

# BS 5-90n

## 11a/n 5GHz Outdoor Base Station



### Overview

The BS 5-90n delivers the highest performance and stability available in the 5GHz 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. The smart dynamic polling based protocol (iPoll 3) 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 polycarbonate plastic with UV inhibitors to provide years of outdoor exposure in direct sunlight without cracking. The BS 5-90n 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 has a grounding lug and a grounded 24-volt PoE to allow a professional installation, resistant to electrical surges.

### New form factor

The shape of the enclosure is now smaller, lighter but retains the IP-66 weather protection rating. Smaller packaging reduces freight costs and makes them less obvious. The new design has no metal parts, which makes them lighter and corrosion resistant.

### New mounting

The adjustable mounting bracket is very easy to assemble and install. It consists of two easy to connect parts that allow tilting the device up and down when installing on a pole. A metal strap is included to securely tighten the device. This design includes additional reinforcements and thicker materials to ensure survival in extreme climate conditions.

### Powerfull 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 CPE hardware devices and effortless setup for those deploying the networks.

- Smart polling data transmission protocol (iPoll 3)
- Dual-firmware image support
- Responsive HTML 5 based GUI
- 170 Mbps capacity
- 80,000 PPS rate

- IPv6 support
- Infinity controller compatible

## Specifications

Suggest Distance	PTMP mode
BS 5-90n	7km/ 4.35mi

Wireless	
WLAN standard	IEEE 802.11 a/n, iPoll
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

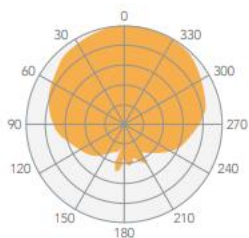
Receive sensitivity (dBm)	802.11n ipoll (20/40MHz)	15M	30M	45M	60M	90M	120M	135M	150M
		-97	-95	-93	-88	-85	-81	-79	-77
		30M	60M	90M	120M	180M	240M	270M	300M
		-94	-92	-89	-85	-82	-78	-77	-75
	802.11a	6M	9M	12M	18M	24M	36M	48M	54M
		-97	-97	-95	-93	-90	-86	-82	-81

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

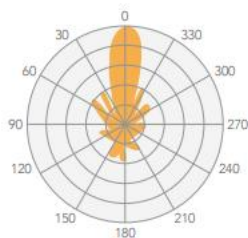
<b>Antenna</b>	
Type	Integrated dual-polarized 90 degree sector antenna
Gain	18 dBi
<b>Wired</b>	
Ethernet port	10/100 Base-T, RJ45
<b>Physical</b>	
Dimensions	Length 380mm, width 100mm, height 35mm
Weight	0.460g
Mounting	Pole mounting bracket included
<b>Power</b>	
Power supply	12 - 24 VDC passive PoE (24 V passive PoE adapter is included in the package)
Power source	100 - 240 VAC
Power consumption	4.5 W
<b>Environment</b>	
Operating temperature	-40°C (-40 F) ~ +65°C (+149 F)
Working temperature	0 ~ 90 % (non-condensing)
<b>Management</b>	
System monitoring	SNMP v3, Syslog, Web UI and Infinity Controller
Configuration	WebUI, Infinity Controller
<b>Certificate</b>	
Certificate	Meet FCC/IC/CE standards
<b>Software</b>	
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

V Pol

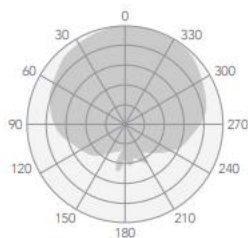


Azimuth

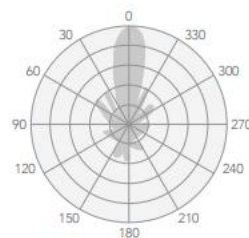


Elevation

H Pol



Azimuth



Elevation

### Antenna

Frequency range	5.1 – 5.9 GHz
Gain	18 dBi
Polarization	Dual linear
Cross-pol Isolation	24dBi
VSWR	<1.7
Azimuth beamwidth (H pol)	90°
Azimuth beamwidth (V pol)	90°
Elevation beamwidth	20°

# ALTI-LINK

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