光普森科
GPSENKE

20KM Wireless Bridge 5GHz 23dBi 866Mbps

GP-AB950-20 Series



INDUSTRIAL NETWORK SOLUTION SPECIALIST
WWW.GPSENKE.COM

Introduction

The GP-AB950-20 is a high-performance and highly stable 5GHz wireless bridge based on an IEEE 802.11ac wireless SOC. It integrates 64MB RAM and 16MB Flash memory, and features a 23dBi high-gain dual-polarized directional antenna, delivering stable wireless transmission speeds of up to 866Mbps.

The GP-AB950-20 supports Gigabit Ethernet with PoE and DC power input, compatible with a wide voltage range of 12–32VDC. It features advanced QoS to prioritize voice, video, and data traffic, supporting both Layer 2 (CoS) and Layer 3 (ToS/DSCP), and uses WRR scheduling to improve bandwidth efficiency and reduce packet loss.

Designed for harsh environments, the GP-AB950-20 features a robust IP67-rated enclosure, making it suitable for deployment in urban, rural, forest, coastal, border, oil & gas fields, highways, and tunnel environments.It is widely used for video surveillance, data transmission, wireless network extension, and IoT applications.

Main Feature

- Support 802.11 a/n/ac Standard
- Support Single-Band with 866Mbps Speed (2×2 MIMO)
- Support MAX. up to 20km wifi transmit distance
- Support Intelligent QoS wireless multimedia optimization technology
- Prioritizes stable transmission of voice and video.
- Web-based management for easy installation and maintenance.
- Support 10/100/1000 Mbps RJ45 Ethernet (PoE)
- Support IEEE 802.3 at PoE/DC Power Supply
- Support Diversified Access Authentication Methods
- Support IP67 Protection-Level

Hardware Parameter

Model	GP-AB950-20
Chipset	Qualcomm 750MHz QCA9563 core SOC + QCA9882 RF SOC
Modulation technology	256-QAM
RAM	64 MB
Flash	16 MB
Mode & Distance	PTP: 20 KM PTMP:12KM
5 GHz Operating Band	5.15 ~ 5.85GHz
5 GHz Wi-Fi Protocol	IEEE 802.11 a/n/ac
Transmission Mode	2*2 MU-MIMO
Maximum Data Rate	866Mbps
Transmit Power	Up to 30 dBm (varies by country/region regulations)
Channel Bandwidth	5, 10, 20, 40, 80MHz
Modulation Scheme	802.11 a/n: OFDM (64-QAM, 16-QAM, QPSK, BPSK) 802.11 ac: OFDM (256-QAM, 64-QAM, 16-QAM, QPSK, BPSK)
Throughput	802.11 ac @ 40 MHz: 400, 360, 300, 270, 240, 180, 120, 90, 60, 30Mbps 802.11 ac @ 80 MHz: 866, 780, 650, 585, 520, 390, 260, 195, 130, 65Mbps
Error Correction	FEC, LDPC
Duplex Mode	Time Division Duplex (TDD)

Software Parameter

Management	System monitoring: SNMP v3, Syslog, Web UI, WNMS, Infinity Controller
	Configuration: WebUI, WNMS, Infinity Controller
Wireless Operating Mode	Access point (Auto WDS), Station (WDS), 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
Network Operating Mode	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, Infinity controller
Tools	Site survey, link test, antenna alignment

Wireless Parameter

Built-in antenna	Built-in 23dBi dual-polarized directional flat panel antenna
Ethernet port	10/100/1000M adaptive Ethernet port, supporting PoE power supply
Power supply	12 ~ 32VDC, DC-5.5*2.1 socket
Power adapter	24VDC Gigabit passive PoE power supply
AC power supply	100 ~ 240VAC
Power consumption	10W
Product dimensions	379 mm (L), 387 mm (W), 55 mm (D) (total thickness including pole mount: 225 mm)
Weight	3.3kg
Installation method	Pole mount
Operating environment	Operating temperature: –40° C ~ +65° C Humidity: 0%~95% (non-condensing)

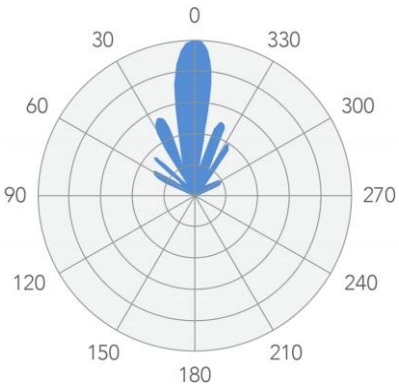
RF Parameter

40MHz	Transmission rate, Mbps	400	360	300	270	240	180	120	90	60	30
	Transmit power, dBm	26	27	28	29	30	30	30	30	30	30
	Receiver sensitivity, dBm	-70	-72	-76	-78	-80	-84	-87	-92	-94	-95
80MHz	Transmission rate, Mbps	866	780	650	585	520	390	260	195	130	65
	Transmit power, dBm	24	25	25	26	27	28	28	29	29	29
	Receiver sensitivity, dBm	-64	-66	-70	-72	-74	-78	-81	-85	-88	-90

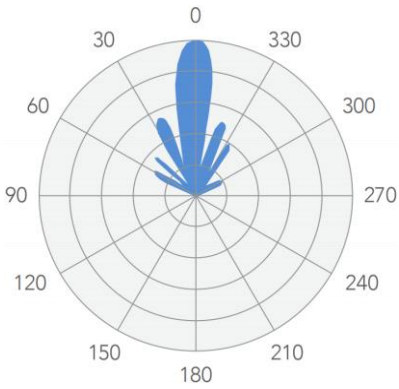
Antenna Specifications

Working Band	5.1 – 5.9GHz
Gain	23dBi
Polarization	Vertical and horizontal dual polarization
Cross-pol Isolation	27 dBi
VSWR	<1.5
Azimuth beamwidth (H pol)	6°
Azimuth beamwidth (V pol)	7°
Elevation beamwidth	9°

Vertical RF Direction

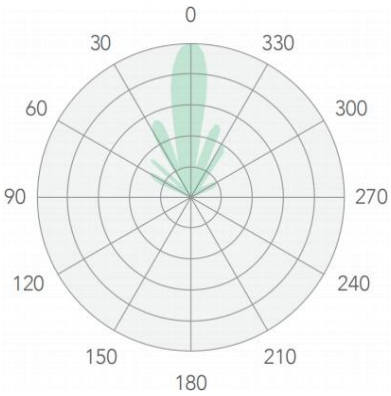


Azimuth Angle

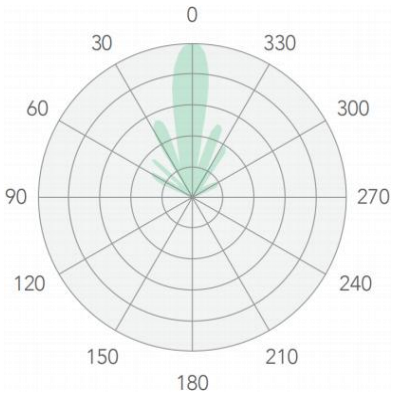


Elevation Angle

Horizontal RF Direction

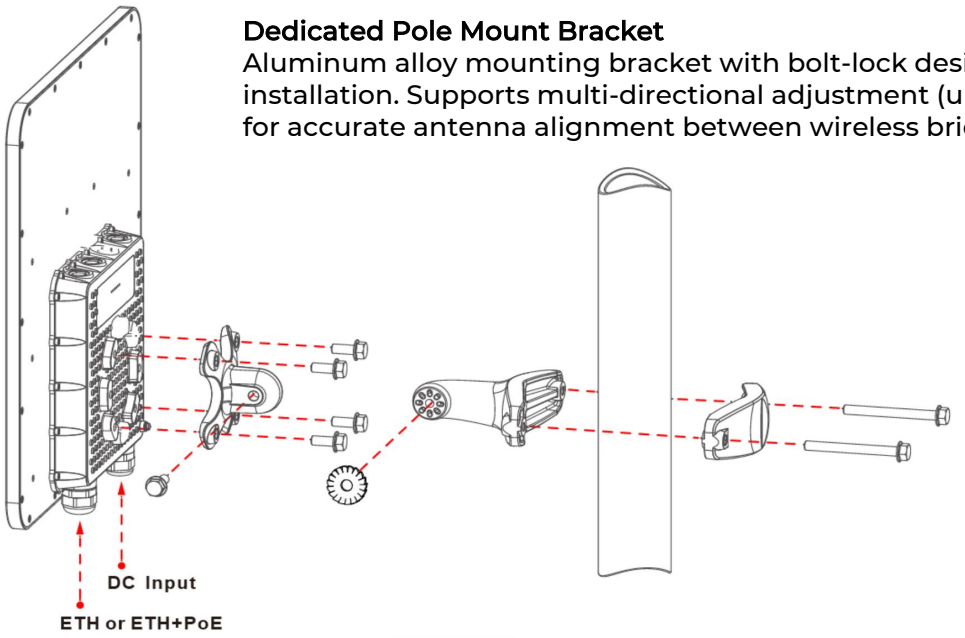


Azimuth Angle



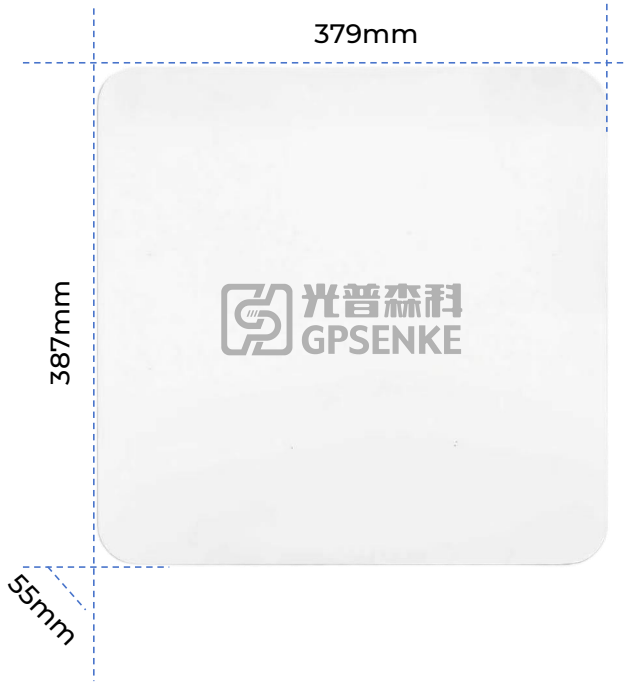
Elevation Angle

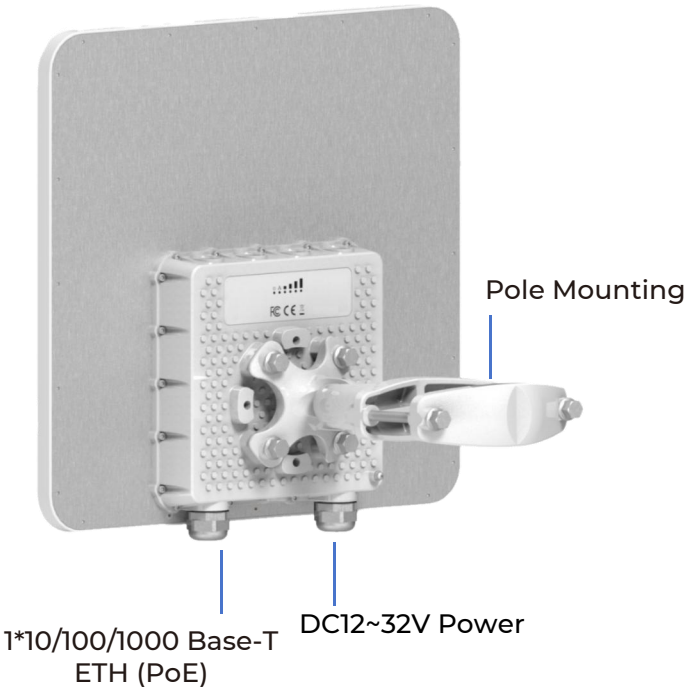
Pole Installation Method



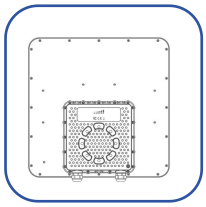
Dedicated Pole Mount Bracket
Aluminum alloy mounting bracket with bolt-lock design for easy installation. Supports multi-directional adjustment (up/down/left/right) for accurate antenna alignment between wireless bridges.

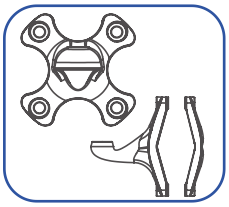
Appearance & Accessories

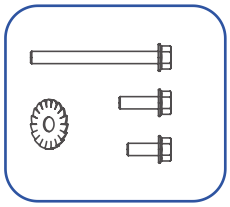


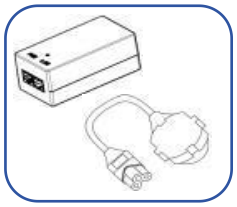



Package*1


Device * 1


Pole bracket*1 Set


Bolt washers*1 Set


PoE Adapter*1 Set


Manual*1

Model Selection

Model	GP-AB950-20
Speed	866Mbps
Distance(PTMP)	12Km
Distance(PTP)	20Km
Antenna	Build-in 23dBi dual-polarized directional flat panel antenna

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