
VAP11AC Product Specification

VAP11AC is a professional dual band WiFi bridge and repeater product carefully developed by HouTian network, can work in 5G and 2.4G band at the same time, adopt temperature compensated auto frequency control technology (TAFC), WiFi signal is more stable and not easy to drop, its main features as below:

- WiFi intelligent bridge relay/router can realize the function of wireless to wired and wired to wireless;
- Support wide voltage DC5V-24V power supply, two-stage automatic overvoltage protection (Protection voltage upper limit 29V);
- Support both 2.4G and 5G WiFi band;
- Support 802.11ac, 802a, 802.11n WiFi transmission protocol;
- WiFi transmission rate: 300Mbps (2.4G) + 900Mbps (5G);
- RF transmit power: 2.4G is 15dBm, 5G is 18dBm/23dBm optional;
- Point to point no-barrier transmission distance: 300 meters (802.11A);
- WiFi hotspots automatically reconnected, and two hotspot matching methods (full match authentication mode, SSID and password authentication mode);
- WiFi hotspot memory, maximum memory 100 hotspots;
- Two 10/100Mbps adaptive Ethernet cables/ports;
- Support connecting more than 20pcs WiFi terminal at the same time;
- Support SSA signal strength detection and reporting function to realize WiFi mobile positioning;
- Support manually close SSID broadcast, manually close WiFi hardware;
- Original creation VDNS virtual domain configuration technology to solve the user's trouble of configuration;
- Support WEB management, Chinese and English configuration interface;
- Adopt temperature compensated auto frequency control technology (TAFC), WiFi signal is more stable and not easy to drop;
- Built-in heat sink with convection cooling holes on both sides of the housing for more efficient heat dissipation;
- Built-in 2 high-power FEM, built-in intelligent automatic start/stop cooling fan
- Work environment temperature: -20℃ to 55℃;
- Support IP layer transparent transmission and MAC layer transparent transmission two bridge modes to meet various bridge applications:
 - IP layer transparent transmission (factory default), transparent transmission of IP layer data, can meet most of the bridge applications;
 - MAC layer transparently transmits all data above the MAC layer (link layer) and the MAC layer, including IP layer data;
 - MAC transparent transmission can solve some special applications for MAC layer encryption, such as GoPro camera, Cisco AP, Hikvision monitoring system, etc.

One: Hardware Spec

Protocol Standards	IEEE 802.11ac, IEEE 802.11a; IEEE 802.11n, IEEE 802.11g, IEEE 802.11b;
Transmission rate	2.4GHz band: 300Mbps 5GHz band: 900Mbps
External interface	A USB/DC power cable; A set of 10/100m adaptive Ethernet cable; One 10/100M adaptive Ethernet port;
Button	Reset button (long press 5 seconds, then release, the device will automatically restore the factory)
LED	Status instruction: Ethernet port status light (Yellow); 2.4G WiFi connection status light (Blue); 5G WiFi connection status light (Green);
Antenna	Built-in 2pcs Smart omnidirectional 2.4G Antennas, 1.5dbi; Built-in 2pcs Smart omnidirectional 5G Antennas, 1.5dbi;
Product size	93mm x 45mm x 24mm (L x W x H)
Item weight	78.8g

Two: WiFi Related

Basic Function	1) Smart WiFi bridge(IP layer transparent transmission, MAC layer transparent transmission); 2) Routing mode, supporting WiFi WAN access and WAN/LAN exchange; 3) WiFi hotspot exchange; 4) WiFi hardware exchange; 5) Intelligent start and stop cooling fan; 6) 2.4G WiFi mode optional: 11B/G/N, 11B/G, 11N, 11G, 11B; 5G WiFi mode optional: 11AC/AN/A, 11AC/AN, 11A/N, 11A, 11N; 7) WiFi hotspots automatically reconnected, and two hotspot matching methods (full match authentication mode, SSID and password authentication mode); 8) WiFi hotspot memory, maximum memory 100 hotspots; 9) Support SSA signal strength detection and reporting function ; 10) Hotspot connection parameter import and export function;
Supported band	2.4G band channel: 1-14; 5G band channel: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112,



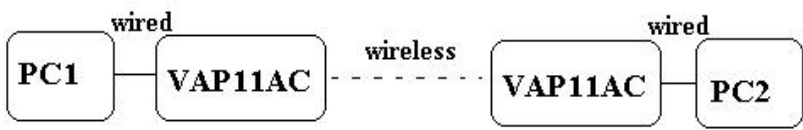
	116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165
WiFi transmit power	2.4G: 15dBm; 5G: Normal power: 18dBm; Enhanced power: 23dBm
Compliance acceptance sensitivity	-69dbm (2.4G) -75dbm (5G)
Application Method	WiFi Repeater (WiFi signal repeater), can extend WiFi transmission distance; WiFi Bridge: IP layer transparent transmission, MAC layer transparent transmission, WiFi access point (AP);
WiFi Security	64/128/WEP encryption; WPA-PSK/WPA2-PSK、WPA/WPA2 security mechanism;
System Function	Firmware Upgrade Reboot device Reset factory Account and password revise

Three: Electrical performance parameters

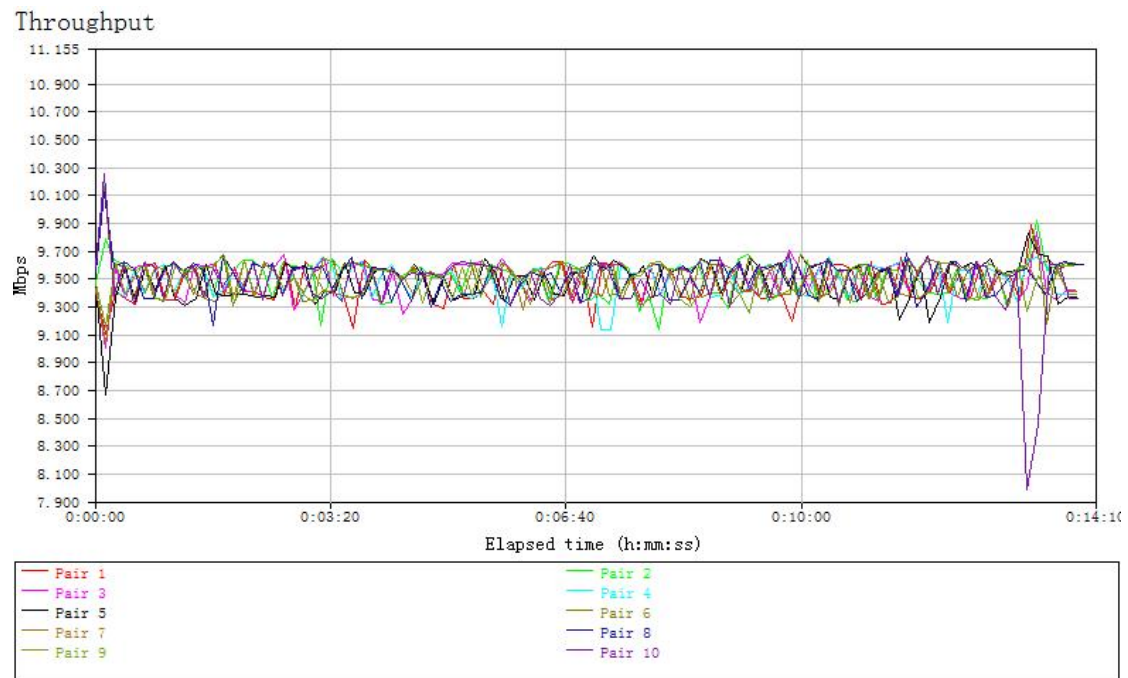
1.Power supply parameters				
Supply Voltage Range		Input Power	Typical Power Supply	Overvoltage protection
DC5V-24V		≥10W	DC5V/2A	29V
2. Working Electrical Performance Parameter Measurement Form (Environment Temperature: 26℃)				
Work Band	Supply Voltage	Work Stage	Work Current (mA)	Main chip temperature (℃)
2.4G	12V	Booting Up	100-300	25-35
		Standby	150-300	35-50
		Transfer Data	200-400	60-70
5G	12V	Booting Up	100-320	30-40
		Standby	150-300	40-60
		Transfer Data	300-500	65-75
Dual Band	12V	Booting Up	100-350	30-40
		Standby	200-400	40-65

		Transfer Data (2.4G)	200-400	60-70
		Transfer Data (5G)	300-550	65-75
		Transfer Data (Dual Band)	500-700	65-75

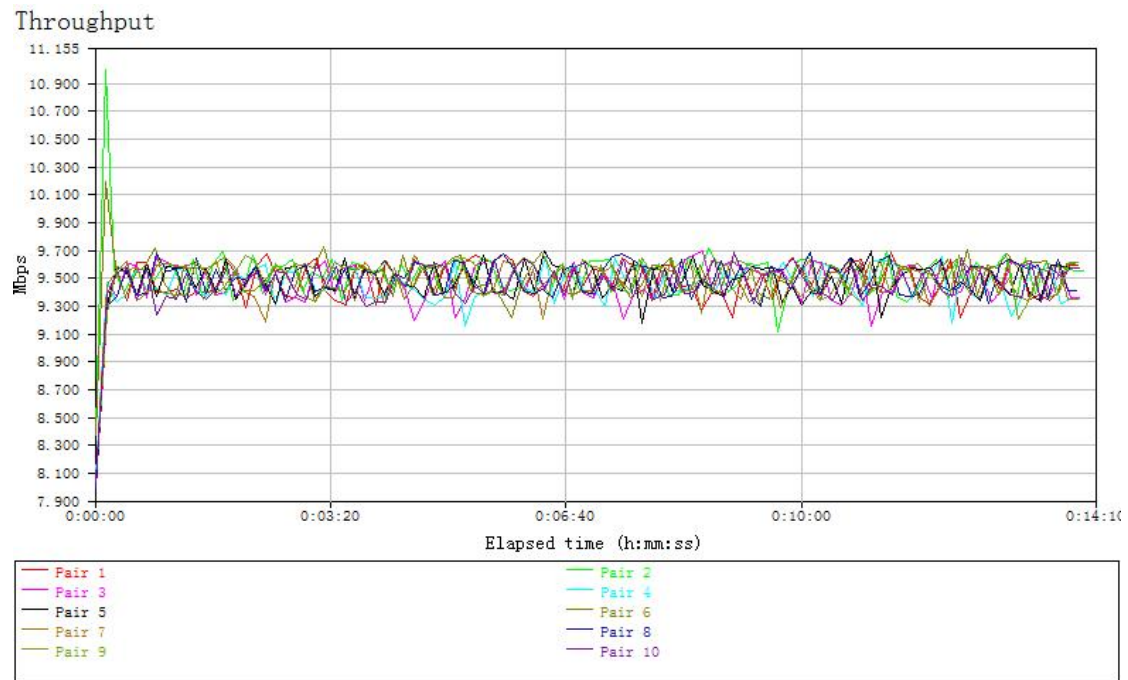
Four: Network Throughput Test Report

Device	2pcs VAP11AC, 2pcs Computers		
Test Tool	IxChariot Software		
Top relationship			
Test Result:			
Band	WiFi Protocol	Throughput (Mbps)	
2.4G	B/G/N	94	
5G	AC/A/N	94	
	A/N	93	
	A	30	

2.4G (B/G/N) Throughput Test Fluctuation Chart:



5G (AC/A/N) Throughput Test Fluctuation Chart:



Five: RF Test Report

2.4G RF Parameters Form (Hardware Version: 5.0)

Channel(Band)	1 (2412M)	3 (2422M)	6 (2437M)	7 (2442M)	9 (2452M)	11 (2462M)	13 (2472M)
Transmit power	15.1	15.1	15.5	15.4	15.7	15.5	15.7
EVM	-31	-31	-31	-32	-32	-33	-33
Transmit power2	16.2	16.4	16.8	16	16.1	15.5	15.5
EVM2	-34	-34	-33	-34	-33	-34	-33

5G RF Parameters Form (Hardware Version: 5.0)

Channel(Band)	36 (5180M)	52 (5260M)	64 (5320M)	100 (5500M)	128 (5640M)	149 (5745M)	157 (5785M)	165 (5825M)
Transmit Power 1	18.9	18.5	18.2	18.4	18.5	18.3	18.1	18.3
EVM1	-38	-37	-37	-37	-37	-37	-37	-30
Transmit Power 2	23.6	23.5	22.7	23.4	23.0	23.8	23.3	23.4
EVM2	-30	-29	-31	-31	-29	-29	-30	-30

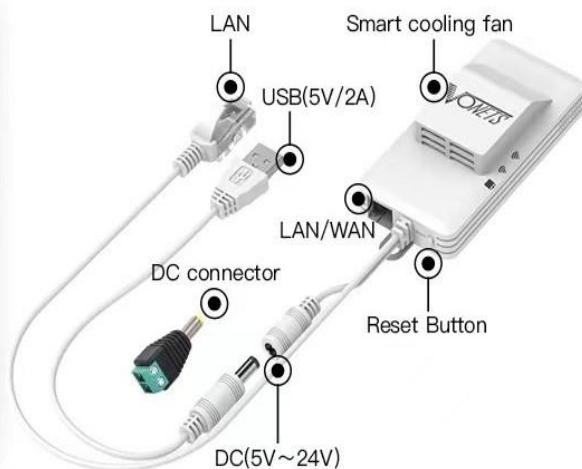
Sixth: Antenna Matching Test Report:

Standing Wave Ratio Parameters Form (Hardware Version: 5.0)					
Band					
Antenna Channel	2.412GHz	2.432GHz	2.452GHz	2.462GHz	2.477GHz
ANT1	1.2	1.1	1.0	1.1	1.3
ANT2	1.6	1.3	1.1	1.3	1.6
Band					
Antenna Channel	5.180GHz	5.350GHz	5.550GHz	5.700GHz	5.825GHz
ANT1	2.0	1.8	1.8	1.7	1.6
ANT2	2.0	1.7	1.9	2.1	1.9

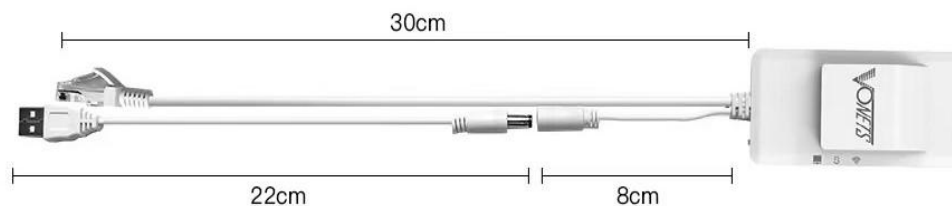
Product Picture as below:

Product Specification

Product Name	VAP11AC(With fan version)
WiFi Function	Router/Repeater/Bridge
WiFi Band	2.4GHz/5.8GHz
WiFi Protocol	802.11ac/a/b/g/n
transmission rate	300Mbps+900Mbps
Work Voltage	5V~24V(Typical 5V/2A)
Color	White
Device size	93X45X24mm
Package	140X95X36mm
Weight	78.8g



- Green Light, 5G WiFi connection status light
- Blue Light, 2.4G WiFi connection status light
- Yellow Light, Ethernet cable connection light



Dimension drawing:

