HUAWEI AC6605-26-PWR
Access Controller Datasheet

HUAWEI TECHNOLOGIES CO.,LTD.
Huawei Industrial Base
Bantian Longgang
Shenzhen 518129,P.R.China
Tel: +86 755 28780808

HUAWEI TECHNOLOGIES CO., LTD.

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Multiple interface support

- 2 10-GE optical interfaces
- 24 GE and 4 GE combo interfaces
- 1 RJ-45 serial maintenance interface
- 1 RJ-45 network maintenance interface
- 1 mini-USB serial maintenance interface

Large-capacity, high-performance design with proven reliability

- Connections for up to 512 APs
- Backplane capacity of 128 Gbit/s with non-blocking data switching support
- Port backup using Link Aggregation Control Protocol (LACP) or Multiple Spanning Tree Protocol (MSTP)
- Dual, hot-swappable AC/DC power supplies

Easy to install and easy to maintain

- Convenient size (442 mm × 420 mm × 43.6 mm): small enough to fit a standard cabinet
- Power supplies are hot swappable
- Boolean port support for environmental monitoring and intra-board temperature probes, which monitor the operating environment of the AC in real time

Dynamic energy management

- Low-noise fans, which dynamically adjust to load changes to keep equipment noise and power consumption low
- Automatic power-saving mode, which engages during idle operation (when no peer device is connected)
- Highly integrated, energy-saving design, which provides even higher performance and lower power consumption when coupled with an intelligent device management system

The Huawei AC6605-26-PWR access controller (AC) delivers secure network access with advanced management features for campus, industrial, and medium- to large-scale enterprise networks. This high-performance AC integrates 1,000 M Ethernet switch functionality for both wired and wireless access control and also works well for extending hotspot coverage. When used with Huawei Premium Series APs, Enhanced Series APs, and Standard Series APs, the AC6605-26-PWR delivers a flexible network solution that is easy to install and maintain at an attractive price.

Advanced Network Features

The Huawei AC6605-26-PWR provides AP connection and control for medium- to large-size enterprise and campus networks. The Huawei AC6605-26-PWR offers these features:

- licenses for managing multiple APs
- 128 Gbit/s switching capacity
- Compatibility with 802.11a/b/g/n
- PoE power supply for up to 24 interfaces
- Flexible networking and forwarding
- Comprehensive user policy management and authorization control
- Centralized authentication and distributed forwarding
- Secure and reliable N+1 backup
- Centralized AP management and maintenance
- Integrated WLAN management

Typical Network Configurations

The AC6605-26-PWR can be deployed in branched, chain, and distributed wireless networks (WDS and Mesh).

Branched Networking

In branched networking, the AC6605 connects to a network device (usually an aggregation switch) to manage the APs. Management flows are transmitted in Control and Provisioning of Wireless Access Points (CAPWAP) tunnels, and data flows are forwarded to the upper layer network by the aggregation switch and do not pass through the AC6605.
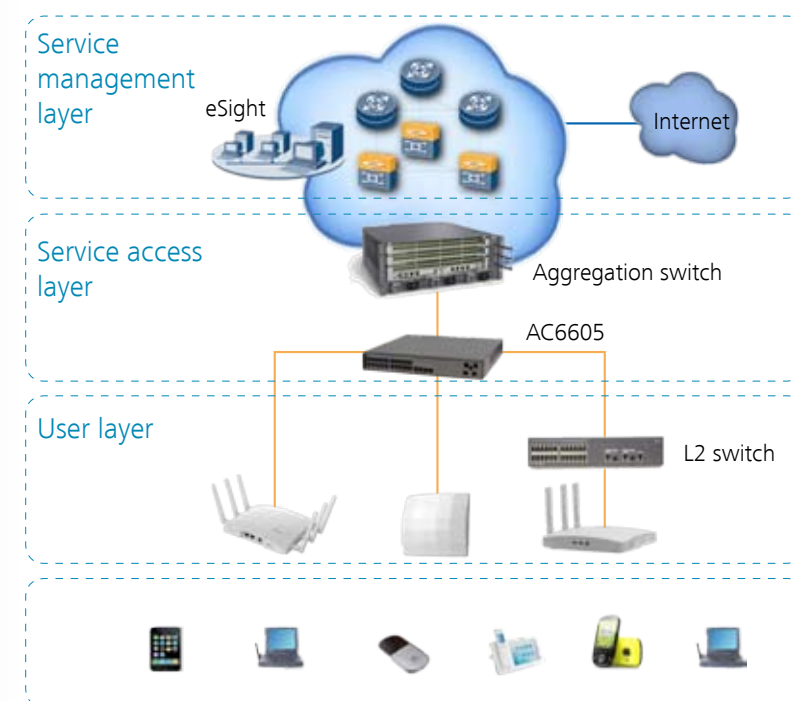

The AC6605 manages all the APs connected to the aggregation switch. This network topology works well where APs are scattered across hot spots. Because tunnel forwarding is commonly used for overlay network deployments, Huawei recommends using tunnel forwarding in branch network configurations for most enterprise networks.

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Chain Networking

In chain networking, APs or access switches directly connect to the AC6605. The AC6605 functions as both an AC and an aggregation switch to forward and process data and management services for the APs.

In chain networking scenarios, the AC6605 sets up CAPWAP tunnels with APs to configure and manage these APs. Service data of wireless users can be forwarded between APs and the AC6605 over CAPWAP data tunnels or be directly forwarded by APs.
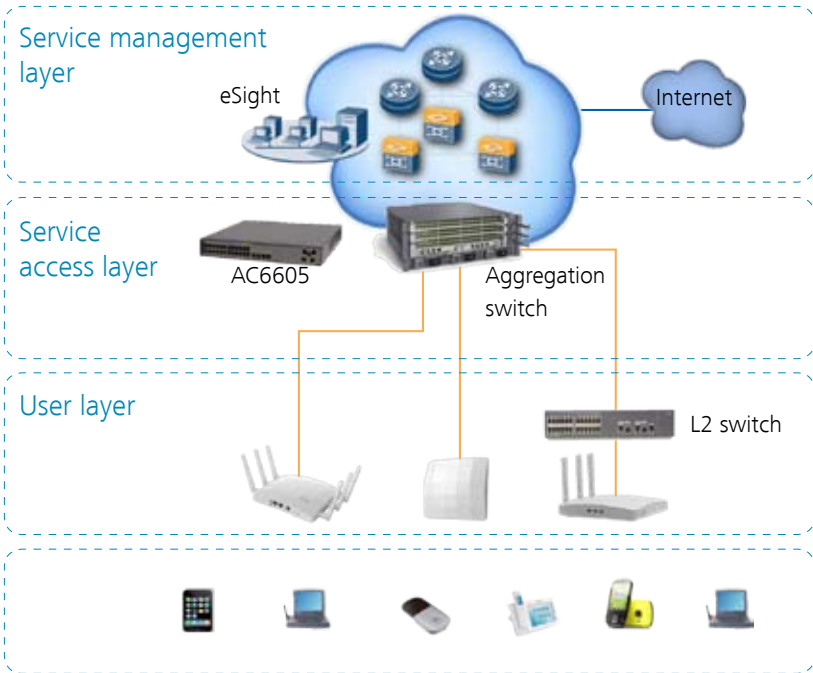
The AC6605 has a wired switching unit with powerful access, aggregation, and switching capabilities. Direct forwarding is often used in chain networking scenarios. This networking mode simplifies network architecture and is used with large-scale and centralized WLANs.

WDS and Mesh Networking
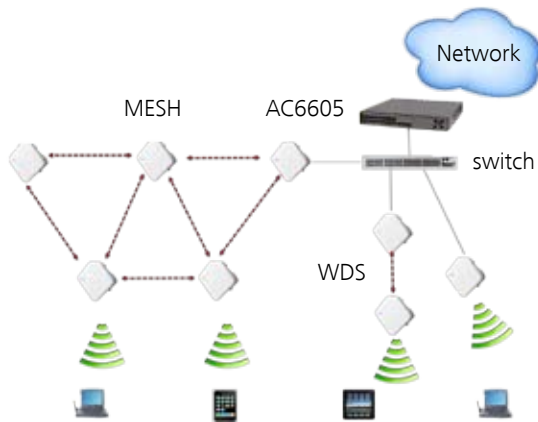
Wireless Distribution Systems (WDS) and Mesh networks use a distributed network of APs. The WDS and Mesh networks connect to an AC through a switch, and the AC connects to the network through a network device, such as a gateway or an aggregation switch. The WDS and Mesh connect to user stations (STAs).

WDS and MESH networking are used to expand wireless coverage areas for outdoor deployments.

AC6605-26-PWR features

Feature	Benefit
Scalability	Licenses are available for managing 16, 64, or 128 APs.
Flexible networking	The AC and APs can be connected across a Layer 2 or Layer 3 network. Network Address Translation (NAT) can be deployed in configurations where APs are deployed on an internal network and the AC is deployed on an external network. Services can be mapped between VLANs and Service Set Identifiers (SSIDs). The number of service VLANs and number of SSIDs can be in a ratio of 1:1 or 1:N based on service requirements. You can assign user VLANs based on SSIDs, physical locations, or services. The AC can be deployed in chain, branched, and WDS/Mesh networks. Where PoE interfaces are required, the AC6605-26-PWR provides power for up to 24 interfaces to support power-sourcing the APs from the AC.
Flexible forwarding	The AC6605-26-PWR allows you to easily configure local or centralized forwarding on Virtual Access Point (VAP) settings according to network traffic and service control requirements. • Centralized forwarding meets the requirements of most network configurations; however, when bandwidth demands from users connected to the same AP steadily increase, traffic switching loads will increase. • Local forwarding improves bandwidth efficiency, however, user authentication can not be controlled by the AC in local forwarding mode. The AC6605-26-PWR solves this problem with support for both local forwarding and centralized authentication to accommodate changing needs.

Radio management	The AC6605-26-PWR supports automatic selection and calibration of radio parameters in AP regions with these features:
	• Automatic signal level adjustment and channel selection on power-up.
	• Automatic signal re-calibration in the event of signal interference.
	  - Partial calibration: Adjusts a specific AP to optimal signal levels.
	  - Global calibration: Adjusts all APs in a specified region for optimal signal levels.
	• When an AP is removed or goes offline, the AC6605-26-PWR increases the power of neighboring APs to compensate for reduced signal strength.

Flexible user rights management	The AC6605-26-PWR uses Access Control Lists (ACLs) based on APs, VAPs, or SSIDs and provides isolation and bandwidth-limiting for each option. The AC AC6605-26-PWR also provides access controls for users and user roles to meet enterprise requirements regarding permissions, authentication, and authorization, as well as bandwidth limitations per user and user group. • The AC6605-26-PWR implements per-user access control based on ACLs, VLAN IDs, and bandwidth limits sent from the RADIUS server. • User groups are defined with access control policies. An ACL, user isolation policy, and bandwidth limitations can be applied to user groups for additional access control. • Inter-group user isolation or intra-group user isolation can also be configured..

Feature	Benefit
WDS	The AC6605-26-PWR provides STA access and wireless bridge management functions, as well as network bridge management when in Fit AP mode. The AC6605-26-PWR supports these networking modes: point-to-multipoint bridging, single-band/dual-band multi-hop relay, dual-band WDS bridging + WLAN access, and single-band WDS bridging + WLAN access. The AC6605-26-PWR can also function as a wireless bridge between a central campus network and multiple branch campuses. This configuration works well for deployments with no wired network or where cable routing is inconvenient.
High reliability	Multiple ACs can be configured in a network to increase WLAN reliability. If an active AC experiences a fault or the link between the active AC and APs disconnects, the APs can switch to a standby AC. The AC6605-26-PWR system provides N+1 active/standby mode, which allows multiple active ACs to share the same standby AC. This feature provides high reliability at reduced cost.
Load balancing	• Inter-AP load balancing: When an STA is in the coverage area of multiple APs, the AC6605-26-PWR connects the STA to the AP with the lightest load, delivering STA-based or traffic-based load balancing. • Inter-STA resource balancing: The AC6605-26-PWR can dynamically and evenly allocate bandwidth resources to prevent some STAs from overusing available bandwidth due to network adapter performance or special applications, such as BT Total Broadband. • The AC6605-26-PWR first utilizes the 5 GHz band to increase overall utilization of bandwidth.
Visualized WLAN network management and maintenance	The AC6605-26-PWR and APs use Fit AP + AC networking and standard Link Layer Discovery Protocol (LLDP) for centralized AP management and maintenance. When paired with Huawei's eSight network management tool, the AC6605-26-PWR provides network topology displays to easily manage and optimize network performance.

AC6605-26-PWR Specifications

Item	Specifications
Technical specifications	Dimensions (W×D×H): 442 mm×420 mm×43.6 mm Weight: 5.48 kg Operating temperature: 0℃ to 45℃ Storage temperature: −40℃ to +70℃ Humidity: 5% to 95% Input voltage: 100 V AC to 240 V AC; 50/60 Hz; −48 V DC to −60 V DC Maximum power consumption: 85 W
Interface type	20×GE interfaces + 4×Combo interfaces + 2×10-GE optical interfaces Power for up to 24 PoE interfaces 1 RJ-45 serial maintenance interface 1 RJ-45 network maintenance interface 1 mini-USB serial maintenance interface Dual, hot-swappable AC/DC power supplies

Item	Specifications
Number of managed APs	16 to 512 (an integer multiple of 16)
Number of APs controlled by each license	16,64 or 128
Number of access users	Entire device: 10 K
Number of Number of Extended Service Set Identifiers (ESSIDs)	1 K
User group management	The AC supports 128 user groups: • Each user group can reference a maximum of 8 ACLs. • Each user group can associate with a maximum of 128 ACL rules.
Number of MAC addresses	16 K
Number of VLANs	4 K
Number of ARP entries	8 K
Number of routing entries	10 K
Number of multicast forwarding entries	4 K
Number of DHCP IP address pools	128 IP address pools, each containing a maximum of 16 K IP addresses

Wireless features

Feature	Description
Network management and maintenance	Device management and statistics • Command line management based on SSH/Telnet/Console • SNMPv2/v3 • Web management • Standard MIBs and Huawei proprietary MIBs • Syslog • AP and station statistics • Alarms with different severity levels Centralized AP configuration and management • Region-based AP management • Centralized version management and automatic version file load • Built-in AP type and customized AP addition Graphic AP deployment and topology displays • AP LLDP • AC LLDP

Feature	Description
Wireless protocols	IEEE 802.11a, 802.11b, 802.11g, 802.11d, WMM/802.11e, 802.11h, and 802.11n
WLAN deployment	AP-AC networking • AP-AC Layer 2/3 networking • AC Layer 2 forwarding or Layer 3 routing • NAT traversal (APs are deployed on a private network and ACs are deployed on the public network) Data forwarding • AP-AC CAPWAP tunnel and DTLS encryption • VAP-based forwarding (centralized forwarding and local forwarding) • Centralized authentication and local forwarding VLAN deployment • Mapping between SSIDs and VLANs and VLAN assignment based on SSIDs or physical locations WDS deployment • Point-to-point and point-to-multipoint • Automatic topology detection and loop prevention (STP) AC active/standby mode • Dual-linked active and standby ACs with Virtual Router Redundancy Protocol (VRRP) • N:1 activestandby deployment
Radio management	Channel and power configuration • Centralized or static channel power configuration • Automatic channel allocation to implement global radio calibration or partial radio calibration • Automatic power adjustment to implement coverage hole compensation • AP region-based configuration and management Load balancing • Load balancing based on the traffic volume on each radio • Load balancing based on the number of users
Wireless service control	Extended Service Set (ESS)-based service management • ESS-based SSID hiding and AP isolation at Layer 2 • Maximum number of access users and associated aging time settings in an ESS • ESSs to service VLANs mapping • ESS associations with a security profile or a QoS profile • Internet Group Management Protocol (IGMP) support for APs in an ESS Wireless roaming • Layer 2 roaming • Inter-VLAN Layer 3 roaming • Pairwise Master Key (PMK) caching, rapid key negotiation DHCP service control • Built-in DHCP server • Support for DHCP snooping on APs • Support for DHCP relay and DHCP snooping on AC Multicast service management • IGMP snooping • IGMP proxy

Feature	Description
Wireless user management	WLAN user management • User blacklist and whitelist • User access number limit • User disconnection • Support for multiple queries including online user information and statistics User group management • ACLs based on user groups • Isolation based on user groups
Wireless security and authentication	Authentication and encryption • OPEN/WEP/PSK/WPA(2) + 802.1x • WEP/TKIP/AES(CCMP) • WAPI User authentication and control • MAC address authentication, Portal authentication, and 802.1x authentication • MAC + Portal authentication • PEAP/TLS/MD5/CHAP Security and defense • ACLs based on interface, users, and user groups • Isolation based on VAPs and user groups • IP source guard for STAs • Detection of unauthorized APs and alarm function • User blacklist and whitelist AAA • Local authentication/local accounts (MAC addresses and accounts) • RADIUS authentication • Multiple authentication servers
Wireless QoS control	Flow control: • VAP-based rate limiting • User-group-based rate limiting • Rate limiting for a specified user • Dynamic traffic control, preventing resources from being wasted by STAs Priority mapping and scheduling • Mapping QoS settings of encapsulated data packets to 802.1p and DSCP fields of outer tunnel packets • Mapping between DSCP, 802.1p, and 802.11e

Wired features

Feature	Description
Ethernet features	802.1p, QinQ, Smart Link, LLDP Storm suppression, port isolation, and link aggregation
Ethernet loop protection	Spanning Tree Protocol (STP)/Rapid Spanning Tree Protocol (RSTP)/Multiple Spanning Tree Protocol (MSTP) Bridge Protocol Data Unit (BPDU) protection, root protection, and loop protection Partitioned STP and BPDU tunnels Rapid Ring Protection Protocol (RRPP) Hybrid networking of RRPP rings and other ring networks
IP routing	Unicast routing protocols: RIP, OSPF, BGP, and IS-IS
Device reliability	Virtual Router Redundancy Protocol (VRRP)
QoS features	Traffic classifier, traffic behavior, queue scheduling, congestion avoidance, and outbound interface rate limiting
Link detection	BFD EFM OAM, CFM OAM, and Y.1731
IP service control	ARP Built-in DHCP server RADIUS client Built-in FTP server DHCP relay and DHCP snooping

AC6605-26-PWR purchase and accessory information

Item	Part Number	Product Name	Description
Bundle	S4017388	AC6605-26-PWR-26-PWR-Bundle	AC6605-26-PWR-26-PWR-Bundle(Including AC6605-26-PWR-26-PWR,Resource License 16AP)
Bundle	S4017392	AC6605-26-PWR-32AP Bundle	Including AC6605-26-PWR-26-PWR,Resource License 32AP
Bundle	S4017393	AC6605-26-PWR-64AP Bundle	Including AC6605-26-PWR-26-PWR,Resource License 64AP
Bundle	S4017394	AC6605-26-PWR-128AP Bundle	Including AC6605-26-PWR-26-PWR,Resource License 128AP

Item	Part Number	Product Name	Description
Bundle	S4017395	AC6605-26-PWR-26-PWR-256AP Bundle	Including AC6605-26-PWR-26-PWR,Resource License 256AP
Bundle	S4017396	AC6605-26-PWR-26-PWR-512AP Bundle	Including AC6605-26-PWR-26-PWR,Resource License 512AP
License	88031BVE	L-AC6605-26-PWR-16AP	Software Charge,AC6605-26-PWR,L-AC6605-26-PWR-16AP,AC6605-26-PWR Access Controller AP Resource License(16 AP)
License	88031BVF	L-AC6605-26-PWR-64AP	Software Charge,AC6605-26-PWR,L-AC6605-26-PWR-64AP,AC6605-26-PWR Access Controller AP Resource License(64 AP)
License	88031FJP	L-AC6605-26-PWR-128AP	Software fee-AC6605-26-PWR-L-AC6605-26-PWR-128AP-AC6605-26-PWRwireless access control AP license(128 APs)
Power supply	02310JFA	ES0W2PSA0150	AC6605, ES0W2PSA0150,150W AC Power Module
Power supply	02310JFD	ES0W2PSD0150	AC6605, ES0W2PSD0150,150W DC Power Module
Power supply	2130983	W2PSA0500	AC/DC power module--25degC-55degC-90V-264V-12V/10A,-53.5V/7.1A
Power cable			Please refer to the ordering guide for more information.
Optical module			
Optical connector			
Network cable			
Ground bar			

Professional Service and Support

Huawei Professional Services provides expert network design and service optimization tasks to help customers

- Design and deploy a high-performance network that is reliable and secure.
- Maximize return on investment and reduce operating expenses.

Company Addendum

For more information, please visit http://enterprise.huawei.com/en/ or contact your local Huawei office.