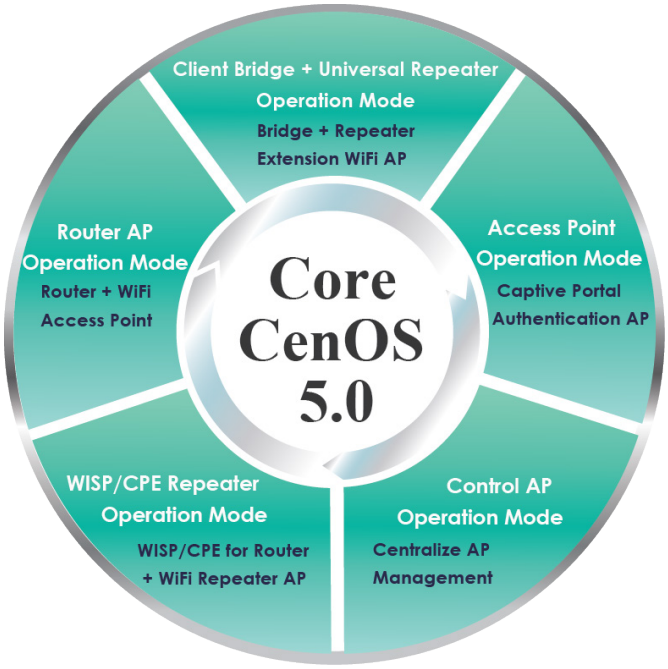
CenOS 5.0 Software Core

Supported by Cerio 11ac & 11n wireless Access Points and Router Access Points

CenOS 5.0 Demo (CLICK HERE)

Introduction



(**Notice**: Not all models support Router Mode)

CenOS 5.0 is a versatile software solution that supports the following 5 operation modes:

- **Access Point Mode** (includes Captive Portal Authentication and AP with WDS Mode)
- **Control Access Point Mode** (Centralized Access Point Management)
- **Router Access Point Mode**
- **Client Bridge + Repeater Mode**
- **WISP / CPE Repeater + Access Point Mode**.

This versatile and feature packed software allows our wireless devices to handle any challenges and network requirements faced by our customers, providing an all-encompassing wireless solution for all network environments and architectures.

CenOS 5.0 is compatible with all Cerio wireless access points with the exemption of a few models. Devices that are currently operating on legacy software cores can be upgraded to CenOS 5.0 by downloading the CenOS 5.0 firmware from the Cerio website product page.

Highlight features

- Supports five different operation modes
- Versatile authentication supports **Guest Login**, **Local Account Users**, **OAuth2.0** for **Facebook** and **Google+ Login**, and **Built-in RADIUS**
- Control Access Point Mode (CAP) can centrally manage a maximum of
  - **128 AP Devices** (using 11ac Access Point)
  - **16 AP Devices** (using 11n Access Point)
- Customizable Captive Portal authentication platform for convenient client login
- Supports built-in 802.1x RADIUS authentication server account database for small and medium environments **(for 11ac devices only)**
- Each Virtual ESSID supports 10 local built-in local accounts, and supports external RADIUS server
- CAP Mode Group management –maintain a set of setting templates that simplify the task of assigning the same setting to multiple APs
- Each SSID supports 802.1q VLAN Tag standards, supporting up to 4096 group VLAN Tag capability
- QoS (Quality of Service) for bandwidth management and traffic prioritization. Administrators can regulate the maximum Bandwidth Upload/Download speed limit of each network user
- 11ac Access Points support 32 ESSIDs per device (16 ESSID on 2.4Ghz and 16 ESSID on 5Ghz)
- 11n Access Points support 8 ESSIDs per device
- Supports IEEE802.11f IAPP and IEEE802.11r and IEEE802.11k Fast Roaming
- Supports x8 WDS per Radio (2.4Ghz band WDS x8 and 5Ghz band WDSx8) for a total of 16 WDS Links (dual band models only)
- Dual Band devices supports Band steering
- Software UI supports Auto reboot setting function. Software setting allows automatically reboot by Daily/Weekly/Monthly settings

www.cerio.com.tw +(866) 2-8911-6160 issales@cerio.com.tw

CenOS 5.0 Highlight Features

Centralized AP Management through CenOS's CAP Mode

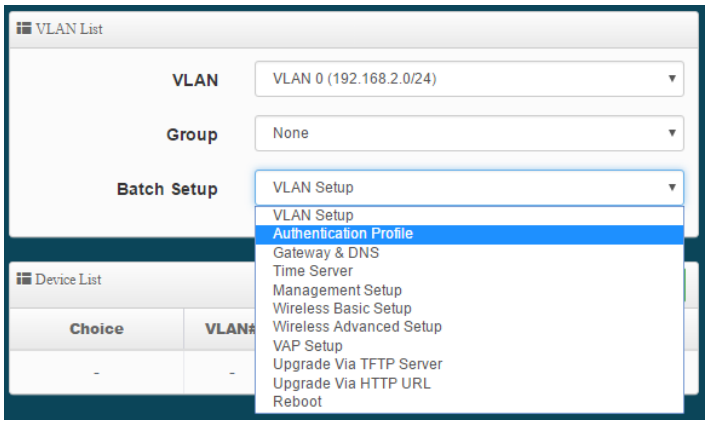
CERIO's CenOS 5.0 supports an integrated AP management function called Control Access Point (CAP) Mode. This effectively converts an access point into an AP controller for centralized management of a wireless network. CenOS 5.0 devices operating in CAP mode can manage and monitor up to **128 devices**

11ac devices can manage up to 128 APs
11n devices can manage up to 16 APs

- AP Group management –maintain a set of setting templates that simplify the task to assign the same setting to multiple APs
- AP-Automatic configuration and provisioning by CAP mode.
- Locally maintained configuration profiles for managed APs.
- Auto discovery Cerio devices for easy AP management
- Centralized firmware Upgrade-Select multiple APs and upgrade their firmware at the same time
- Remote Firmware upgrade by TFTP and HTTP.
- Monitor APs for traffic and system information.
- Track the number of associated clients to the APs.
- Supports Location Map Management.

Conveniently Scan and import discovered access points into the management database

Use Batch Setup to quickly manage settings and operations of up to 128 access points



Monitor information of imported devices in the management database

Captive Portal Authentication through CenOS 5.0's AAP Mode

Service provider can benefit from the flexible web redirection service. This service provides a set of location, browser, and user-specific information to the backend system to enable value added personalized service provided by the WISP. Detailed location information is available via HTTPs/XML interfaces. Web pages can be either stored locally on the OS or remotely on a guest portal server.

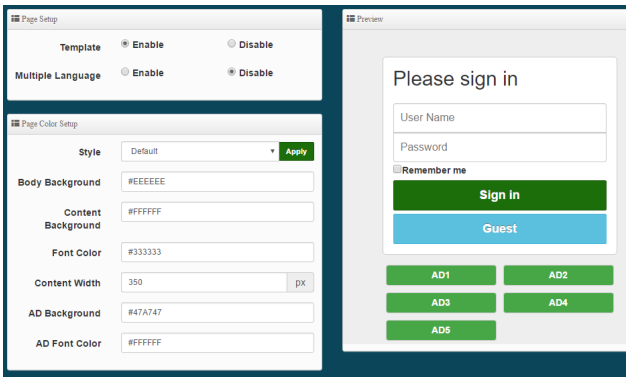
- **Authentication:** single sign-on (SSO) client with authentication integrated into the built-in 802.1x RADIUS authentication server account database (11ac devices only) and local authentication environment through local, RADIUS Server and OAuth2.0
- Support internet bandwidth control
- Supports Guest Login and Guest Client Control
- Allow MAC binding IP address for local users authentication
- Support Web-based for SSL browser-based authentication
- Default support OAuth2.0 through Google an Facebook account authentication

*__11ac__ devices support management of up to **128 APs***
*__11n__ devices support management of up to **16 APs***

Notice: Only 11ac devices support built-in RADIUS authentication

Default Login Page Template

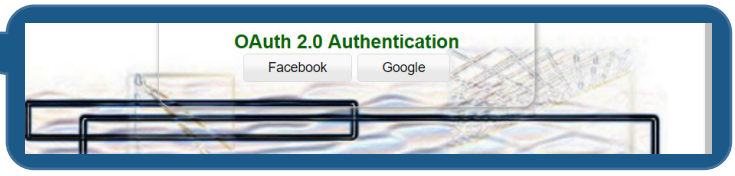
CenOS 5.0 supports a default login page for captive portal authentication. Users can use the default login templates for quick and easy client authentication. This default template supports minor customization features such as color changing and content width. The default login template still supports Walled Garden and our various login methods such as **Guest Login**, **Facebook/Google+ Login**, and **Local Account Login**.



Customized Captive Portal Sample

Customized Login Page

CenOS 5.0's Captive Portal authentication supports a highly customizable login page. By disabling the default login template, administrators gain access to a HTML Source code page. Using this platform, designers can create a customized login page with desired photos, backgrounds, links, and login methods.



CenOS 5.0 Software Features

Wireless Feature

- Transmission power control : Layer 1~9
- HT Tx/Rx Stream selection : 1 or 2
- Supports packet transmission time control through Slot Time and ACK Timeout interval control functions
- Supports Beacon Interval and performance control DTIM Interval for client power efficiency
- Channel Bandwidth setting : 20MHz, 20/40MHz, or 80MHz (11ac)

Authentication/Encryption (Wireless Security)

- SSID Visibility support to display or hide ESSIDs, and VLAN assignment on ESSID
- Supports IEEE802.1x authentication (EAP-MD5 / TLS /TTLs)
- WEP 64/128 bit /EAP-TLS + Dynamic WEP , EAP-TTLS + Dynamic WEP, PEAP/MSPEAP + Dynamic WEP
- Supports security protocol IEEE 802.11i Preauth (PMKSA Cache)
- WPA-PSK/TKIP,WPA-802.1x/TKIP, 802.11i WPA2-PSK/CCMP/AES 128/256bit,WPA2 (802.1x /CCMP / AES 128/256bit), No. of registered RADIUS servers: 1
- Setting for TKIP/CCMP/AES 128/256bit (ASCII 63 & HEX 64)key's refreshing period
- ESSID supports VLAN Tag function, each group can use different virtual ESSID tag for organized traffic
- Access Control list (ACL) by MAC Address
- Client Isolation and Client Connection limitations.

Quality of Service

- Download and Upload traffic control and support Traffic Analysis and Statistics
- Support IEEE802.11e WMM
- DiffServ/TOS , COS, IEEE 802.1Q Tag VLAN priority control

Network / Management

- Provide customizable login and logout Captive portal page by Web Page
- Supports IEEE802.11f IAPP and IEEE802.11r and IEEE802.11k Fast Roaming
- Supports IEEE.802.1Q VLAN Tag
- Supports IEEE802.1d Spanning Tree Protocol
- Router/WISP supports DHCP server function to automatically give IP addresses to end clients
- Router/WISP supports fixed IP for DHCP clients and PPPoE dial-up link to the WAN Wi-Fi network
- Router/WISP supports PPPoE Reconnect, conveniently connecting clients to the DHCP server
- Supports Proxy DNS, Dynamic DNS, and NTP Client
- Web-Based management interface, Intuitive Web Management Interface, Administrative Access : HTTP and HTTPS and support CLI access via Telnet and SSH
- Support remote Firmware Upgrade via Web , Reset to Factory Defaults
- Support SNMP v1/v2c/v3, MIB II. Also supports SNMP Traps to a list of IP addresses
- Supports Ping Watchdog to detect crashes after consecutive failed pings
- Support System log Setup to remote server
- Supports Auto reboot setting function, can schedule Auto Reboot by Hour/Daily/Weekly setting
- Supports wireless IGMP the v1/v2/v3 function, routing multi-cast stream to more efficiently manage media traffic

Status Monitoring

- Status monitoring of on-line users and authentication users
- Real-Time Online Users Traffic Statistic Reporting and users connection status
- Support Syslog for diagnosing and troubleshooting
- User traffic history logging

www.cerio.com.tw +(866) 2-8911-6160 issales@cerio.com.tw