ABLOOMY CAM600 Autonomous Controller

CAM600 autonomous controller is ABLOOMY's wireless control access manager for SMB-sized wireless network solutions. It can support up to 16 AP management, and can be deployed on the layer 2 or layer 3 network without needing to change any network architecture and hardware equipment. While meeting the basic wireless access requirements of enterprises, CAM autonomous controllers also have outstanding technologies such as perfect radio frequency optimization management, flexible permission admission control, and intelligent device management functions.

The product provides multiple functions such as AC, access authentication, Portal, CDN, data collection, etc., which can meet the various business needs of SMEs in one machine, optimize the configuration of user network solutions, and save network construction costs.

Features

Intelligent RF Management

Intelligent Channel Switch

There are a large number of possible interference sources in the frequency band of wireless LAN operation, which will seriously affect the normal operation of the AP. Through adaptive channel selection, the channel assigned to each AP is optimized to minimize and avoid adjacent/co-channel interference.

Automatic Power Adjustment

It can automatically adjust the power according to the RF environment, automatically increase or decrease the RF power, realize automatic detection and compensation of the coverage area, and achieve the optimal coverage effect

Load Balancing

- Provide balance based on the number of access users (when the number of users between APs exceeds the set threshold, it can dynamically adjust the even distribution of users between different APs)
- Provide traffic-based load balancing (when the traffic value between APs exceeds the set threshold, it can dynamically adjust the even distribution of users between different APs)
- Provide load balancing based on frequency band (when the users on the AP are concentrated on a single frequency band, they can dynamically adjust the user access to different frequency bands, and priority access is recommended

Support Fast Roaming

CAM series autonomous controllers support fast roaming, and the roaming domain is not restricted by subnets. This excellent roaming feature allows customers to plan wireless networks without much consideration of existing network planning and pay more attention to wireless signal coverage.

Comprehensive Security Protection

Device Connection Security

AP devices are deployed in the open environment of the Internet. The access of fake APs and the kidnapping of own APs are two major security issues. ABLOOMY draw on e-commerce security solutions and uses TLS network security protocols. A three-party authentication system has been established between AP and CAM to solve the problem of device identity authentication on the Internet.

User Access Security

ABLOOMY supports multiple security access methods, supports access control of users' black and white lists, 802.1X security authentication, real-name online authentication based on SMS, and intelligently identifies user identity characteristics based on the way users access

the network, allowing users to enjoy customization strategy and service.

Illegal Device Detection

Provide wireless intrusion detection WIPS function, by continuously monitoring the wireless space, looking for illegal access points and temporary networks, for the detected Rouge AP and Station, provide warnings and attacks for illegal devices/users

Differentiated Service Experience

Mobile Office

With the advent of mobile internet, enterprises are facing more and more urgent needs for mobile office. ABLOOMY can provide remote office services. No matter employees are travel, work from home or anywhere, they can extend the enterprise VPN network and enjoy the same application environment in the company.

Differentiated service based on physical location

The CAM has built-in AP location information identification, which can set different network services based on physical location information. For example, the AP at the front desk provides visitors with Internet access, while restricting access to the Internet and designated internal resources only. Employees in office locations implementing 802.1x to access the company network for the company's internal services.

Right management based on user roles

User-based access control is a major feature of CAM series products, which can define role access/access permissions (including time, location, role, QOS permissions), and can define one or more roles for users, each role can have different access rights, control users' upstream and downstream bandwidth, and provide users with differentiated management services.

- Role: can define roles for local authentication users and bind with access policies through binding MAC, IP, ESSID, VSLAN and roles
- Access: The access strategy can define the specific location and time information of the access strategy, and bind with the role; the location can define the specific AP location and VSLAN; the time accuracy can be to the second;
- Permissions: Permission policies can define access policies, control users' online behavior, and bind with roles and access policies; access policies and access rules can customize protocols and ports to control online behaviors.

Application control based on time

Time-based service control can be set, such as setting to turn off the LED lights of the device after 9 pm, or the AP to turn to offline mode during holidays, restart the device at a fixed time every month, and turn off the probe scan of the device during peak traffic, starting the automatic device upgrade service at 2 am, etc.

Consolidate Basic Function

AP Plug N Play

After the AP is connected to the network, as long as the route to the CAM device is reachable, it can automatically register and receive the wireless rules and policies formulated on the CAM device without manual configuration and maintenance by professional technicians each time.

Flexible data forwarding

- User traffic can be decided by the AP whether to be forwarded locally by the AP or aggregated to the CAM for centralized forwarding;
- Under same AP, one SSID data traffic is forwarded locally, and one or more SSID data traffic is forwarded centrally through the CAM;

Alarm function

Rich early warning service, providing interface status alarm, device offline alarm, illegal AP/client alarm, high CPU, memory, hard disk usage alarm, DHCP address exhaust alarm, license expire alarm, etc. The scope and service can be customized. The alarm information is notified to the network administrator via SMS and email to prevent accidents.

Automated O&M Services

The products are all based on strategic implementation of network operations, such as strategic O&M services based on AP equipment, which can realize automatic equipment upgrade, automatic fault detection, automatic switching of AP working mode, automatic information collection, automatic control of LED lights, automatic restart of equipment and other services. Ensure the reliability of services when the business is busy, and realize network upgrades or fault detection when the network is idle. All of this without human real-time

participation, and can be completed automatically, simplifying the difficulty of network O&M.

Realized Manageable Network

Support probe function

ABLOOMY AP supports the probe function, which can set the acquisition frequency of the probe according to the application scenario, and at the same time supports the AP to switch to the pure probe mode. As long as the Wi-Fi client opens the Wi-Fi connection, the AP can obtain the mobile terminal's MAC, associated third-party AP, signal strength and other information. At the same time, the collected information can be submitted to ABLOOMY's offline data collection server (VDS), combined with VDS to achieve user positioning, historical track and other services.

Transform existing network to achieve unified authentication

- Integrated wired and wireless management: ABLOOMY can manage the existing wired network, and the existing user traffic needs to be passing through the CAM, so as to realize the integrated management and authentication of wired and wireless networks;
- Compatible with existing wireless networks: For deployed wireless networks, ABLOOMY's unique third-party wireless management function can be used to manage equipment from mainstream third-party AP manufacturers.

Hardware Specification

Hardware Specification	
Number of manageable APs	≤16 个
Max manageable users	1000 个
Memory	2GB
Flash	8GB
Dimension	L118.0 x W118.0 x H28.0mm
Weight	150g
Power Consumption	≤12W
Physical Ports	Power: DC12V
	Console 1: RJ45 serial port
	WAN x 1: 10/100M port
	LAN x 1: 10/100M port
	Factory reset
	USB x 1: USB port
	TFx 1: TF 卡 (8G、16G、32G、64G various storage capacity options)
Working Environment	Operating Temperature：0℃～50℃ Storage Temperature：-10℃~70℃
	Operating Humidity：10%~90% (Non-condensing) Storage Humidity：5%~95% (Non-condensing)

Software Specification

Protocol	802.11a/b/g/n/ac, 802.1P, 802.11e, 802.11k, 802.11 ARP、DHCP、TFTP、OSPF、STP
WLAN Topology	AC Discovery Support broadcast discovery CAM Support DHCP option 43 discovery CAM Support manual assignment CAM

	Support DNS discovery Deployment Support AP/AC layer 2 or 3 network topology • Support cloud AC network topology Redundancy • Support 1+1 hot backup mode • Support n+1 backup mode
RF Management	Channel and power configuration • Supports automatic and manual power adjustment • Supports automatic and manual channel adjustment • Supports automatic and manual rate adjustment Load balancing • Support traffic-based load balancing • Support user-based load balancing • Support RF-based load balancing
Data Forwarding & Authentication	Support local forwarding Support central forwarding Support local NAT forwarding mode (user obtains address from AP) Support CAPWAP tunnel encryption between AP and AC Support centralized authentication, local forwarding mode;
User Management	• Support User Blacklist • Support limit of user access • Support kicking out user access • Support user isolation • Support user group access isolation (VPN isolation)
Authentication and Encryption	Encryption type • Support OPEN/WPA-PSK/WPA2-PSK combine encryption • Support WEP/TKIP/AES encryption User Authentication • Support MAC, portal, 802.1x authentication • Support Mac and portal combine authentication • Support SMS authentication • Support billing based on duration and flow rate (built-in UMS billing system)
	• Support access and role assignment based on terminal MAC address;

Multi-dimensional user access and role assignment	• Support user-based permission allocation, and can set different access permissions for each specific user; • Supports permission allocation based on time period, different access rights in different time periods, flexible control of employees' access rights during working hours; support for setting different access rights based on user groups and temporary visitor groups; • You can set different network permissions for user-free authentication, SMS visitors, and temporary visitors based on the type of visitors;
QOS	• Support on different lines to ensure or limit traffic according to different applications, users and user groups; • Upstream and downstream traffic management based on single user, flow control granularity down to 1Kbps; • Support time-based traffic management and control, assign different traffic strategies in different time periods, and flexibly allocate bandwidth resources; • Support traffic management based on terminal access location different traffic strategies are assigned to different access locations; • WMM, 802.1p • Support priority scheduling based on business application types (voice, video, data)
Device Maintain	• Support AC firmware remote automatic or manual upgrade; • Support batch upgrade based on AP hardware model, firmware version, location; • Support upgrade based on AP specific time;
Log	• Support device log, operation log, user log, probe log, alarm log classification view and data export; • Support external log server for data export;
Network Management	• Support standard and open MIB, such as MIB II, 802.11 MIB; • Support local network management in serial mode; • Support SSH management; • Support Https management