



# **Huawei AC6508**

# **Wireless Access Controller**

# **Datasheet**

# Product Overview

The [AC6508 is a small-capacity fixed wireless access controller \(AC\)](#) for small and medium enterprises. It can manage up to 256 access points (APs) and integrates the GE Ethernet switch function, achieving integrated access for wired and wireless users. The WLAN AC features high scalability and offers users considerable flexibility in configuring the number of managed APs. When used with Huawei's full series 802.11ax, 802.11ac and 802.11n APs, the AC6508 can be used to construct small and medium campus networks, enterprise office networks, wireless Metropolitan Area Networks (MANs), and hotspot coverage networks.

Huawei AC6508 wireless access controller



## Product Features

### Large-capacity and high-performance design

- The AC6508 can manage up to 256 APs, meeting requirements of small and medium campuses.
- Provides 2 x 10GE optical interfaces and 10 x GE electrical interfaces, supporting up to 6 Gbit/s forwarding performance.

### SmartRadio for air interface optimization

- Load balancing during smart roaming: The load balancing algorithm can work during smart roaming for load balancing detection among APs on the network after STA roaming to adjust the STA load on each AP, improving network stability.
- Intelligent DFA technology: The dynamic frequency assignment (DFA) algorithm is used to automatically detect adjacent-channel and co-channel interference, and identify any 2.4 GHz redundant radio. Through automatic inter-AP negotiation, the redundant radio is automatically switched to another mode (dual-5G AP models support 2.4G-to-5G switchover) or is disabled to reduce 2.4 GHz co-channel interference and increase the system capacity.
- Intelligent conflict optimization technology: The dynamic enhanced distributed channel access (EDCA) and airtime scheduling algorithms are used to schedule the channel occupation time and service priority of each user. This ensures that each user is assigned relatively equal time for using channel resources and user services are scheduled in an orderly manner, improving service processing efficiency and user experience.

### Various roles

- The AC6508 has a built-in Portal/AAA server and can provide Portal/802.1X authentication for users, reducing customer investment.

### Flexible networking

- The WLAN AC can be deployed in inline, bypass, bridge, and Mesh network modes, and supports both centralized and local forwarding.
- The WLAN AC and APs can be connected across a Layer 2 or Layer 3 network. In addition, NAT can be deployed when APs are deployed on the private network and the WLAN AC is deployed on the public network.
- The WLAN AC is compatible with Huawei full-series 802.11n, 802.11ac and 802.11ax APs and supports hybrid networking of 802.11n, 802.11ac and 802.11ax APs for simple scalability.

### Built-in application identification server

- Supports Layer 4 to Layer 7 application identification and can identify over 6000 applications, including common office applications and P2P download applications, such as Lync, FaceTime, YouTube, and Facebook.
- Supports application-based policy control technologies, including traffic blocking, traffic limit, and priority adjustment policies.
- Supports automatic application expansion in the application signature database.

### Comprehensive reliability design

- Supports AC 1+1 HSB, and N+1 backup, ensuring uninterrupted services.
- Supports port backup based on the LinkAggregation Control Protocol (LACP) or Multiple Spanning Tree Protocol (MSTP)..
- Supports WAN authentication escape between APs and WLAN ACs. In local forwarding mode, this feature retains the online state of existing STAs and allows access of new STAs when APs are disconnected from WLAN ACs, ensuring service continuity.

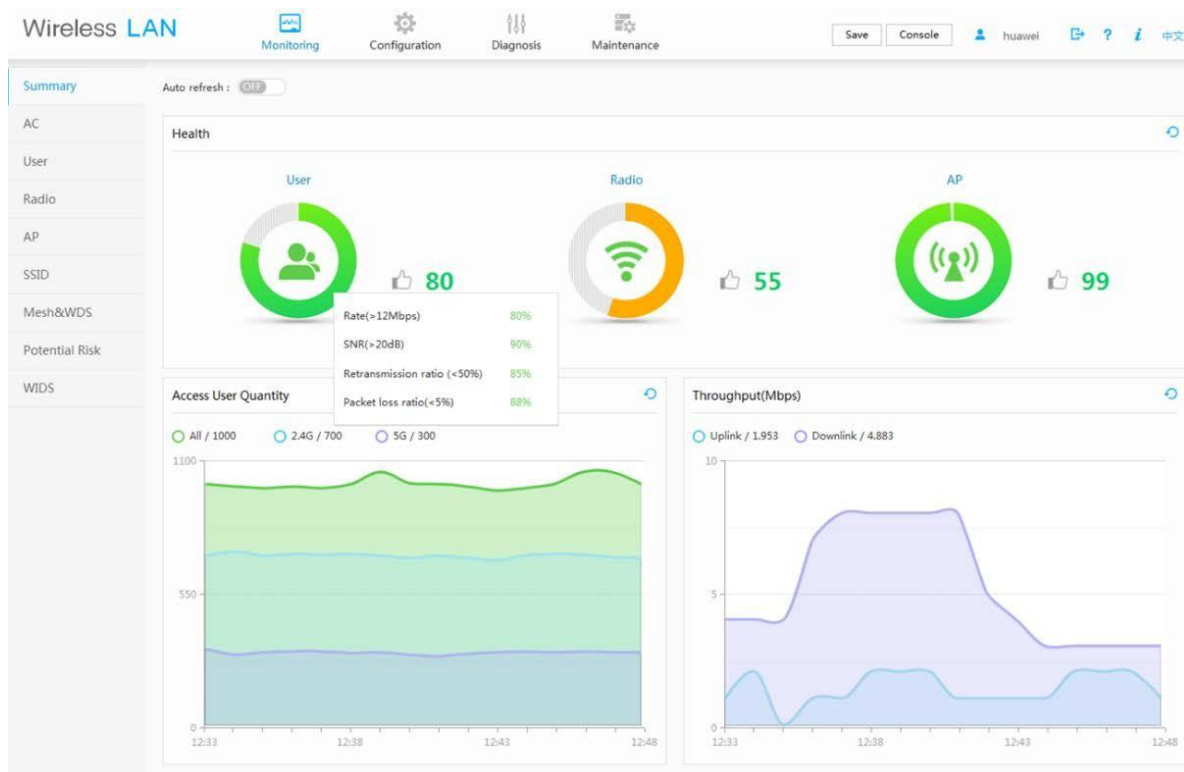
### Built-in visualized network management platform

The AC6508 has a built-in web system that is easy to configure and provides comprehensive monitoring and intelligent diagnosis.

### Health-centric one-page monitoring, visualized KPIs

- One page integrates the summary and real-time statistics. KPIs are displayed in graphs, including user performance, radio performance, and AP performance, enabling users to extract useful information from the massive amounts of monitored data, while also knowing the device and network status instantly.

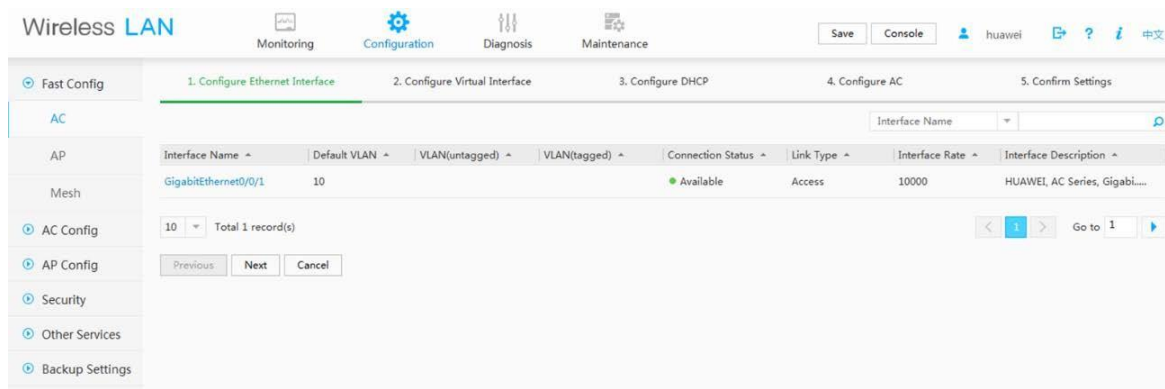
Monitoring interface



### Profile-based configuration by AP group simplifies configuration procedure and improves efficiency.

- The web system supports AP group-centric configuration and automatically selects the common parameters for users, meaning that users do not need to pre-configure the common parameters, simplifying the configuration procedure.
- If two AP groups have small configuration differences, users can copy the configurations of one AP group to the other. This improves configuration efficiency because users only need to modify the original configurations, not create entirely new ones each time.

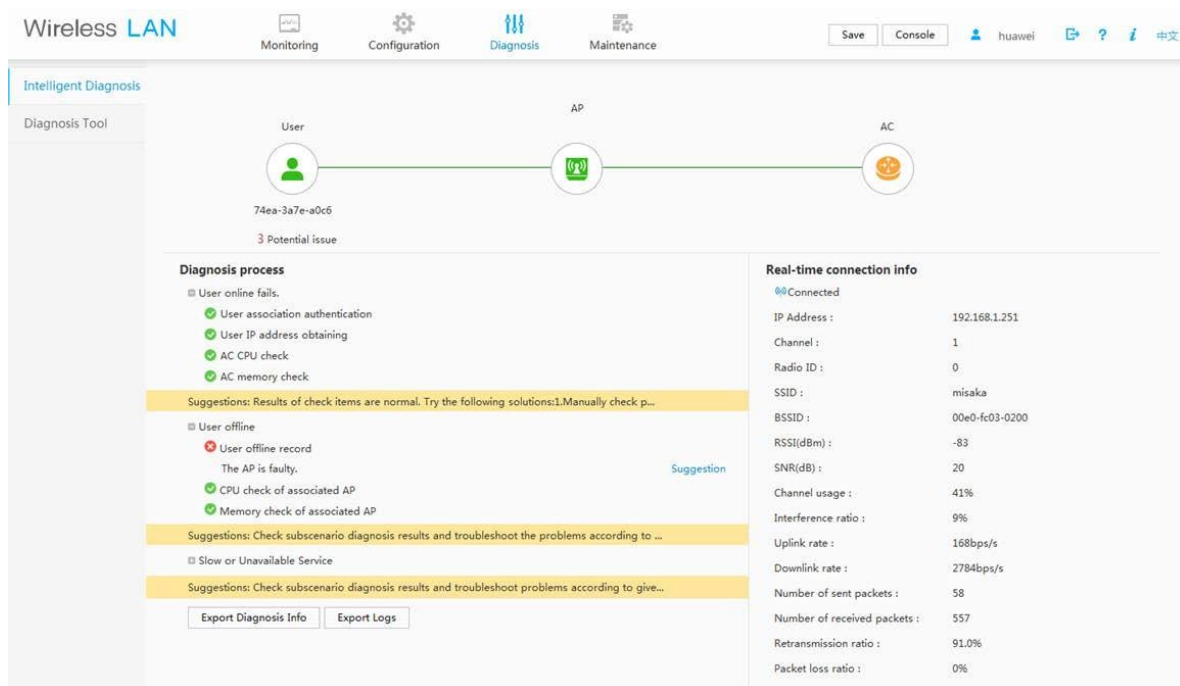
## Configuration interface



One-click diagnosis solves 80% of common network problems.

- The web system supports real-time and periodic one-click intelligent diagnosis from the dimensions of users, APs, and WLAN ACs, and provides feasible suggestions for troubleshooting the faults.

## Intelligent diagnosis



## AC6508 Features

### Switching and forwarding features

Feature	Description
Ethernet features	<p>Ethernet</p> <p>Operating modes of full duplex, half duplex, and auto-negotiation</p> <p>Rates of an Ethernet interface: 10 Mbit/s, 100 Mbit/s, 1000 Mbit/s, and auto-negotiation</p> <ul style="list-style-type: none"> <li>• Flow control on interfaces</li> <li>• Jumbo frames</li> <li>• Link aggregation</li> <li>• Load balancing among links of a trunk</li> <li>• Interface isolation and forwarding restriction</li> <li>• Broadcast storm suppression</li> </ul>

Feature		Description
	VLAN	Access modes of access, trunk, and hybrid Default VLAN VLAN pool
	MAC	Automatic learning and aging of MAC addresses Static, dynamic, and blackhole MAC address entries Packet filtering based on source MAC addresses Interface-based MAC learning limiting
	ARP	Static and dynamic ARP entries ARP in a VLAN Aging of ARP entries
	LLDP	LLDP
Ethernet loop protection	MSTP	STP RSTP MSTP BPDU protection, root protection, and loop protection Partitioned STP
IPv4 forwarding	IPv4 features	ARP and RARP ARP proxy Auto-detection NAT Bonjour protocol
	Unicast routing features	Static route RIP-1 and RIP-2 OSPF BGP IS-IS Routing policies and policy-based routing URPF check DHCP server and relay DHCP snooping
	Multicast routing features	IGMPv1, IGMPv2, and IGMPv3 PIM-SM Multicast routing policies RPF
IPv6 forwarding	IPv6 features	ND protocol
	Unicast routing features	Static route RIPng OSPFv3 BGP4+ IS-IS IPv6 DHCPv6 DHCPv6 snooping