

## EAC680 SMB Smart Wireless Access Controller

### Product Overview

DCN EAC680 is a smart access controller (AC) developed for SMB wireless networks and large enterprise branches. It can combine with DCN smart EAP series wireless access points (APs) to form a centrally managed wireless LAN (WLAN) solution.

The EAC680 supports 24\*10/100/1000MBase-T and 4\*10GbE SFP+) for uplink, it can manage up to 520 smart wireless APs. The device provides strong WLAN access control through systems such as precise user control and management, complete RF management and security mechanism, powerful QoS, seamless roaming, and authentication based on existing networks.

EAC680 has a complete L3 core switch function and powerful forwarding performance. It can be used as a wireless controller and a L3 core switch at the same time. It is not only the brain of the wireless network but also the data exchange center of the entire wireless network, truly achieving wired and wireless integration.



Manage APs 520



Friendly WEB GUI



Concurrent users 32K+



SMB Network



Switch + access controller



AC N+M redundancy

## Key Features and Highlights

### High-Performance and High-Reliability Wireless Network

#### High-density access port, intelligent integrated control, and forwarding architecture

EAC680 adopts the wireless forwarding technology based on an ASIC chip. All wireless traffic and wired traffic are unified forwarded in the same chip; The wired and wireless intelligent integrated control and forwarding architecture integrates the functions of the wireless controller and routing switch, and deploys the wireless controller direct connection networking mode, which greatly reduces the user's investment cost, improves the performance of the network, and facilitates network management.

#### Automatic emergency mechanism of APs

This mechanism enables an AP to intelligently detect links. When detecting that the wireless AC is down, the AP quickly switches its operating mode so that it may continue to forward data while enabling new users to access the network. This mechanism attains high availability in the entire wireless network and helps wireless users to be always online.

### Wireless Network of Intelligent Control and Automatic Perception

#### Intelligent RF management

The EAC680 provides an automatic power and channel adjustment function. It employs particular RF detection and management algorithms to attain a better RF coverage effect. When the signals of an AP are interfered with by strong external signals, the AP may

automatically switch to an appropriate operating channel under the control of the AC to avoid such interference, thereby guaranteeing wireless network communications.

#### Intelligent control of terminals based on airtime fair

The intelligent control of terminals based on airtime fairness greatly improves the performance of both the client and the entire network. It enables all clients with high data transmission rates to attain strikingly higher performance while low-rate clients are almost not affected at all. The performance will be even higher on an open wireless network. Once high-rate clients finish data transmission, fewer clients will be transmitting data on the wireless network. In this case, there will be less contention and retry on the network, thereby greatly improving overall AP performance.

### Easy-to-Manage Wireless Network

#### AP plug-and-play

When used with the EAC680, DCN smart APs support plug-and-play, and zero configuration. The wireless AC undertakes all the management, control, and configuration of the APs. Network administrators do not need to separately manage or maintain a huge number of wireless APs. All actions, such as configuration, firmware upgrade, and security policy updating, are performed uniformly under the control of the wireless AC.

## Product Specifications

### Hardware Specifications

Item	EAC680
Service port	24*10/100/1000MBase-T +4*10GbE SFP+ ports
Management port	One console port (RJ-45), one USB 2.0, one 10/100/1000M Base-T out of band management port
Power supply	AC 100 V to 240 V, 50 Hz to 60 Hz
Maximum power consumption	25W
Working/Storage temperature	0°C to +50°C -40°C to +70°C
Working/Storage RH	5% to 90% (non-condensing)
Dimensions (W x D x H) (mm)	440 x 240 x 44

### Software Specifications

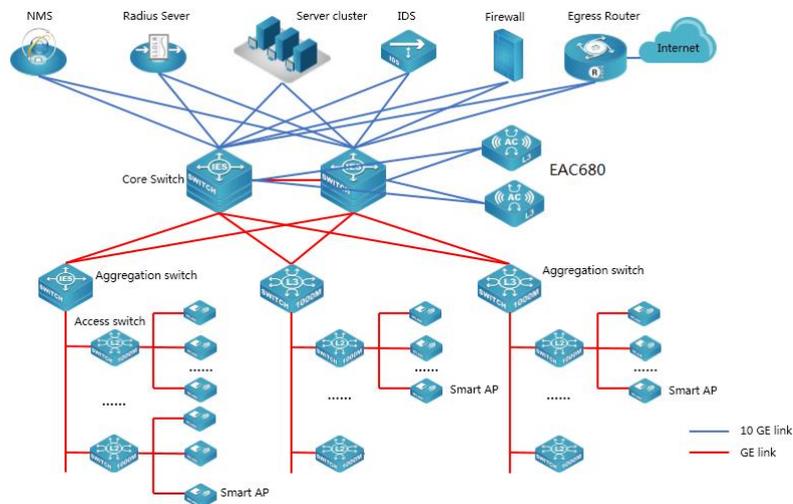
Item	EAC680
The base number of	520

<b>manageable APs</b>	
<b>Maximum number of manageable APs</b>	520
<b>Maximum number of concurrent wireless users</b>	10k
<b>VLANs</b>	4K
<b>ARP table</b>	8K
<b>Switching time during roaming</b>	< 30 ms
<b>L2 protocols and standards</b>	IEEE802.3 (10Base-T), IEEE802.3u (100Base-TX), IEEE802.3ab (1000Base-T), IEEE802.1Q (VLAN), IEEE802.1p (COS), IEEE802.1x (Port Control) IGMP Snooping, MLD Snooping GVRP, PVLAN
<b>L3 protocols and standards</b>	Static Routing RIPv1/v2, OSPF, VRRP, IGMP v1/v2/v3 ARP, ARP Proxy PIM-SM, PIM-DM, PIM-SSM
<b>Wireless protocols and standards</b>	802.11, 802.11a, 802.11b, 802.11g, 802.11n, 802.11d, 802.11h, 802.11i, 802.11e, 802.11k
<b>CAPWAP protocol</b>	Supports L2/L3 network topology between an AP and an AC.
	Enables an AP to automatically discover an accessible AC.
	Enables an AP to automatically upgrade its software version from an AC.
	Enables an AP to automatically download configurations from an AC.
<b>RF management</b>	Setting country codes
	Manually/automatically setting the transmit power
	Manually/automatically setting the working channel
	Automatically adjusting the transmission rate
	Blind area detection and repair
	RF environment scanning, which enables a working AP to scan the surrounding RF environment
	RF interference detection and avoidance
	11n-preferred RF policy
	SSID hiding
	20 MHz and 40 MHz channel bandwidth configuration
	Airtime protection in hybrid access of 11bg and 11n terminals
	Terminal-based airtime fairness scheduling
	Terminal locating (A terminal locating algorithm can be embedded in the AC)
	Spectral navigation (5 GHz preferred)
	11n only
	SSID-based or Radio-based limit on the number of users
	User online detection
Automatic aging of traffic-free users	
Prohibiting the access of clients with weak signals	
Remote probe analysis	
<b>Security</b>	64/128 WEP, dynamic WEP, TKIP, CCMP, and SMS encryption
	802.11i security authentication and two modes (Enterprise and Personal) of 802.1x and PSK
	WAPI encryption and authentication
	LDAP authentication
	MAC address authentication
	Portal authentication, including built-in portal, external portal, and custom portal authentication modes
	PEAP user authentication
	Forwarding security control, such as frame filtering, white list, static blacklist, and dynamic blacklist
User isolation	

	Periodic Radio/SSID enabling and disabling
	Access control of free resources
	Secure admission control of wireless terminals
	Access control of various data packets such as MAC, IPv4, and IPv6 packets
	Secure access control of APs, such as MAC authentication, password authentication, or digital certificate authentication between an AP and an AC
	Radius Client
	Backup authentication server
	Wireless SAVI
	User access control based on AP locations
	Wireless intrusion detection system (WIDS) and wireless intrusion prevention system (WIPS)
	Protection against flooding attacks
	Protection against spoofing attacks
<b>Forwarding</b>	IPv6 access and forwarding; constructing IPv6 WLAN access service on an IPv4 network; providing IPv4 WLAN access service on an IPv6 network; and constructing private IPv6 WLAN network service on an IPv6 network
	Fast roaming between APs served by the same AC
	IPv4 and IPv6 multicast forwarding
	WDS AP
<b>QoS</b>	802.11e (WMM); and 4-level priority queues, ensuring that applications sensitive to the real-time effect, such as voice and video services, are transmitted first
	Ethernet port 802.1P identification and marking
	Mapping from wireless priorities to wired priorities
	Mapping of different SSIDs/VLANs to different QoS policies
	Mapping of data streams that match with different packet fields to different QoS policies
	Access control of MAC, IPv4, and IPv6 data packets
	Load balancing based on the number of users
	Load balancing based on user traffic
	Load balancing based on frequency bands
	Bandwidth limit based on APs
	Bandwidth limit based on SSIDs
	Bandwidth limit based on terminals
	Bandwidth limit based on specific data streams
Power saving mode	
Multicast-to-unicast mechanism	
Automatic emergency mechanism of APs	
Intelligent identification of terminals	
<b>Management</b>	Web management
	Configuration through a console port
	SNMP v1/v2c/v3
	Both local and remote maintenance
	Local logs, Syslog, and log file export
	Alarm
	Fault detection
	Statistics
	Login through Telnet
	Login through SSH
	Dual-image (dual-OS) backup
	Hardware watchdog
	AC cluster management; automatic information synchronization between ACs in a cluster, and automatic or manual push of configuration information
	SSID-based user permission management mechanism

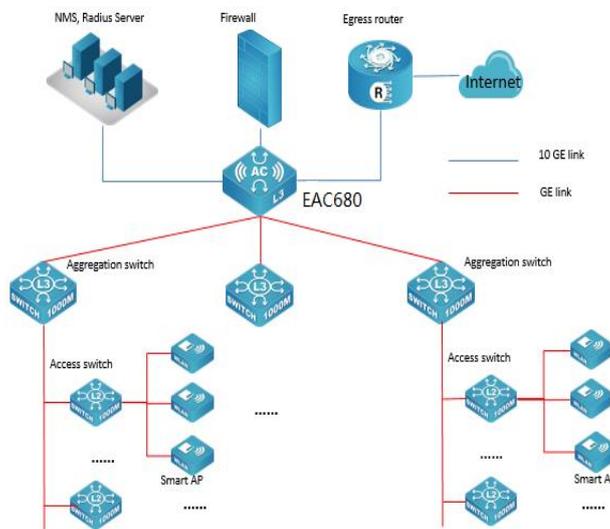
## Typical Application

### Bypass Deployment Scenario



### Trunk Deployment Scenario

Here the EAC680 is used as both the core switch and access controller.



## Order Information

Product Model	Description
EAC680	DCN SMB Intelligent Access Controller (default with 520 units AP license, support controlling max. 520 AP), 24*10/100/1000MBase-T +4*10GbE SFP+), could manage EAP series access point