



CloudOS

Intelligent multi-service Wi-Fi controller

Product Introduction

CloudOS is a high-performance enterprise-class wireless access controller system. This system can be deployed on common x86 server hardware as well as in public/private cloud environments. CloudOS supports powerful wireless data processing, service monitoring, application analysis, and device management capabilities. CloudOS can be widely applied in various industries such as smart cities, business, education, government, and enterprise.

Compared to traditional wireless controllers, CloudOS adopts an x86 software architecture, integrating wireless network management and control, wireless user authentication management, Portal content services, built-in RADIUS, data collection and aggregation, user Internet behavior logging, user application identification, and industry-specific applications into one unit.

Product Feature

Flexible system deployment methods

- Deploys on common x86 servers, such as DELL servers, Huawei servers, and other servers
- Deploys via KVM/VMware/OpenStack architecture in private cloud environments
- Deploys on public cloud platforms such as AWS, Alibaba Cloud, Huawei Cloud, and other platforms

Intelligent access point management

- Centralized configuration and management of all APs
- Zero-touch configuration for access point deployment
- Scalable up to 10,000 manageable APs on one single node
- Supports load balancing to maximize the number of connected terminals and data traffic limitation per AP

Superior user experience

- Excellent network coverage for various scenarios
- Supports up to 200,000 terminals on one single node
- Supports up to 256,000 MAC address entries on one single node
- Supports seamless authentication and Layer 2/3 roaming among multiple controllers

Smart RF management

- Constantly monitors the wireless network
- Automatically configures AP's RF parameters and adjusts power and channel assignment
- Network recovers automatically in case of AP failure

Rich business and intelligent wireless features

- Supports user behavior tracking and WLAN information security management
- Identifies mobile applications, enabling big data analysis on users
- Monitors and alerts on the status of wireless terminals and service systems
- Integrates rich functions including authentication (such as SMS authentication and app authentication), Portal content service, built-in HTTP ads, and local maintenance of ad content

Robust security and high reliability

- Supports various access authentication methods such as 802.1x-based and Portal-based authentication
- Supports strict user access policies ensuring safer access
- Provides various encryption methods such as WPA/WPA2

Flexible network architecture and data forwarding modes

- Supports centralized or local forwarding (configurable)
- In centralized forwarding mode, all control and data traffic pass through the gateway, allowing users to monitor data to the fullest extent
- In local forwarding mode, only control traffic passes through the gateway (maintaining user management and security), which can save bandwidth and reduce network latency, suitable for various scales of network deployment
- Supports multi-tiered AC deployment

Product Specification

Item	Parameter description										
Ways of deployment	<ul style="list-style-type: none"> x86 servers Private cloud deployment with KVM/VMware/OpenStack architecture (recommended only in local data forwarding networking) Public cloud deployment, such as AMS, Alibaba Cloud and HUAWEI Cloud (recommended only in local data forwarding networking) <p>Note: refer to the "CloudOS Installation Guide" for more details.</p>										
System capacity	<table border="1"> <thead> <tr> <th>Configuration of server or VM</th> <th>Max manageable AP (Central forwarding Local forwarding)</th> </tr> </thead> <tbody> <tr> <td>Dual core(>2.0GHz)+8G RAM+64G HD</td> <td>100 500</td> </tr> <tr> <td>Quad core(>2.0GHz)+8G RAM+64G HD</td> <td>200 1,000</td> </tr> <tr> <td>Octa core(>2.0GHz)+8G RAM+250G HD</td> <td>1,000 4,000</td> </tr> <tr> <td>16 core(>2.0GHz)+32G RAM+250G HD</td> <td>2,000 10,000</td> </tr> </tbody> </table>	Configuration of server or VM	Max manageable AP (Central forwarding Local forwarding)	Dual core(>2.0GHz)+8G RAM+64G HD	100 500	Quad core(>2.0GHz)+8G RAM+64G HD	200 1,000	Octa core(>2.0GHz)+8G RAM+250G HD	1,000 4,000	16 core(>2.0GHz)+32G RAM+250G HD	2,000 10,000
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WLAN	<ul style="list-style-type: none"> Centralized and local forwarding CAPWAP channel encryption Automatic power adjustment Automatic channel selection Dynamic bandwidth limitation Load balancing 5GHz priority 										
Wi-Fi security	<ul style="list-style-type: none"> ACL Portal authentication (based on SMS, APP, and username/password authentications, one-click authentication, and more) 802.1x authentication User blacklist and whitelist SSID-based Portal pages pushing Multiple Portal templates User behavior recording Application identification 										
System management	<ul style="list-style-type: none"> Login through console, SSH, or Telnet Configuration based on CLI or Web UI Management and configuration via platform or APP Syslog system monitoring SNMP, Trap License-based capacity (AP quantity) control 										

Note: Specifications are subject to change.

Ordering

Product	Description
CloudOS	<ul style="list-style-type: none"> CloudOS multi-service controllers software package supports AP, terminal, and Wi-Fi service management without an AP License and software CD
CloudOS-Renew-Serv-1Y	<ul style="list-style-type: none"> One year CloudOS renew service for one AP, according to the number of licensed APs to be purchased
License	Description
CloudOS-LIC-AP-10-T	<ul style="list-style-type: none"> Standard Access Point License (10 APs License, 90 days validity) , For Demo only
CloudOS-LIC-AP-1-E	<ul style="list-style-type: none"> Standard Access Point License (1 AP License), only for software AC
CloudOS-LIC-AP-100-E	<ul style="list-style-type: none"> Standard Access Point License (100 APs License), only for software AC
CloudOS-LIC-AP-200-E	<ul style="list-style-type: none"> Standard Access Point License (200 APs License), only for software AC
CloudOS-LIC-AP-500-E	<ul style="list-style-type: none"> Standard Access Point License (500 APs License), only for software AC
CloudOS-LIC-AP-1000-E	<ul style="list-style-type: none"> Standard Access Point License (1000 APs License), only for software AC
CloudOS-LIC-AP-5000-E	<ul style="list-style-type: none"> Standard Access Point License (5000 APs License), only for software AC