# ImCloud 8860

Intelligent Cloud Management Platform

Product Overview

DCN ImCloud(DCN Intelligent Management Cloud) 8860 is based on cloud technology and provides a new model of wireless network access control and management. With the Cloud Management, it makes the complex network management into a simple, intelligent and visual practice, and improves the users'wireless access and management experience.

ImCloud 8860 is suitable for chain hotels, education organizations, shopping mall and enterprises with multiple branch offices, it can manage up to 10K wireless access points (APs).
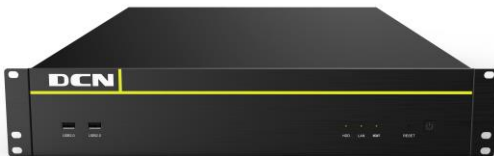
Manage 10K APs

All-in-one: authentication, managements
And access control

Concurrent users 300K

Distributed multi-level management

High performance CPU
And friendly GUI

AC 1+1 redundancy

Key Features and Highlights

Multi-service, High Performance and On-demand Scalability

Integrating AC, authentication, and network management

ImCloud 8860 is an all-in-one cloud management platform that integrates authentication, wireless control, and many kinds of management like network management, equipment management, organization management, user account management.

The high data processing capability

Based on the high-efficient dual-core operating system ImCloud 8860 is capable of managing up to 10,000 APs, 10000 concurrent users, and over 500000 registered users, able to satisfy the needs of single-user multi-concurrent terminals under the application environment of large user volume and high concurrency in Metropolitan Area Network.

Linear scalability of function

The function module can be scaled linearly per man-

ImCloud Management Infrastructure
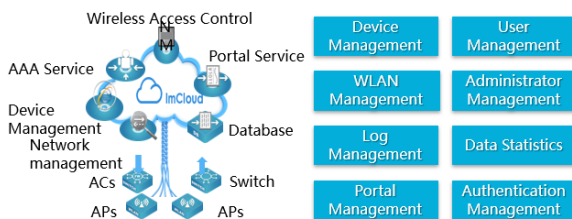
ager's demands and may vary with the management plan of managers at different levels.

Friendly Man-machine Interaction

Intuitive interface operation

With an intuitive web interface design, ImCloud 8860 can assist an administrator in user management, organization structure management, equipment management, administrator management, authentication setting, and network configuration.

Windows-style design

The operation interface is a Windows-style one which is easy for operating. With densely packed functions, it is easy to understand and operate, facilitating users with fast installation and convenient use.

User-friendly Management

AP plus and play

Managed by ImCloud 8860, DCN smart APs support plug-and-play and zero configuration. ImCloud 8860 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.

Distributed management

ImCloud 8860 is capable of providing hierarchical distributed management based on organization structure.

The headquarters administrator can implement centralized monitoring for network equipment, wireless users, and network state of every branch, the configuration of overall wireless network, upgrading of overall equipment, unified authentication of user identity. The branch administrator can manage the equipment of the corresponding branch under the authorization of the headquarters administrator.

Flexible Built-in User Authentication

Multiple Flexible and Safe Authentication Modes

It supports Portal, SMS, We Chat, QR Code, Pre-shared Key, MAC, and other authentication modes.

Terminal Intelligent Identification

ImCloud 8860 can identify the OS of a terminal, such as Apple iOS, Android, and windows, the size of a terminal, and the type of a terminal, such as mobile phone, laptop, and PC. Basing on these identifications, it can implement dynamic policies for different types of terminal and present a corresponding-sized authentication page.

Built-in Authentication Server, easily realizing WEB Authentication

ImCloud 8860 has the built-in portal server and user accounts，so it doesn't need an external portal server and radius server to do the WEB authentication, resulting in both simplified network deployment and reduced network construction cost.

PEAP user authentication

Protected Extensible Authentication Protocol (PEAP) authentication can provide a better user experience. The user needs to manually enter the username and passwords only during the first-time certification, the second time, and the subsequent certifications are performed automatically.

Flexible Visitor Authentication Management

The perfect built-in visitor management system has fully taken the industry demand of users into account and customized rich, convenient, and safe visitor

management mechanisms accordingly:

- ➢ Authentication of Authorized QR Code for visitors.
- ➢ Authentication of Meeting QR Code for the meeting participants
- ➢ SMS Authentication for the mobile population to open a temporary account

Intelligent Control of Wireless Network
Intelligent RF Management
ImCloud 8860 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. It also supports the black hole compensation mechanism. which adjust the AP power to cover the blind area resulted by the crashing of some APs

Intelligent control of terminals based on airtime fairness
This function makes sure that both the low-rate and the high-rate clients get relatively the same accessing time, which can avoid the low-rate clients to affect the AP overall performance by taking up too much accessing time.

Product Specifications

Hardware Specifications

Item		ImCloud 8860
Physical Parameters	**Service Port**	4 gigabit Ethernet ports
	Management Port	1 Console port (RJ-45)
		2 USB 2.0 ports + 2 USB 3.0
	Dimension(L*W*H)	670*444*88mm
	Hardware Disk	256G SSD and 1T HDD
	Memory	DDR4 64G
Power Source Parameter	**Power Input**	1+1 modular AC power
Environment	**Operating Temperature**	0℃~45℃
	Storage Temperature	-40℃~70℃
	Operating Humidity	5%~90% no condensation

Software Specifications

Item		ImCloud 8860
Basic Performance	**Maximum Manageable AP Number (set)**	10K
	Basic Manageable AP Number (set)	32
	AP License step size	16, 32, 128
	Maximum On-line Concurrent User Number	300K
	Built-in Local Authentication Account	800K
	VLAN number	4096

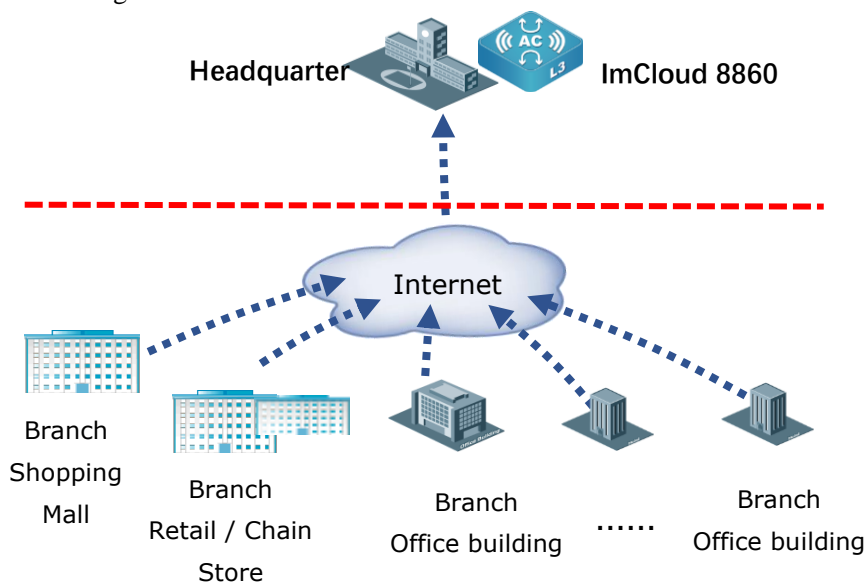|	SSID number	500
Wireless Basic	**Wireless Protocol Speci-fication**	802.11， 802.11a， 802.11b，802.11g, 802.11n，802.11ac, 802.11h, 802.11ax
	Wireless Management Protocol	Support MAN, LAN, and Internet group network with AP
	CAPWAP Protocol	AP can discover and access automatically
		AP can update software version automatically
		AP can download configuration automatically
	User Roaming Switch Time	Less than30ms
	High Reliability	Support 1+1 quick backup
	RF Management	Support country code setting
		Support manual/auto setting of transmitted power
		Support manual/auto setting of a working channel
		Support auto adjustment of transmission rate
		Support RF environment scanning, AP scanning surrounding RF environment information upon working
		Support wireless RF interference monitoring and evading
		Support 11n preferred RF strategy
		Support 20MHz and 40MHz channel bandwidth configuration
		Support air interface time protection under the circumstance of 11abg, 11n, and 11ac terminal hybrid access
		Fair scheduling of terminal-based air interface time
		Frequency spectrum navigation (5G preferred)
		User online detection
		Auto-aging with no user traffic
		Inhibit client access to weak signal
		Mandatory roaming of weak signal in a client terminal
Access Authentica-tion	**Account Authentication**	Support user-and password-based portal authentication
	We chat Authentication	Support WeChat connect Wi-Fi authentication mode
	Authorization QR Code Authentication	After connecting to the wireless network, a QR code page will automatically appear on the terminal. The visitor can have access to the internet by scanning the QR code with his mobile phone;
	Conference QR Code Authentication	Before a conference is held, a QR code will be generated accord-ing to the type and number of visitors and the time of the visit. Visitors can use internet service by scanning the QR code
	One-click Authentication	Users can have access to the internet by clicking the authentica-tion page without entering accounts
	MAC Authentication	mac address authentication based on different wireless networks
	SMS Authentication	After entering his mobile phone number, the visitor receives an SMS with a password. Then, he needs to enter the password to implement authentication
	PEAP Authentication	When implementing authentication for the first time, the visitor needs to enter his username and password. When reconnecting the internet within the preset time limit, the visitor does not need to enter his username and password for authentication.

Typical Application

Bypass Deployment Scenario

Here ImCloud 8860 is deployed in bypass mode. It works as an authentication server, network management system, and access controller. The two ImCloud 8860 can provide 1+1 redundancy.
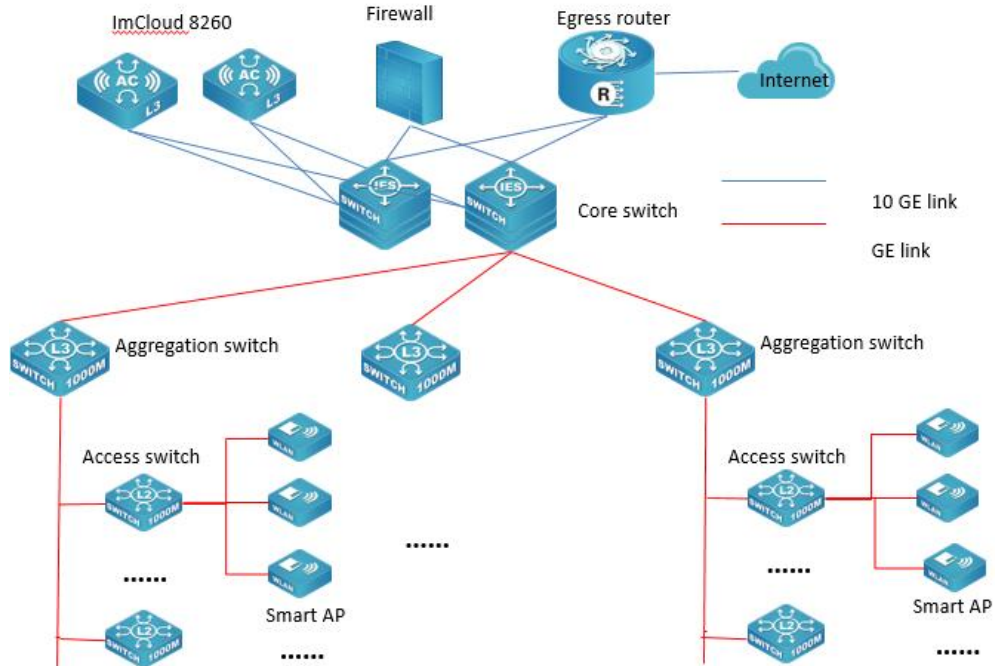
Multi-branch Organization Scenario

Here is for Multi-branch organization deployment. ImCloud is installed in headquarter and manages all the branch networks through the internet.

Order Information

Product Model	Description	Remarks
ImCloud 8860	ImCloud Intelligent Cloud Management Platform is designed for multi-branch organizations, general education metropolitan area networks and companies in lack of IT management, co-operate with DCN intelligent wireless APs, switches, gateways and other network equipment, to provide users with deployable, maintainable and expandable network. 2U device, provide 4* 10/100/1000Base-T ports,4 USB ports ;Integrated 256G SSD and 1T HDD,64G DDR4 memory, default with two power.	Mandatory
DCWS-L16	Upgrade license of the DCN wired/wireless integrated smart AC (for upgrading 16 APs, a minimum number of upgrade step is 16 APs)	Optional
DCWS-L32	Specialized upgrading license of DCN wired-wireless integrated intelligent controller (including 32-set AP upgrading license)	Optional
DCWS-L128	Specialized upgrading license of DCN wired-wireless integrated intelligent controller (including 128-set AP upgrading license)	Optional