DH-PFWB5-90n

5GHz N300 Outdoor Wireless Base Station

Features

- Integrated 5 GHz (2x2) MIMO radio
- Frequency 5.150- 5.850 GHz (FCC 5.150- 5.250 and 5.725-5.850 GHz)
- High performance and stability
- IP-66 standards rated enclosure
- Improved noise immunity
- TDMA ensures reliable communication
- Powerful OS
- Dual firmware
- Built-in tools including Site Survey, Link Test, Antenna Alignment, Spectrum Analyzer, Ping & Trace help in configuration and debugging
- Recommended as Base Station for 0~5km PTMP wireless connection

Product Overview

Dahua's DH-PFWB5-90n delivers the highest performance and stability available in the 5 GHz Base Station class. This product combines a highly advanced radio core containing MIMO 2x2 technology with an integrated, high-gain, dual polarization directional antenna. The feature-rich operating system is optimized for ultra-high performance wireless communications while optionally allowing compatibility with older 802.11 a standard devices.

The smart dynamic polling based protocol (TDMA) ensures reliable communication even in congested areas with 64 client devices connected to a base-station.

Equipped with Dahua'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 polycarbonate plastic with UV inhibitors to provide years of outdoor exposure in direct sunlight without cracking. The DH-PFWB5-90n was designed and tested to meet an IP-66 rating as well as vibration, temperature, drop, salt, fog, and electrical surge standards to ensure a high level of reliability unsurpassed in the industry. It is equipped with a grounding lug and a grounded 24-volt PoE to allow a professional installation, resistant to electrical surges. The mounting bracket permits installation on a wall or a pole and provides up to 30 degrees of down-tilt adjustment.

Technical Specification

Model	DH-PFWB5-90n
Wireless	
WLAN Standard	IEEE802.11 a/n
Radio Mode	MIMO 2x2
Radio Frequency Band	5.150 - 5.850 GHz (FCC 5.150 - 5.250 and 5.725 - 5.850 GHz)
Transmit Power	Up to 29 dBm (country dependent)
Receive Sensitivity	Varying between -97 and -75 dBm depending on modulation
Channel Size	5,10, 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
Transmission Distance	0-5km (recommended), max≥7km
Antenna	
Type	Integrated directional panel antenna
Gain	18dBi
Wired	
Interface	10/100 Base-T, RJ45

Technical Specification

Software	
Wireless Operating Modes	Access point (auto WDS), access point (TDMA2), access point (TDMA3), station (WDS, TDMA2,TDMA3), 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 TDMA
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, Telnet
Tools	Site survey, link test, antenna alignment, spectrum analyzer, ping & trace
Physical	
Dimensions	383 mm (Length)× 100mm (width)× 98mm (height)
Weight	520 g
Mounting	Combination wall / pole mount included
Power	
Power Supply	12- 24 VDC passive PoE (24 V passive PoE adapter is included in the package)
Power Source	100 – 240V AC
Power Consumption (max)	4.5W
Environmental	
Operating Temperature	-30°C ~ +70°C
Humidity	0 ~ 90 % (non-condensing)
Management	
System Monitoring	SNMP v1/2c/3 server, Syslogs, system alerts via e-mail and SNMP trap
Regulatory	
Certification	FCC/CE
Internal Antenna	
Frequency Range	5.1 – 5.9 GHz
Gain	18 dBi
Polarization	Dual linear
Cross-pol Isolation	24dBi
VSWR	<1.7
Azimuth Beam Width (H pol)	90°
Azimuth Beam Width (V pol)	90°
Elevation Beam Width	20°

Technical Specification

Receive Sensitivity (dBm)	802.11n/ TDMA (20/40 MHz)	15 Mbps	30 Mbps	45 Mbps	60 Mbps	90 Mbps	120 Mbps	135 Mbps	150 Mbps
		-97	-95	-93	-88	-85	-81	-79	-77
		30 Mbps	60 Mbps	90 Mbps	120 Mbps	180 Mbps	240 Mbps	270 Mbps	300 Mbps
		-94	-92	-89	-85	-82	-78	-77	-75
	802.11a	6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
		-97	-97	-95	-93	-90	-86	-82	-81
Output Power (dBm, combined)	802.11n/ TDMA (20/40 MHz)	15 Mbps	30 Mbps	45 Mbps	60 Mbps	90 Mbps	120 Mbps	135 Mbps	150 Mbps
		29	28	28	28	27	27	25	24
		30 Mbps	60 Mbps	90 Mbps	120 Mbps	180 Mbps	240 Mbps	270 Mbps	300 Mbps
		28	28	28	28	26	26	24	23
	802.11a	6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
		29	29	29	29	29	27	26	25

Dimensions (mm)