC, Selective ARQ
Duplexing scheme	Time division duplex

Receive sensitivity (dBm)	802.11 N/ iPoll	15 Mbps	30 Mbps	45 Mbps	60 Mbps	90 Mbps	120 Mbps	135 Mbps	150 Mbps
		-93	-91	-89	-86	-83	-79	-77	-75
802.11a	30 Mbps	60 Mbps	90 Mbps	120 Mbps	180 Mbps	240 Mbps	270 Mbps	300 Mbps	
	-93	-91	-89	-86	-83	-79	-77	-75	
802.11a	6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps	
	-95	-94	-92	-90	-87	-84	-79	-77	

Output power (dBm)	802.11 N/ iPoll	15 Mbps	30 Mbps	45 Mbps	60 Mbps	90 Mbps	120 Mbps	135 Mbps	150 Mbps
		29	29	29	29	28	28	27	27
802.11a	30 Mbps	60 Mbps	90 Mbps	120 Mbps	180 Mbps	240 Mbps	270 Mbps	300 Mbps	
	29	29	29	29	28	28	27	27	
802.11a	6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps	
	29	29	29	29	28	28	27	25	

Antenna

Type	Integrated directional dual-polarized panel
Gain	12 dBi

Wired

Interface	10/100 Base-T, RJ45
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Networking

Operating modes	Bridge, Router
WAN	Static IP, DHCP client, PPPoE client
NAT	Routing w/ or w/o NAT
Static routing	Supported
DHCP	Client, Server, Relay
Port forwarding	Supported
VLAN	Supported for management and data

Software

General	Ability to define/limit frequency, channel width, EIRP, modulation
Advanced wireless functionality	ATPC (automatic transmit power control), DFS 3, auto-channel, auto-modulation,
Operating mode	Router, Bridge
Wireless operating modes	AP auto WDS, Station, Station WDS, Virtual radios (VSSID), iPoll access point, iPoll client
Wireless security	WPA/WPA2 Personal, WPA/WPA2 Enterprise, WACL, User isolation, UAM (web portal authentication)
Wireless QoS	WMM
WAN protocols	Static IP, DHCP client, PPPoE client
Network	NAT, static routing, firewall, port forwarding, VLAN, traffic shaping
Services	DHCP server, SNMP server, NTP client, Alerts, Remote syslog, Wireless and Ethernet statistics, bandwidth limiting
Management	HTTP(S) GUI, SSH CLI, SNMP read, WNMS, troubleshooting file, reset via reset tool
Tools	Site survey, Link test, Antenna alignment, Ping, Traceroute, Spectrum analyzer, delayed reboot
Management	HTTP(S) GUI, SSH CLI, SNMP read, WNMS, troubleshooting file, reset via ICMP

Physical

Dimensions	Length 150 mm (5.9 "), width 115 mm (4.5 "), height 55 mm (2.1 ")
Weight	400 g (16.2 oz)
Power supply	12 - 48 V DC passive PoE
Power source	100 – 240 VAC via included adapter
Power consumption	6.5 W

Environmental

Operating temperature	-40°C (-22 F) ~ +65°C (+149 F)
Humidity	0 ~ 90 % (non-condensing)

Management

System configuration	User-friendly web GUI, Command line via SSH, centralized Wireless Network Management System, reset via reset tool
System monitoring	SNMP v1/2c/3 server, Syslogs, system alerts via e-mail and SNMP trap

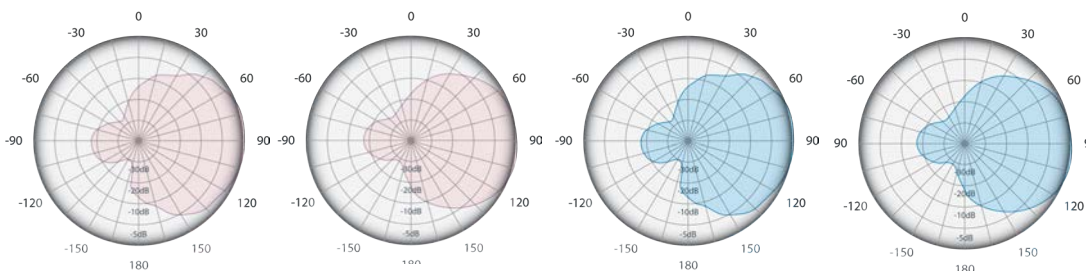
Regulatory

Certification	FCC/CE/Safety/ RoHS compliance
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Antenna specifications

RF patterns (vertical)

RF patterns (horizontal)



Frequency range	5.1 - 5.9 GHz
Gain	12 dBi
Polarization	Dual linear
Cross-pol Isolation	22 dBi
Max VSWR	1.9:1
H-pol Beamwidth	60 deg
V-pol Beamwidth	40 deg
Elevation Beamwidth	40 deg



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