CAM1000 Wireless Access Controller

Abloomy's WiFi solution supports traditional on-premises WLAN architectures. In this scenario, CAM plays the role of a traditional wireless controller. It not only provides all the functions of a traditional WiFi controller such as network management and optimization, NAC and other wireless security functions but also provides portal, authentication, and wifi marketing functions. With a firewall, NAT, VPN and routing functionalities, CAM also works as a network gateway to simultaneously manage access control for both wired and wireless networks.

Compared to normal wireless controllers, CAM enables plug-and-play AP setup with its built-in zero-touch provisioning function. This simplifies deployment and setup of a large-scale WLAN like a campus network. Also, unlike traditional wireless controllers, CAM is a multi-tenant device, which makes it possible to set up multiple isolated virtual WiFi networks used by different customers in a shared wireless coverage environment, like a multi-tenant business building covered by an ISP's WiFi service. Deep visibility and self-optimization features guarantee network performance and stability, while role-based network access control and anti-attack functions ensure security. When used in retail markets, CAM also offers abundant WiFi marketing tools.

Features

Plug-and-Play

Both Abloomy APs and VSMs support zero-touch provisioning. When an AP or VSM registers in the cloud platform, the platform will push predefined configurations to the device, avoiding on-site work.

Scalable Network Architecture

Abloomy adapts a distributed WiFi network architecture based on our Smart-Edge technology, creating a flexible, modularized management system for both network functions and applications. The distributed VSM layer can be scaled seamlessly and automatically creates N+N redundancy backups.

RF Channel Optimization

Interference in WLAN radio affects AP's normal operation. The ABLOOMY platform optimizes AP's radio allocation through adaptive channel selection, avoiding interference from neighboring APs.

Seamless Roaming

The Abloomy centralized architecture easily allows roaming. The CSP series controller supports roaming across subnets without re-authentication.

Multiple Authentication Methods

Multiple authentication methods are included, such as SMS, WeChat, 802.1X, username and password, non-authentication, automatic authentication and more. After the first SMS/WeChat authentication, subsequent access does not require authentication, which not only improves the user experience, but also saves on SMS expenses.

URL Access Control

The VSM can capture and filter browsed URL information based on firewall policies from the CSP.

Role Based Access Control

Role based access control is the main advantage of ABLOOMY products. The platform can define different levels of access roles and authorize differentiated services for the users.

Flexible Data Forwarding

Based on the policies, the data forwarding can be done either locally by AP locally or centrally by VSM.

Ads and Content Operation

Abundant portal templates are available for customers to customize their ad page. The customer can use single page or multi-page portals to present more information.

By caching content locally, customers can save bandwidth by embedding content URL links in the portal page and enabling their Wi-Fi users to locally access videos, articles, and apps, creating a much better user experience. Meanwhile, the backend system will

record statistics on viewed and downloaded content to better understand user preferences and fine-tune marketing strategies.

Social Media Operation

Social media integration improves the interactions and relationships between businesses and customers, building up long-term marketing strategies.

Hardware Specifications

Model	CAM1000
Interfaces	4 * 10/100/1000 Base-T Ethernet ports 1 * console, serial interface , RJ45 2 * USB ports
APs Limit	128
AP License Options	16, 32, 64,128
Operating Temperature	0 ℃~40 ℃
Storage Temperature	-20 ℃~80 ℃
Humidity	10% ~ 90% non-condensing
Power Supply	100-240 VAC
Dimensions	1 U

Software Specifications

AC Discovery	Broadcast discovery			Customer's APP authentication
	DHCP option 43 discovery			UMS (Authentication & Accounting & Authorization)
	DNS discovery			Support multiple authentications concurrently
	Configure manually		Security	Hidden SSID, Rogue AP detection
RF	Support AP and probe mode			Enable user isolation
	Support manual / automatic channel selection			URL capture
	Configure RF TX/RX manually			Black / white list
	Configure channel size 20M/40M/80M manually			MAC and IP address binding
	Support manual /auto TX power configuration			DoS attack protection
Data Forwarding Mode	Central forwarding mode		Access Management	Automatically disconnect idle traffic user
	Distributed NAT forwarding mode			Role-based access control
	Local transparent forwarding mode			Time-based access control
	Support each SSID with Local forwarding VLAN			Location-based access control
	Concurrent local and central forwarding mode			Combine Role/Time/Location based access control
Roaming	L2 roaming between APs		Load Balance	Load balance based on user
Network Protocol	Policy routing			Load balance based on traffic
	ARP		Firewall	Stateful Firewall
	802.1P/Q		NAT	SNAT
	DHCP Server			DNAT
	IGMP Snooping			DPAT
	OSPF Dynamic routing			Service types can be configurable
	DHCP Relay		Content Platform	APP distributed as a content
	DHCP Relay to multiple servers			Ads can be placed in the content page
Encryption	Open system, and pre-share PSK			Support localized content storage
	WEP, WPA2 Encryption			Support remote content redirection
	TKIP Encryption			Historical record of content downloads
	Combine Encryptions		Ads Module	Multiple built-in Portal templates
Authentication	Radius Server			Ads browsing PV/UV statistics
	LDAP			Historical Ads reports
	Built-in role-based access control		Logs and Alerts	Local logs, external log server
	User's MAC address based authentication			Device state alerts, email alerts
	802.1X authentication		System Management	WEB, SSH, Console
	Social media authentication (Facebook, Google+, etc.)			
	SMS authentication			