

PTP Mach5

11a/n 5GHz Outdoor PTP Wireless



Overview

The PTP Mach5 is a 5 GHz point-to-point product with superior performance for building long distance links. This product is equipped with an extreme output power (up to 29 dBm) 802.11n radio that was created with a unique hardware design and coupled with a reliable, feature-rich operating system. This device also has a robust, IP-67 compliant enclosure which is combined with a high-gain dual-polarized panel antenna. The PTP Mach5 is generally designed for PTP applications, but can also act as a high-end client device. Smart dynamic polling based protocol (iPoll 2) ensures reliable communication even in congested areas with 64 client devices connected to a base-station. Equipped with Alti-link's dual firmware image feature, remote software upgrades are assured even if a power failure interrupts the process. The device will restart using the prior firmware in the event of an upgrade failure. The enclosure is made of die-cast aluminum to provide years of outdoor exposure in direct sunlight and survive harsh weather conditions. Environmentally tested to meet an IP-67 rating as well as vibration, temperature, drop, salt, fog, and electrical surge standards to ensure a high level of reliability and backed by a two-year warranty. It is equipped with a grounding lug and a grounded 24-volt PoE to allow a professional installation, resistant to electrical surges.

Powerful OS

The Alti-link OS is a highly functional and easy to use operating system. This powerful and flexible operating system ensures flawless operation of all Alti-link hardware devices and effortless setup for those deploying the networks.

- Smart polling data transmission protocol (iPoll 2)
- Dual-firmware image support
- Responsive HTML 5 based GUI
- 170 Mbps capacity
- 80,000 PPS rate
- IPv6 support
- WNMS compatible

WNMS

WNMS is a FREE enterprise grade Wireless Network Management System. A single software solution simplifies a large number of management and monitoring tasks for network administrators. Alti-link 's comprehensive network management system supports several thousands of nodes. Multiple networks may be maintained and monitored using one server. A rich feature set helps to diagnose network problems effectively, visualize networks on a map, perform scheduled firmware upgrades automatically, track states of devices, get failure alerts, and collect statistics. The Web-based system environment supports multi-user accounts. Several administrators may manage different networks on the same server, without having access to each other 's equipment. WNMS is available as a stand-alone version for Linux and Windows servers, as a cloud-based system and as a mobile application for Android devices.

Specifications

Distance/Model	PTP mode	PTP mode(Full capacity)
PTP Mach5	50 km/ 31.07 mi	10 km/ 6.21 mi

Wireless	
WLAN standard	IEEE 802.11 a/n/ac, iPoll 3
Radio mode	MIMO 2x2
Radio frequency band	5 GHz: 5.150 - 5.850 GHz (FCC 5.150 - 5.250 and 5.725 - 5.850 GHz)
Transmit power	Up to 29 dBm (country dependent)
Channel size	5, 10, 20, 40, 80 MHz
Receive sensitivity	Varying between -97 and -75 dBm depending on modulation
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)	802.11n ipoll (20/40MHz)	15M	30M	45M	60M	90M	120M	135M	150M
		-97	-95	-93	-88	-85	-81	-79	-77
		30M	60M	90M	120M	180M	240M	270M	300M
	802.11a	-94	-92	-89	-85	-82	-78	-77	-75
		6M	9M	12M	18M	24M	36M	48M	54M
		-97	-97	-95	-93	-90	-86	-82	-81

Output power	802.11n ipoll (20/40MHz)	15M	30M	45M	60M	90M	120M	135M	150M
		29	28	28	28	27	27	25	24

(dBm - combined)		30M	60M	90M	120M	180M	240M	270M	300M
		28	28	28	28	26	26	24	23
	802.11a	6M	9M	12M	18M	24M	36M	48M	54M
		29	29	29	29	29	27	26	25

Antenna	
Type	Integrated dual-polarized directional panel antenna
Gain	23 dBi
Wired	
Ethernet port	10/100 Base-T, RJ45
Physical	
Dimensions	Length 379 mm (14.9 "), width 387 mm (15.2 "), height 80 mm (3.15 ")
Weight	3.3 kg (7.3 lb)
Mounting	Combination, heavy duty wall / pole mount bracket included
Power	
Power supply	12 - 24 VDC passive PoE (24 V passive PoE adapter is included in the package)
Power source	100 - 240 VAC
Power consumption	4.5 W
Environment	
Operating temperature	-40°C (-40 F) ~ +65°C (+149 F)
Working temperature	0 ~ 90 % (non-condensing)
Management	
System monitoring	SNMP v1/2c/3 server, Syslogs, system alerts via e-mail and SNMP trap
Configuration	Web UI, Infinity Controller
Certificate	
Certificate	Meet FCC/IC/CE standards
Software	
operating modes	Access point (auto WDS), access point (iPoll 3), station (WDS, iPoll 3), station (ARP NAT)
Wireless techniques	Smart station polling, smart auto-channel, adaptive auto modulation, automatic transmit power control (ATPC)
Wireless security	WPA/WPA2 personal, WPA/WPA2 enterprise, WACL, user isolation
Wireless QoS	4 queues prioritization on iPoll 3
Network operating modes	Bridge, router IPv4, router IPv6
Network techniques	Routing with and without NAT, VLAN

WAN protocols	Static IP, DHCP client, PPPoE client
Services	DHCP server, SNMP server, NTP client, router advertisement daemon, ping watchdog
Management	HTTP(S) GUI, SSH, SNMP read, Infinity Controller, Telnet
Tools	Site survey, link test, antenna alignment

Antenna Specification



Antenna

Frequency range	5.1 – 5.9 GHz
Gain	23 dBi
Polarization	Dual linear
Cross-pol Isolation	27dBi
VSWR	1.5:1
Azimuth beamwidth (H pol)	6°
Azimuth beamwidth (V pol)	7°
Elevation beamwidth	9°

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