Introduction to Outdoor MAN-MESH Bridge/AP Series

CERIO
Amplify your Wireless Network

CenOS 5.0 Software Core

**eXtreme Power Wave2 4X 2x2**
MAN-MESH Outdoor Bridge/AP

Contents

MAN-MESH Wireless AP Series

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Product Photo	Radios & Data Transfer Rate	Hardware	Operation Mode	Application
OW-500 A1-MESH	**Tri-Band** 2.4GHz (400Mbps) 5GHz Radio 1 (867Mbps) 5GHz Radio 2 (867Mbps)	@Built in 2x2 5GHz 18dBi Directional Panel Antenna @Built-in 2x2 2.4HGz 5dBi High-Gain Omni directional Antenna @2 external 5GHz band N-Type connectors @2 10/100/1000M Ethernet Port @Supports PoE function @Supports Pole / Wall Mounting @IP68 weather-proof @Pressure vent	The system operation mode supports MAN-MESH Mode as the main mode, Access Point Mode (includes Hotspot Portal Authentication, Pure AP Mode, and AP + WDS Mode), Control Access Point Mode (CAP Mode), Client Bridge + Repeater Mode, WISP / CPE Repeater Mode etc	It is the best solution for mission-critical applications such as wireless video surveillance and backbone transmission of network services.
OW-500 A3-MESH	**Tri-Band** 2.4GHz (400Mbps) 5GHz Radio 1 (867Mbps) 5GHz Radio 2 (867Mbps)	@Built-in 2x2 2.4HGz 5dBi High-Gain Omni directional Antenna @4 external 5GHz band N-Type connectors @2 10/100/1000M Ethernet Port @Supports PoE function @Supports Pole / Wall Mounting @IP68 weather-proof @Pressure vent		With external N-Type antenna connectors, you can freely match the antenna to meet the application of wireless backbone network deployment. The high performance and durable design are made to withstand harsh environment deployment.
OW-408 A1-MESH	**Dual-Band** 2.4GHz (400Mbps) 5GHz (867Mbps)	@Built-in 8dBi dual band Wide Coverage 100 degree Directional Antenna @2 10/100/1000M Ethernet Port @Supports PoE function @Supports Pole / Wall Mounting @IP68 weather-proof @Pressure vent		It's the perfect solution for backhaul deployment of Semi-Mobile mesh network, such as data transmission of public transport system (ex. Railways, Ships, Bus, MRT, Gondola, etc.)

MAN-MESH Intelligent Core Software Mode

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Cerio MAN-MESH for Backbone Network Topology
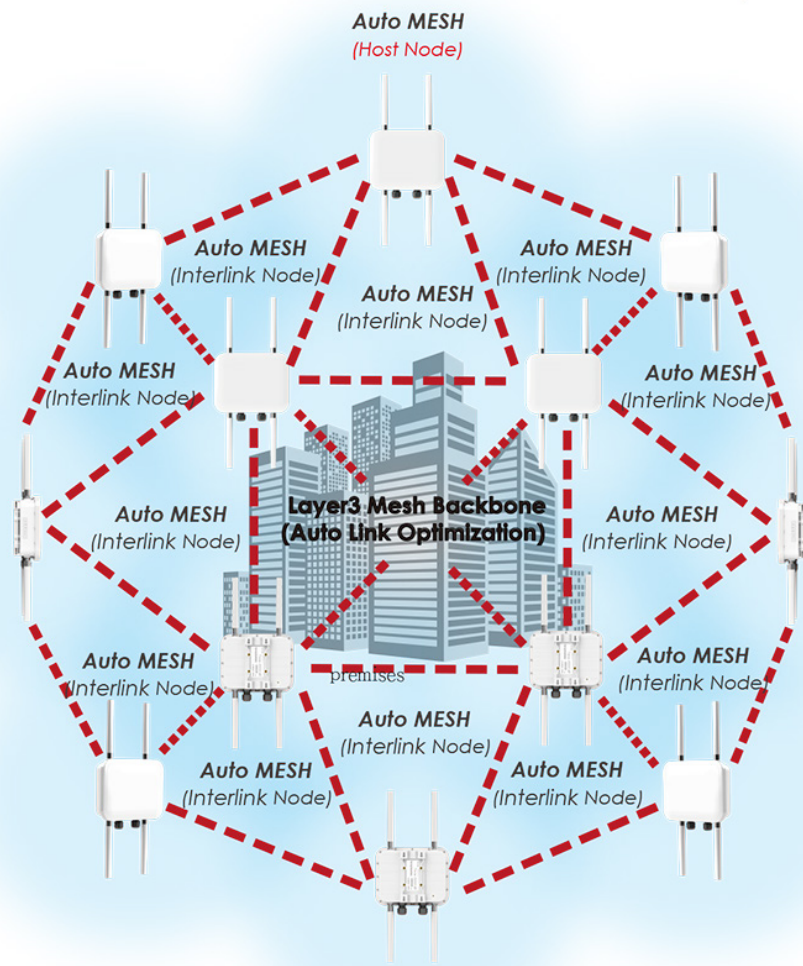
The CERIO MAN MESH Intelligent Core Software Mode provides Layer3 Mesh Backbone Auto Link Optimization, it's using simpler and smartest way to improve the connection quality of the wireless network which let a large number of users in the vast space can enjoy a stable quality wireless network. In addition, each node in the mesh wireless network system can be an independent, providing fast connection and a more stable wireless network. With Intelligent WiFi Mesh Topology, the wireless node will communicate with each other and can be set automatically, which greatly reduces the complicate setting procedure. The MAN-MESH Layer3 Mesh Backbone Auto Link Optimization also provides, when one of the wireless nodes fails or disconnected, the other wireless node in the mesh network can communicate with each other and recover the network connection automatically. **Which is an excellent solution for infrastructure, surveillance, IOT and in-train backhaul. And for emergencies, rapidly deployable and robust communications between each member when emergencies are involved in difficult operations inside buildings, towers, hard-hit disaster areas or surrounded in forest fires.**

MAN-MESH Core Software Mode Main Function

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Auto-Configuring Mesh Network

The Layer3 Mesh Backbone Auto Link Optimization which provides user friendly and simpler setting configuration. It can extend the wireless network to areas that are difficult or expensive to connect via Ethernet cabling. CERIO MAN-MESH provides Intelligent WiFi Mesh technology, Meshed APs self-configure and establish a high-performance, robust, and resilient network automatically, without any need for manual intervention or provisioning. Provide a full coverage wireless network without dead ends, no matter where you are, you can automatically and seamlessly connect to the optimal wireless signal at any time.

Self-Healing Networking with Per-Flow Optimization

This technology can prevent network paralysis from occurring. Each node in the WiFi Mesh Network is connected and communicates with each other. When a node in a mesh network environment is failure through a wired or wireless interface, Mesh will dynamically reconfigure and find the best link and automatically detect and forward traffic to other node link AP devices with Internet network connectivity. To ensure that the connection in the network can continue normally.

Multi-Channel Routing Protocols

Provides Layer3 Intelligent wireless mechanism and advanced proprietary routing protocols and algorithms continuously evaluate link performance by measuring a variety of factors, including signal strength, throughput, link cost, interference, and frame reception rates. Wireless APs take measurements individually and work together with neighboring APs to optimize overall capacity and client throughput. APs route traffic over different channels as needed to minimize per-hop performance degradation and maximize client performance.
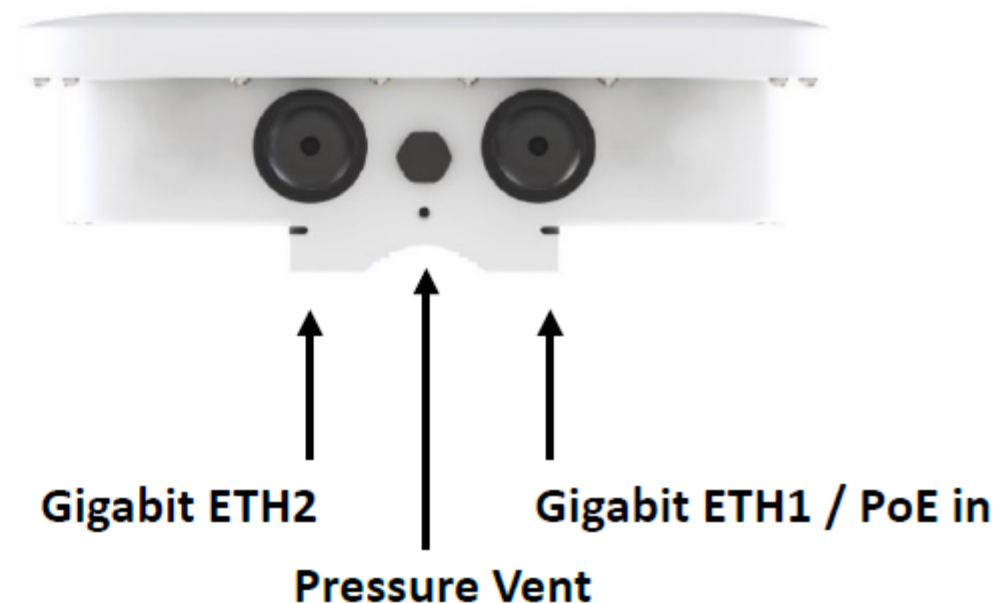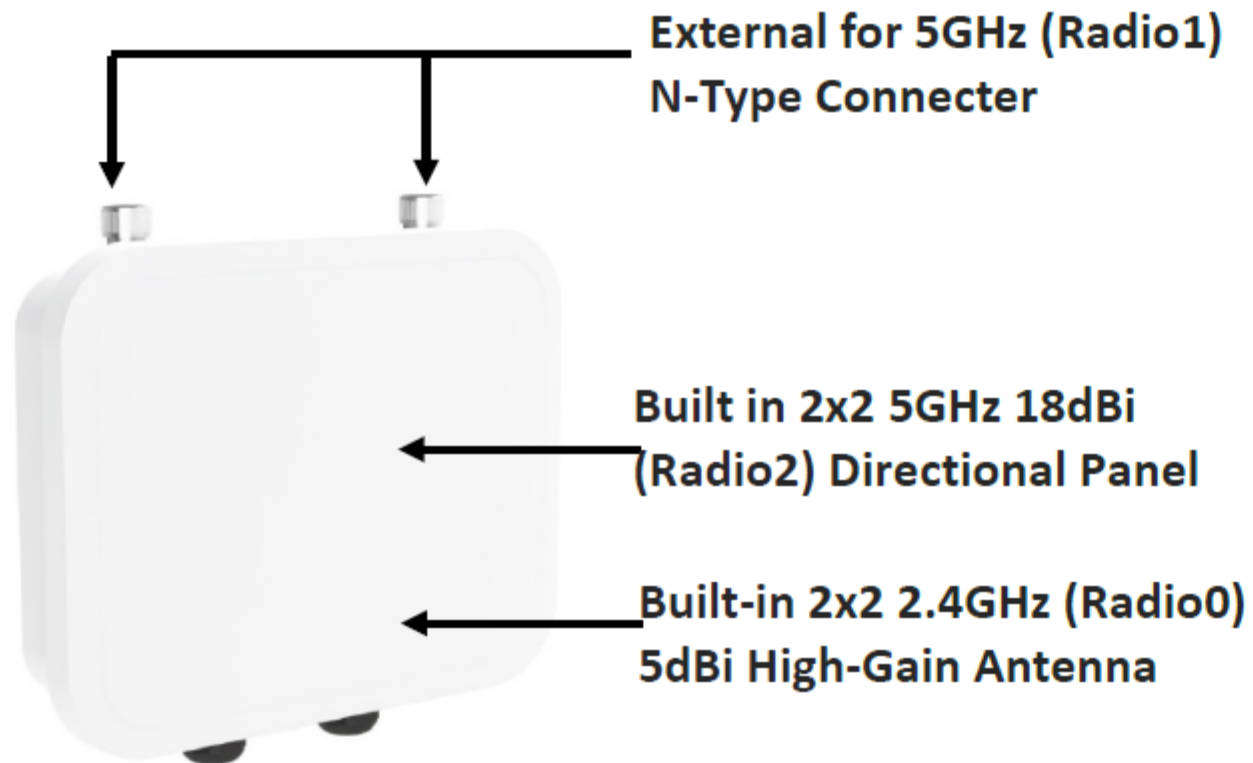
Support MAN-MESH Multi-Channel WAN Backup

When using LAN wired connecting multiple MAN-Mesh APs of WAN for configuration, Mesh will dynamically reconfigure and find the best link through the WAN / Internet route, automatically select one of the best available WAN to access the uplink connection. Therefore, a backup WAN architecture is generated for multiple paths of multiple WANs in the environment. When any WAN in the environment is interrupted, it can be backed up to ensure the Internet connection.

MAN-MESH Advanced Features

➢ **The Mesh Network no geographical limitations :** Provides a mesh environment including stationary surveillance or node terminal device access by wired, mobile user wireless access and point-to-point connection to AP stations in remote areas to extend mesh links.

➢ The wireless AP supports 2.4GHz Radio0, 5GHz Radio1 and 5GHz Radio2, **each radio support 16 groups of Multiple-VLAN (ESSID), total supports up to 48 groups of Multiple-VLAN (ESSID).**

➢ Virtual network tagging function (VLAN Tag), each group can use different VLAN tag.

➢ **Support multi-node smart link capability**, automatic detection of each node, network optimization and network self-healing function, always ensure that the network connection will not be interrupted at any place. It can improve work efficiency and deploy network connection quickly, very convenience and saving time.

➢ **Real-Time Environment Monitoring and Routing :** Constantly scan the air to monitor mesh link. If a better link is available, it will automatically re-route the mesh path to optimum mesh network quality.

➢ MAN Mesh network interconnection security: **support AES 128bit encryption function**, provide input 8 ~ 32 characters, Each MAN-Mesh AP connects through secure encrypted transmission each other.

➢ **Supports intelligent routing and multi-channel selection of Auto Mesh Link function**, Mesh connection between multiple channels based on signal quality, link optimization, hop-by-hop performance, transmission efficiency, etc.

Hardware Overview OW-500 A1-MESH

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External for 5GHz (Radio1) N-Type Connecter

Built in 2x2 5GHz 18dBi (Radio2) Directional Panel

Built-in 2x2 2.4GHz (Radio0) 5dBi High-Gain Antenna

Gigabit ETH2

Pressure Vent

Gigabit ETH1 / PoE in

Hardware Overview OW-500 A3-MESH

CERiO

External for 5GHz (Radio1) N-Type Connecter
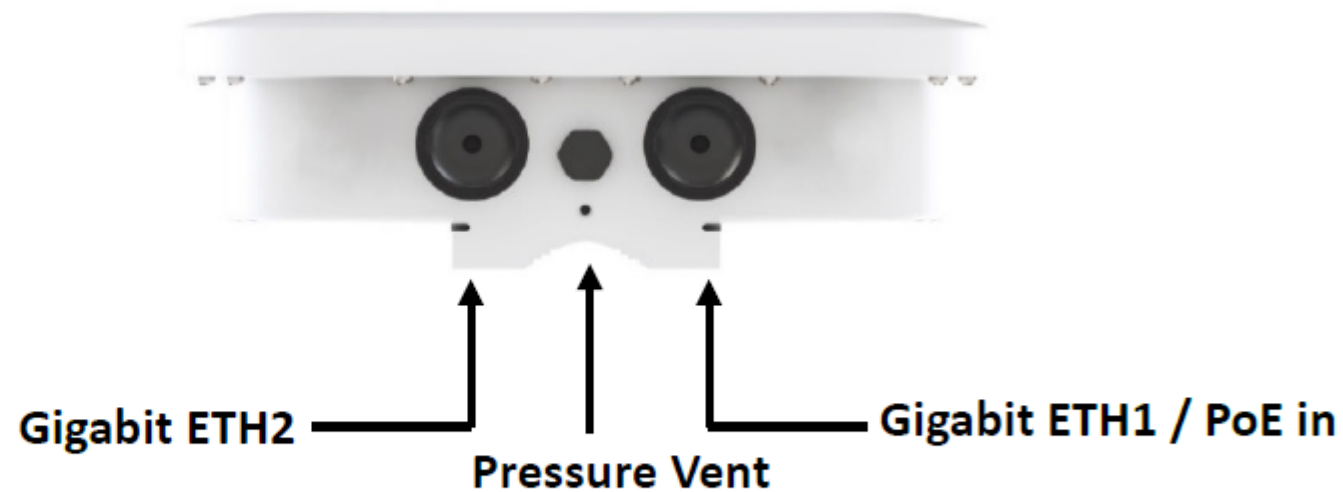
Built-in 2x2 2.4GHz (Radio0) 5dBi High-Gain Antenna

External for 5GHz (Radio2) N-Type Connecter
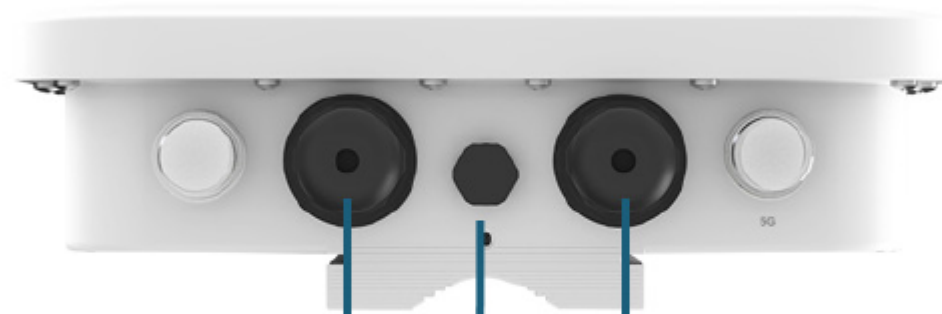
Gigabit ETH2

Gigabit ETH1 / PoE in

Pressure Vent

Built in 8dBi dual band Wide Coverage Directional Antenna

Gigabit ETH2

Pressure Vent

Gigabit ETH1 / PoE in

Pressure Vent

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The integrated pressure vent allows the IP68 enclosure to breathe safely.

This auto-adjusting technology **equalizes pressure** inside the device and **reduces condensation** from building up inside.

The overall result of the Pressure Vent is that product performance and durability are increased. This effectively gives users peace of mind when deploying out OW-500 Series products.

Pressure Vent
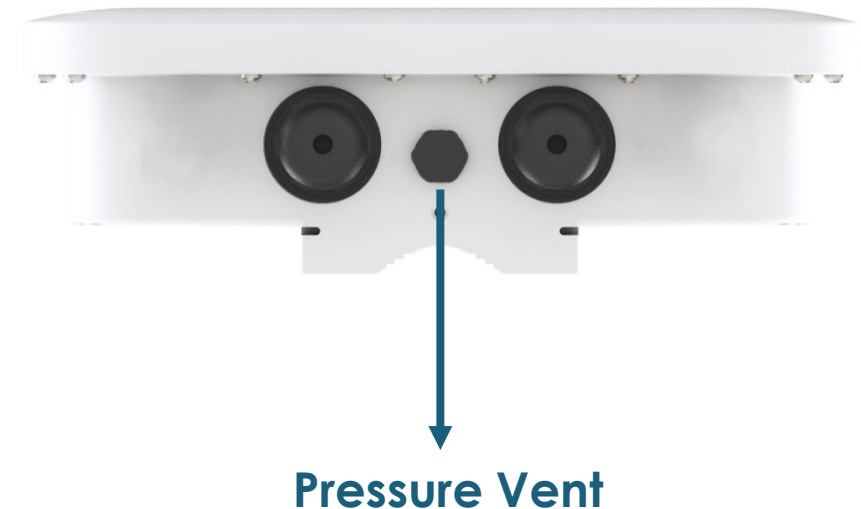
IP68 Rating Waterproof

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Support P68 Rating Waterproof Design

CERIO MAN-MESH Wireless AP Series provide high performance and IP68 durable design are made to withstand harsh environment deployment. This provides product durability and user peace of mind when deploying wireless devices in outdoor environments.

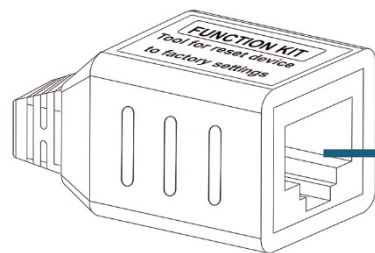# Versatile Mounting

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Wall Mount Supported
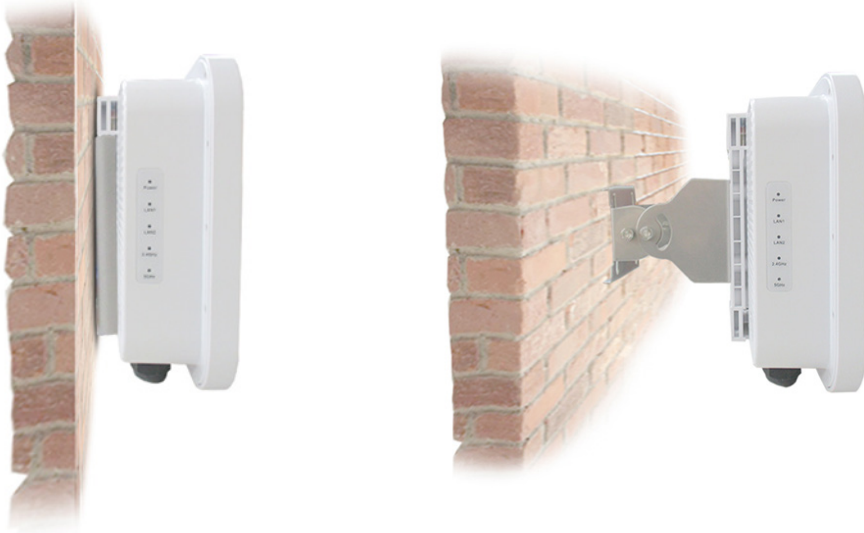
Pole Mount Supported

Adjustable

Adjustable

Hardware Reset Function Kit

Bundles RJ45 Function Kit, which is able to reset the device to default remotely. It can save extra re-installation cost and time.

RJ45 Function Kit

ETH2 Port

RJ45 LAN Cable

Surge Protector

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Indoor/Outdoor Surge Protector (Optional)

Provides surge protector for optional，Installing two surge protector devices, one is nearly terminal equipment (such as CERIO all OW Series Outdoor AP or other Ethernet devices), and the other at source equipment (such as Switch, Router). Damaging ESD attacks and surges will be absorbed by the surge protector devices and safely discharged into the ground. It is a cost-effective solution for protecting expensive outdoor Ethernet devices

Outdoor Type POE-OSP   **Indoor Type POE-ISP**

Surge Protector Application

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POE-OSP for Outdoor

PoE equipment / WiFi AP / IPCAM

POE-ISP for Indoor

Equipment for PoE Switch /WiFi AP / IPCAM
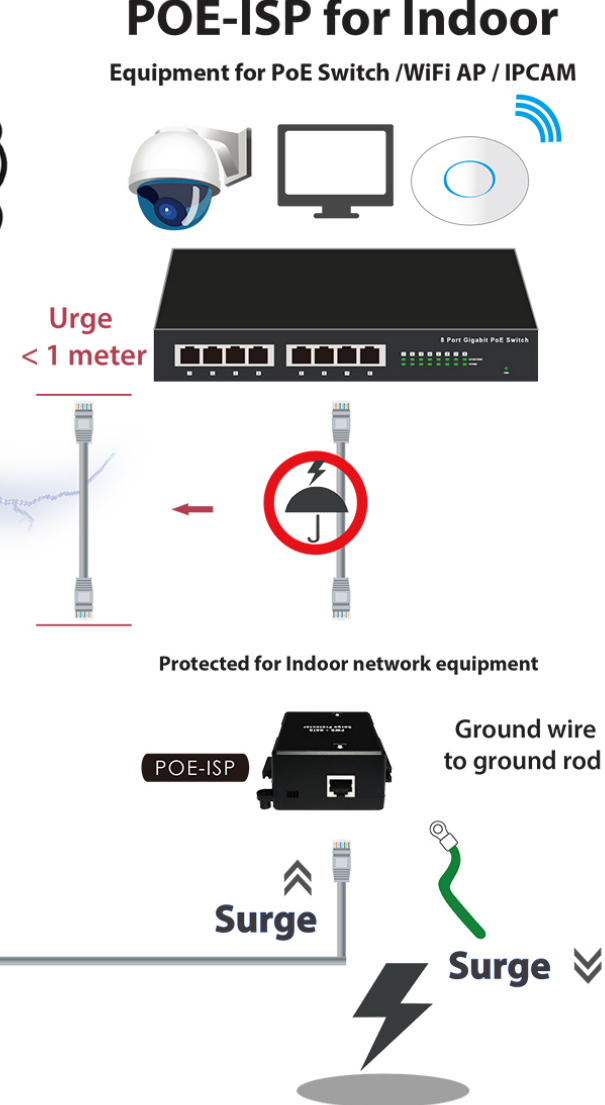
Lightning Strike

Urge
< 1 meter

Urge
< 1 meter

Protected for Outdoor equipment

Protected for Indoor network equipment

Ground wire
to ground rod

POE-OSP

POE-ISP

Ground wire
to ground rod

Surge

Surge

Surge

Surge

MAN-MESH Application — CERIO
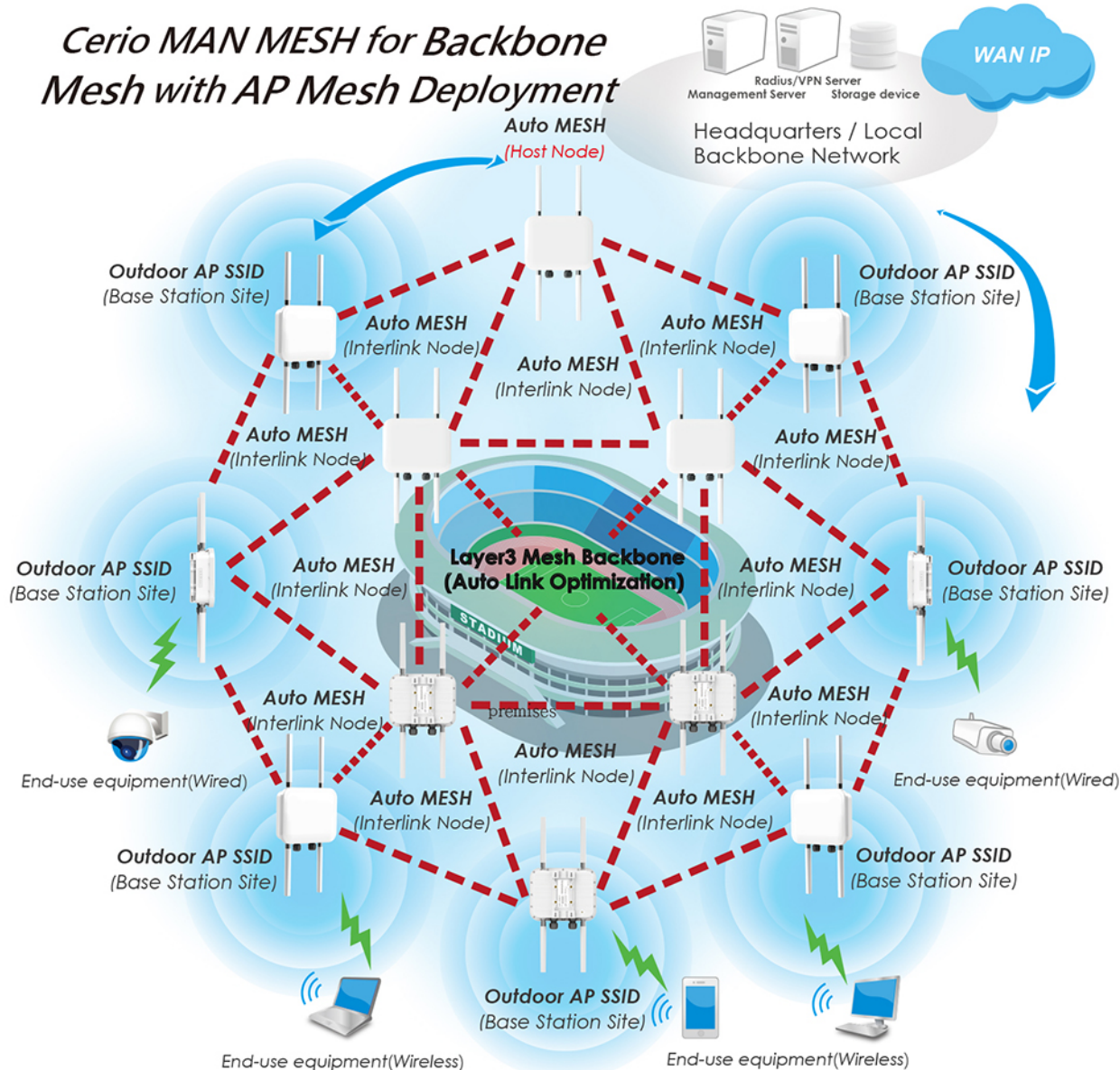
Wireless Man Mesh for Backbone Deployment

When using MAN-MESH equipment, In addition to the multi-radio AP Station (Access Point) that can be for more wireless clients. Also built-in the MAN-MESH Software Core provides Intelligent Mesh Backbone Auto Link Optimization Meshed APs self-configure and establish a high-performance, robust, and resilient network automatically. Provide a full-coverage wireless network without dead ends, no matter where you are, you can automatically and seamlessly connect to the optimal wireless signal at any time.

Wireless Man Mesh for Backbone with Access Point Deployment

In addition to the deployment of wireless backbone MESH AP network applications, it can also be used as an AP Station to connect wired or wireless devices to the terminal. For example, the CERIO OW-500 A3-MESH model supports four 5GHz external N-Type antenna connectors and a built-in 5dBi 2.4GHz high-gain antenna. **The external N-Type outdoor antenna connector can be freely matched with Omni Antenna to meet the deployment of a full range of wireless backbone networks.**

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Built in 18dBi directional signal and Omin 12dBi signal

Built in 18dBi directional signal and Omin 12dBi signal

OW-500A1-Mesh

OW-500A1-Mesh

Auto MESH (Interlink Node)

Auto MESH (Interlink Node)

Auto MESH (Interlink Node)

OW-500A1-Mesh

OW-500A1-Mesh

Built in 18dBi directional signal and Omin 12dBi signal

Auto MESH (Host Node)

OW-500A1-Mesh

Security Traffic video management Surveillance/CCTV Control Center
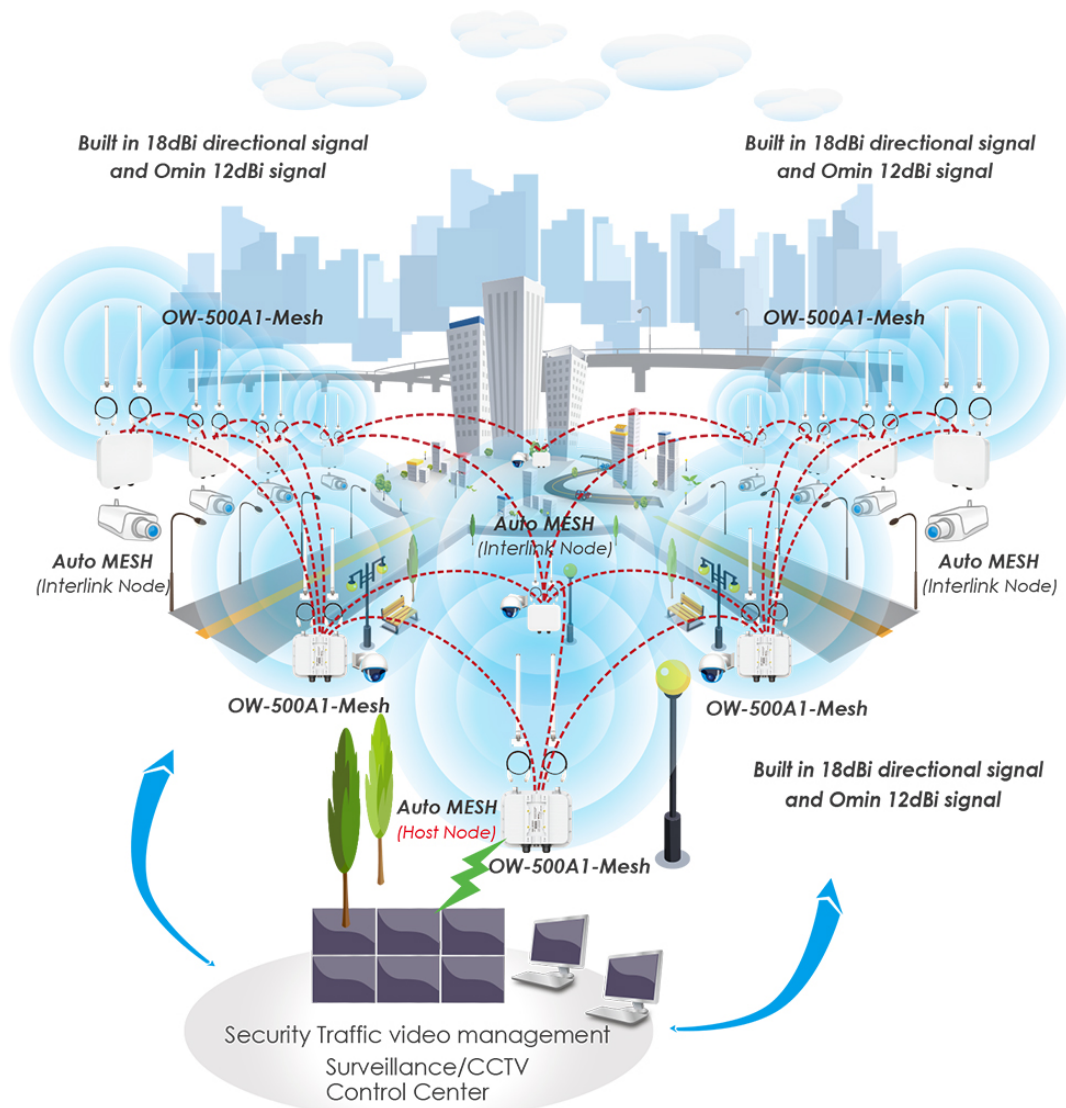
Cerio Wireless MAN-Mesh for Intersection monitor Backhaul Deployment

Wireless MAN-Mesh for Intersection monitor Backhaul Deployment

CERIO MAN-MESH Wireless Mesh Network (Mesh) **is the best solution for mission-critical applications such as wireless video surveillance and backbone transmission of network services.** It can completely solve any difficulties in the network architecture environment that needs to provide wired network nodes. When in certain large areas, such as intersections in streets or public video surveillance equipment which using distributed mesh wireless network for data transfer back application. By using the MAN-Mesh equipment (ex. OW-500 A1-MESH which supports Tri-radio with built in 18dBi directional high gain antenna) with a 5GHz high-gain Omnidirectional antenna to achieve single wireless or multiple wireless links in a long distance mesh topology, and using Mesh architecture for network planning which can easily achieve the mesh routing backup. Intelligent mesh network environment can provide multiple backhaul mechanism paths in each mesh node to achieve uninterrupted connection paths. That's when every 5GHz Mesh WiFi node and its wireless link are interrupted for no reason, they can seamlessly reconnect through different paths to resume fast data transmission. So it ensures the safety and reliability of wireless network transmission.

MAN-MESH Application

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Cerio MAN MESH for Backhaul Mesh with Semi-Mobile Mesh Deployment
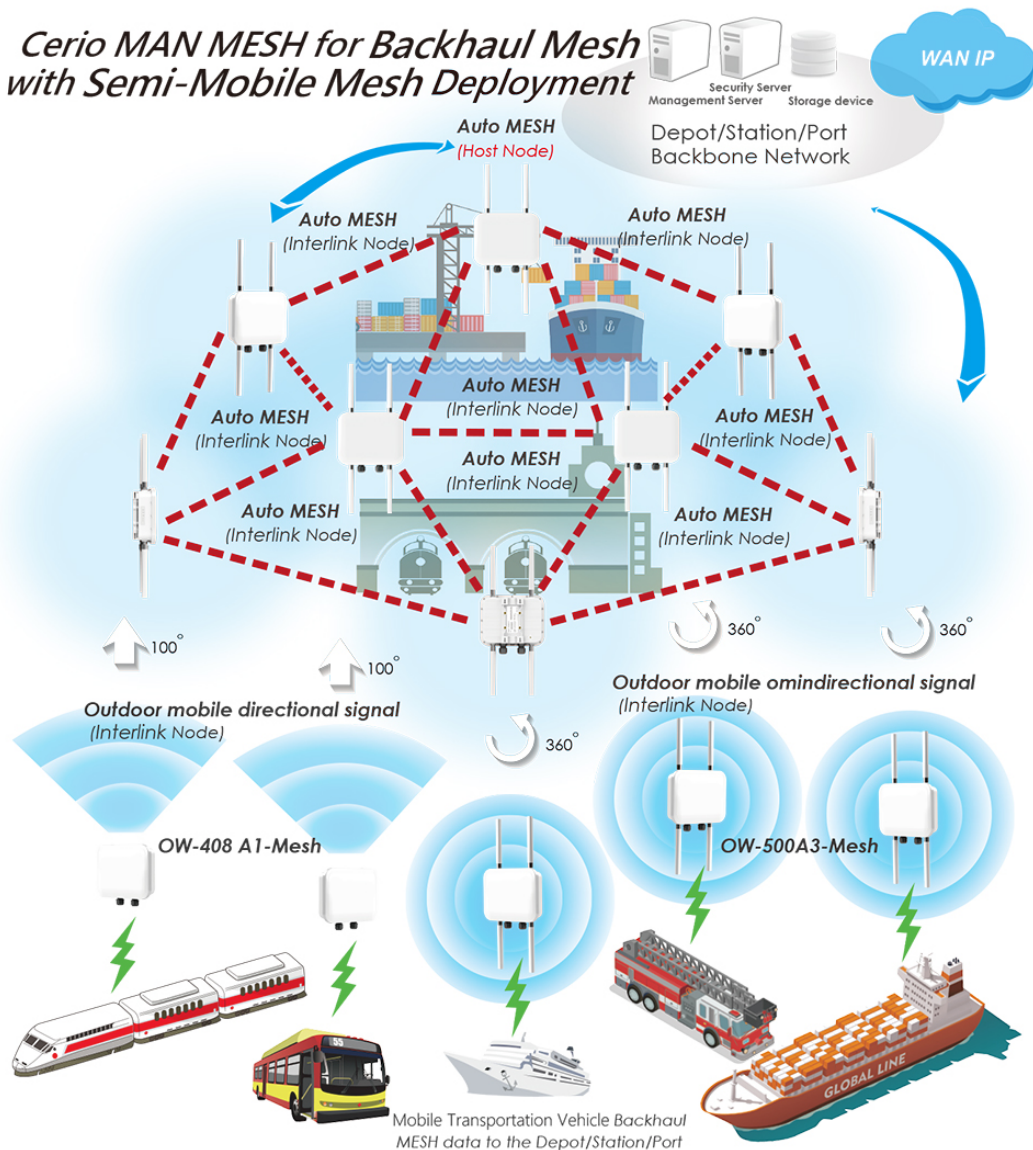
Wireless Man Mesh for Semi-Mobile Backhaul Deployment

The MAM-MESH Outdoor CPE/AP, **It's the perfect solution for backhaul deployment of Semi-Mobile mesh network, such as data transmission of public transport system (ex. Railways, Ships, Bus, MRT, Gondola, etc.)**, through this smart wireless mesh network, which can collect and transmit information in real-time, so that control center can do security monitoring and management. This MAN-MESH equipment (ex. OW-408 A1-MESH which supports dual-radios with built in 8dBi wide range directional high gain antenna) can be connected to any Ethernet device to easily build short- or long-distance wireless mesh network applications at the edge site, such as Warehouse and factory incoming/outgoing vehicle, construction area safety monitor management and so on.

MAN-MESH Proven Test Results
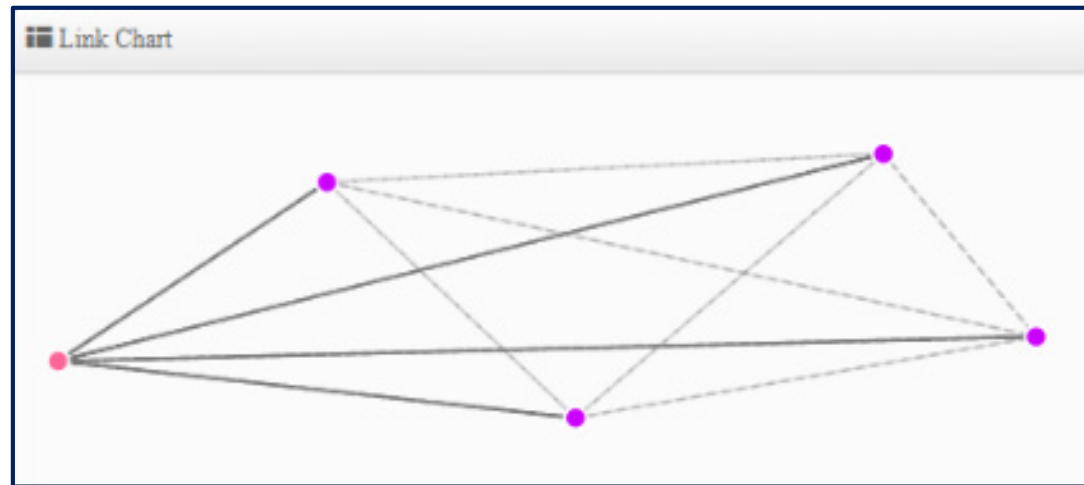
From IP 192.168.2.30 Laptops to each node Laptops

Throughput test(2Tx+2Rx)

Test Channel: Radio 1 CH 36-52, Radio 2 CH 128-161

Set 2Tx and 2Rx running throughput

IP 30 to 10	Throughput	276.373 Mbps
IP 30 to 20	Throughput	232.166 Mbps
IP 30 to 40	Throughput	198.345 MBPS
IP 30 to 50	Throughput	271.731 Mbps

MAN-MESH Proven Test Results

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From IP 192.168.2.30 to IP 192.168.2.10 Throughput

Average (Mbps)	Minimum (Mbps)	Maximum (Mbps)
276.373	61.209	75.901
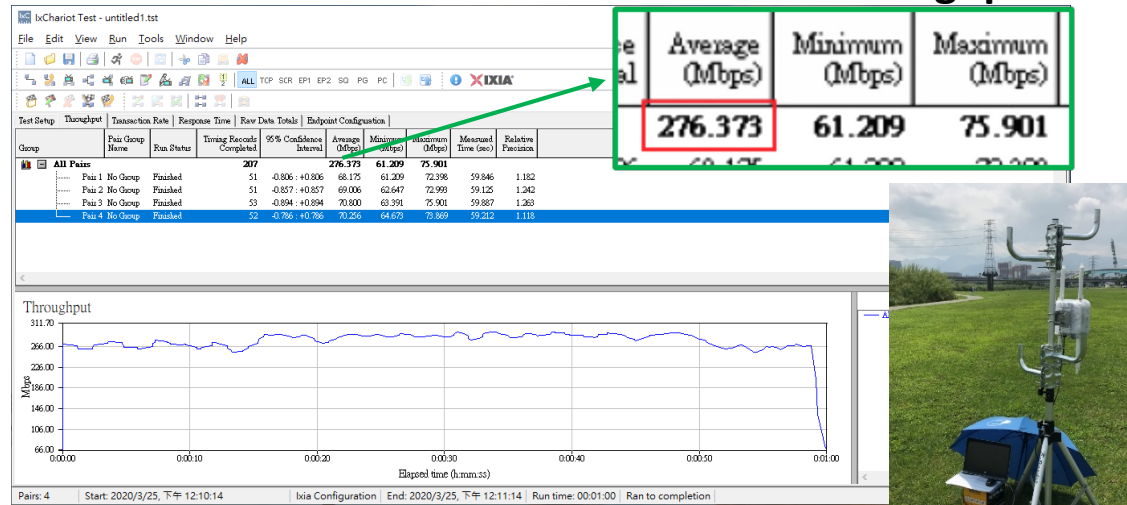
From IP 192.168.2.30 to IP 192.168.2.20 Throughput

Average (Mbps)	Minimum (Mbps)	Maximum (Mbps)
232.166	51.020	64.412
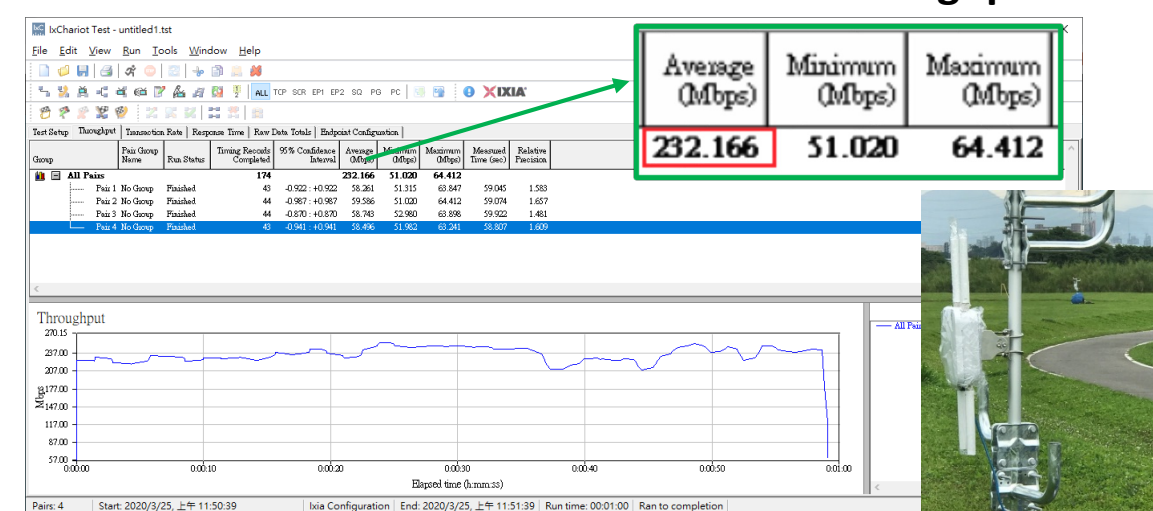
From IP 192.168.2.30 to IP 192.168.2.40 Throughput

Average (Mbps)	Minimum (Mbps)	Maximum (Mbps)
198.345	46.921	53.655
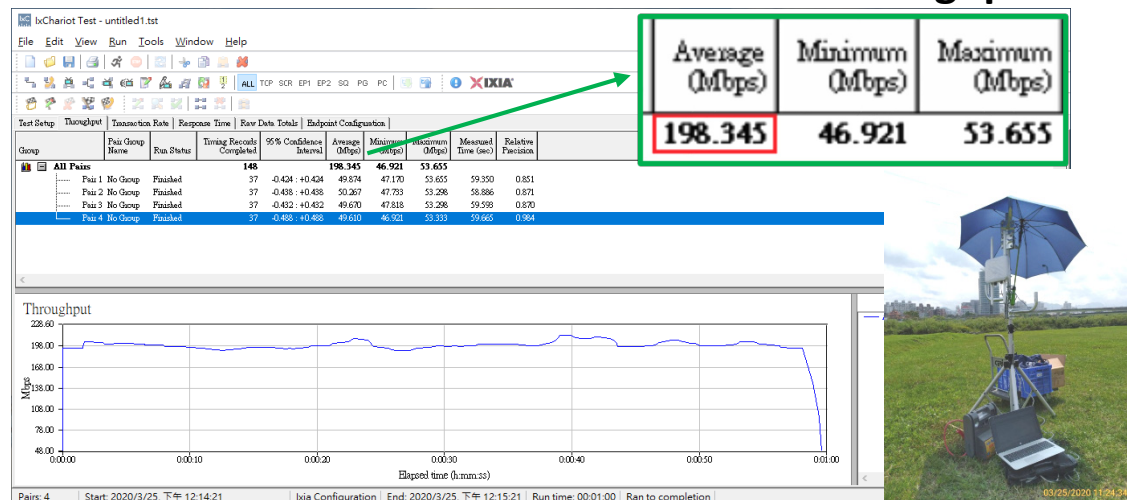
From IP 192.168.2.30 to IP 192.168.2.50 Throughput

Average (Mbps)	Minimum (Mbps)	Maximum (Mbps)
271.731	57.971	74.212

Captive Portal Authentication

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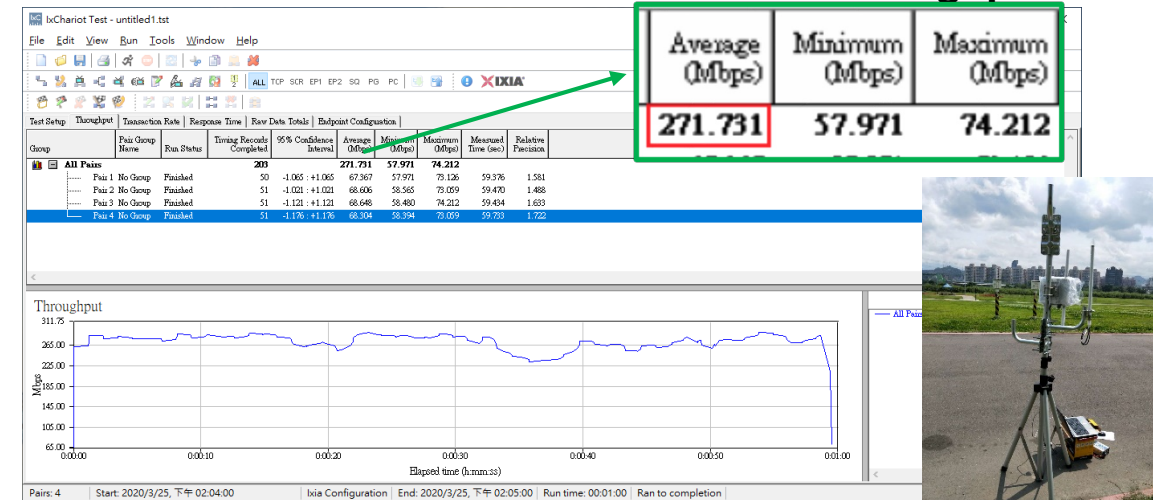
Captive Portal Authentication conveniently allows wireless clients

to access the network through a customized web login portal.
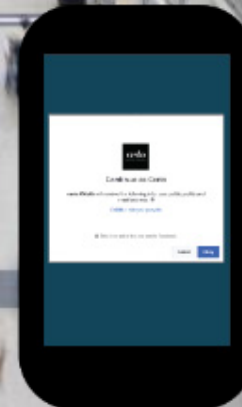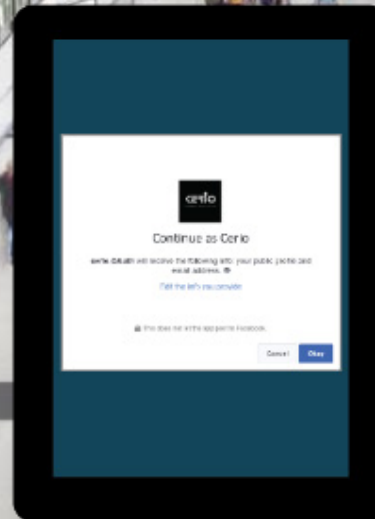
Administrators can deploy a

customized Captive Portal with

the following login methods
1. Guest Login
2. Local Account Login
3. OAuth2.0 Login

(Facebook/Google/etc.)

Local Account Login

Facebook Login

Ideal Deployment

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Emergency Rescue

MRT/Railways

Construction

Intersection Monitoring

Gondola

Ships

Factory/Warehouse

Software Overview

Operation Modes

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The system operation mode supports MAN-MESH Mode as the main mode, Access Point Mode (includes Hotspot Portal Authentication, Pure AP Mode, and AP + WDS Mode), Control Access Point Mode (CAP Mode), Client Bridge + Repeater Mode, WISP / CPE Repeater Mode etc.
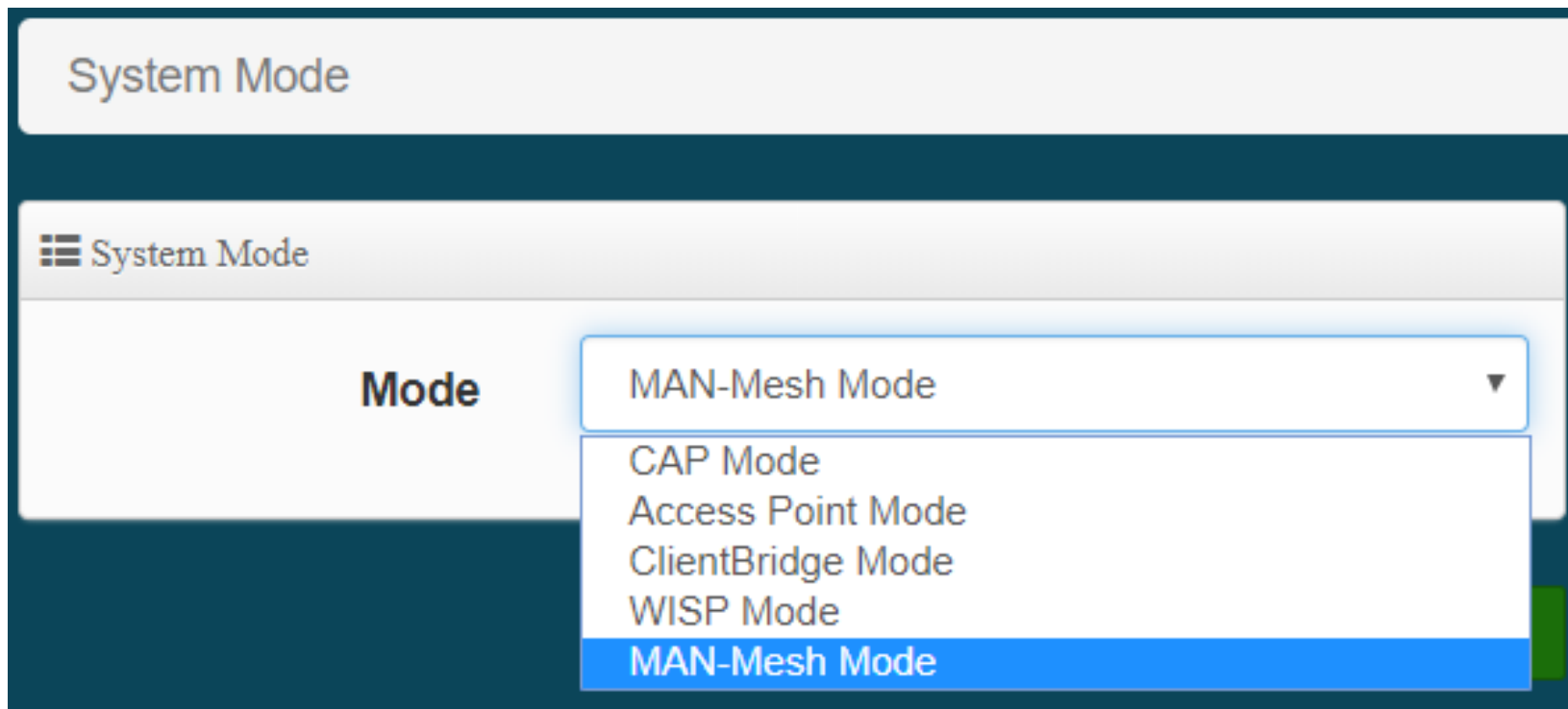
MAN-MESH Mode

MAN-Mesh mode is a mesh network wireless system, using Layer3 Intelligent WiFi Mesh technology, which is simple to set up, easy to deploy and supports characteristics of multi-node architecture. The The MAN-Mesh mode is a mesh network wireless system, using Layer3 Intelligent WiFi Mesh technology, which is simple to set up, easy to deploy and supports characteristics of multi-node architecture. The MAN-MESH provides Intelligent WiFi Mesh technology with Multi-Channel Routing wireless mechanism.

Dynamic Routing Automatic Path Selection

CERIO
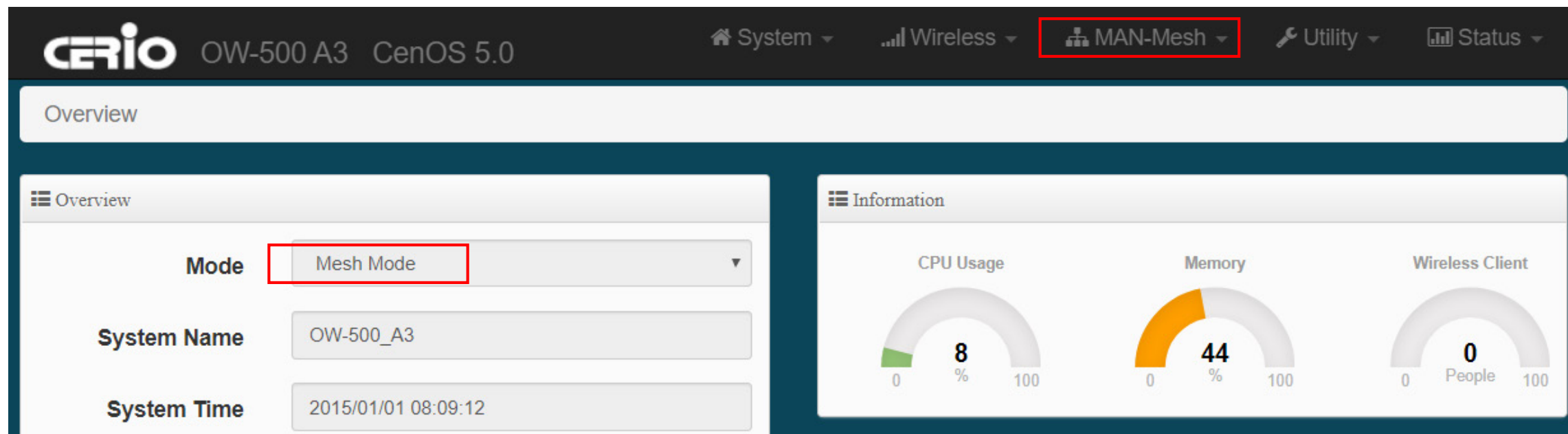
MAN-Mesh WiFi has the capability of dynamic routing automatic path selection. The dynamic path selection includes the best path transmission of the Mesh Backbone network and the best dynamic path transmission of the WAN / Internet route.
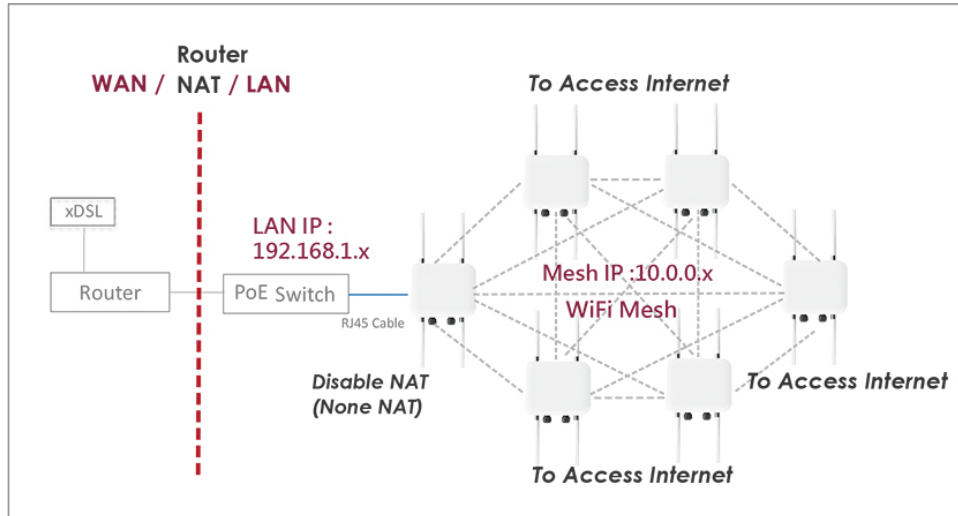
#Single LAN physical WAN Internet / backhaul access architecture

Under the interconnected MAN-Mesh AP environment, all the backhaul or WAN Internet access of the WiFi AP Station extension and its downstream LAN line will be transmitted through the Mesh backbone to the best link path back to the LAN physical line to the upstream connection.
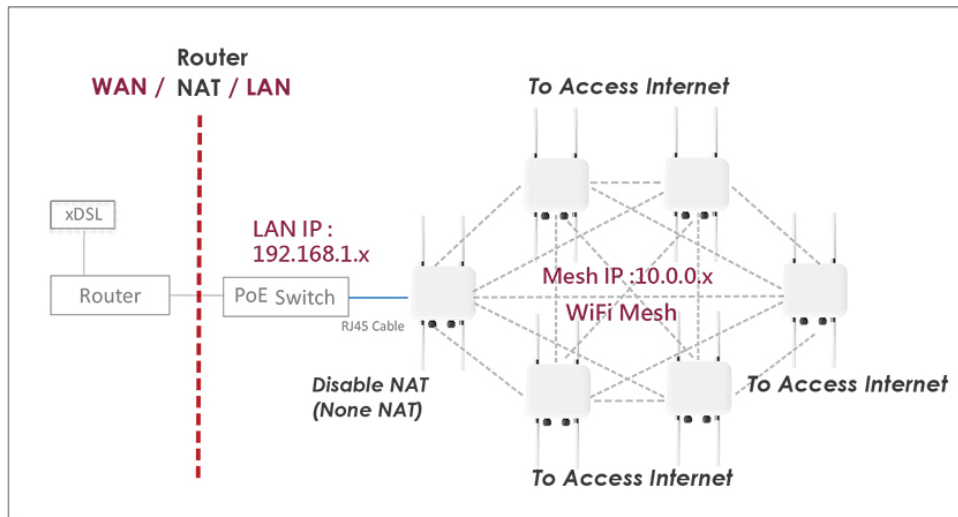
#Multi-LAN physical WAN Internet / backhaul access architecture

Under the condition of connecting MAN-Mesh APs, the WiFi AP Station extends all backhaul or WAN of its downstream LAN Internet access, it can transmit back through the best transmission of the mesh network and can be transmitted through the WAN / Internet route of the best dynamic path, automatically select the best available LAN connection, one of connects the upstream to achieve multiple WAN path backup connections.

IPv4 & IPv6

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IP address of the MAN-Mesh AP can be set in both IPv4 and IPv6 formats.

MAN-Mesh IPv4 Setup

IPv4 Mode	⦿ Enable	○ Disable
IPv4 Address	10.0.0.2	
Netmask	255.255.255.255	

MAN-Mesh IPv6 Setup

Link-local address	FE80::8E4D:EAFF:FE05:3406	
IPv6 Mode	⦿ Enable	○ Disable
IPv6 Address	2001:8E4D:EAFF:FE01:0000:0000:0000:0002	
Subnet Prefix Length	64	

IPv4 Application

IPv6 Application
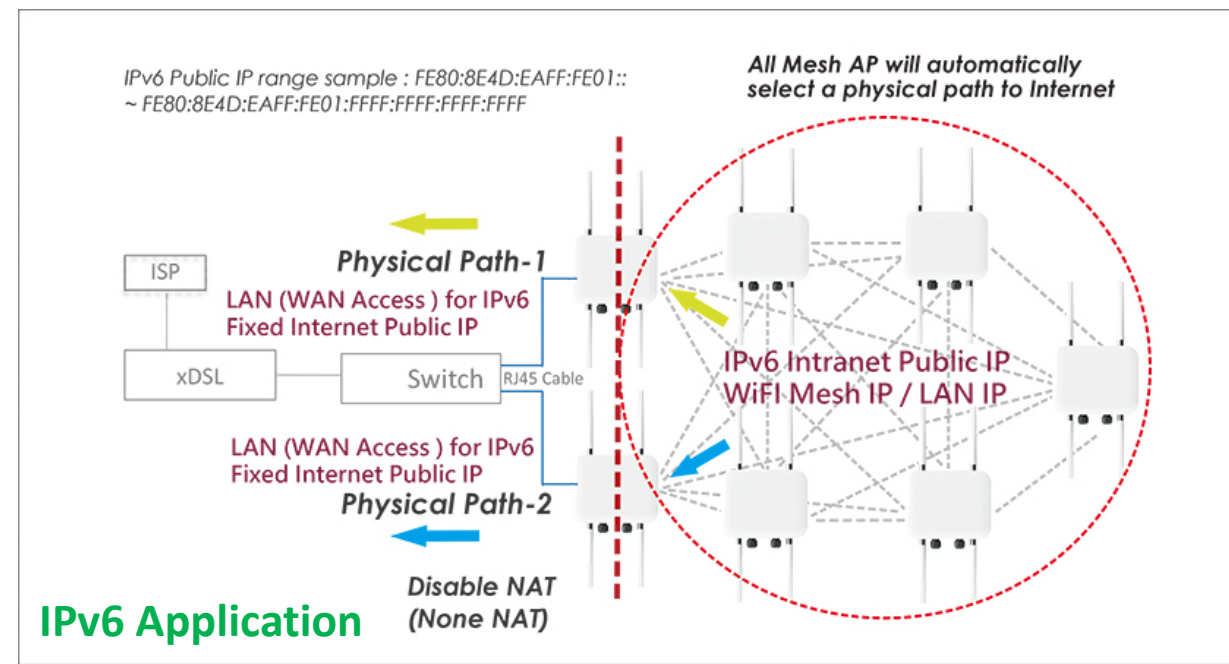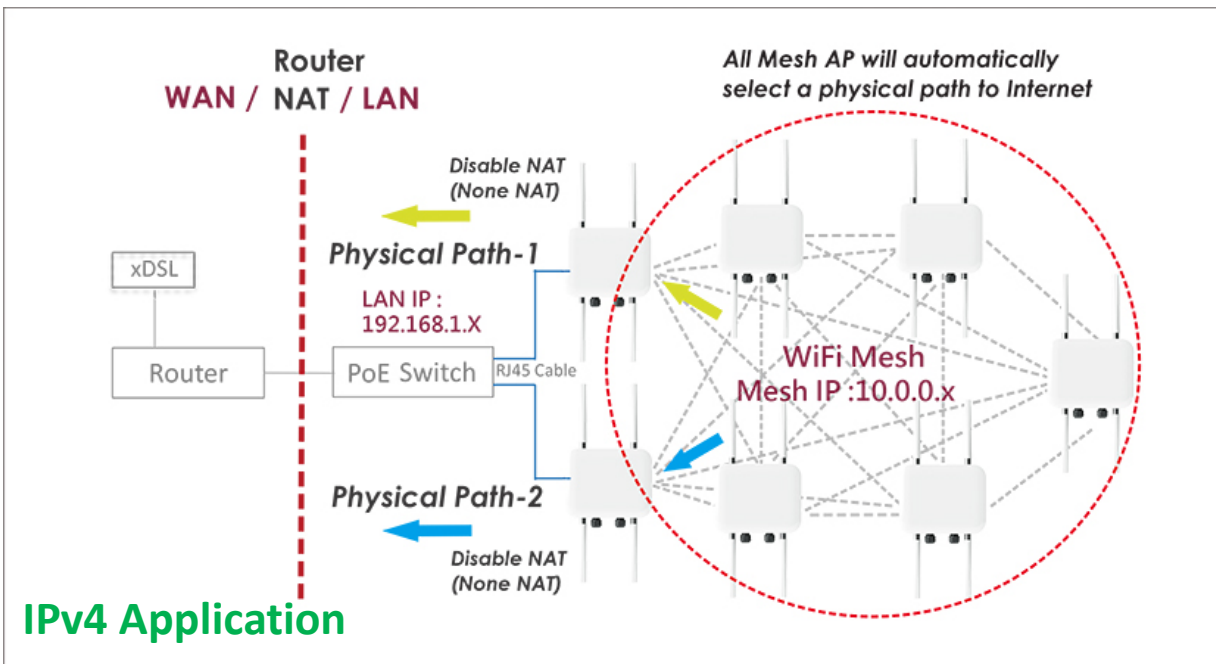
Multi-Channel Selected

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The MAN-Mesh AP provides intelligent and quickly automatic connections between multiple channels. It is recommended that the number of channels selected can be 3 to 5 channels and use the high, medium, and low range channel selection principles to select the plural channels to use. Appropriate channel selection will help to speed up MAN-Mesh APs to automatically connect to each other.

5G Radio 1 three low range frequency channels
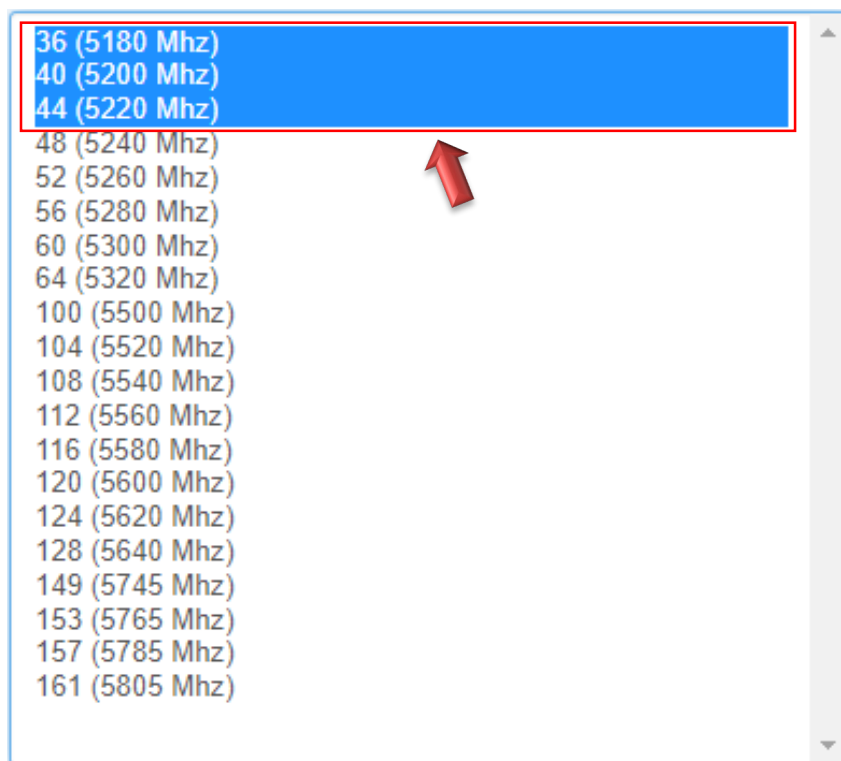
5G Radio 1 three high range frequency channels

MAN-MESH Link Chart

CERIO
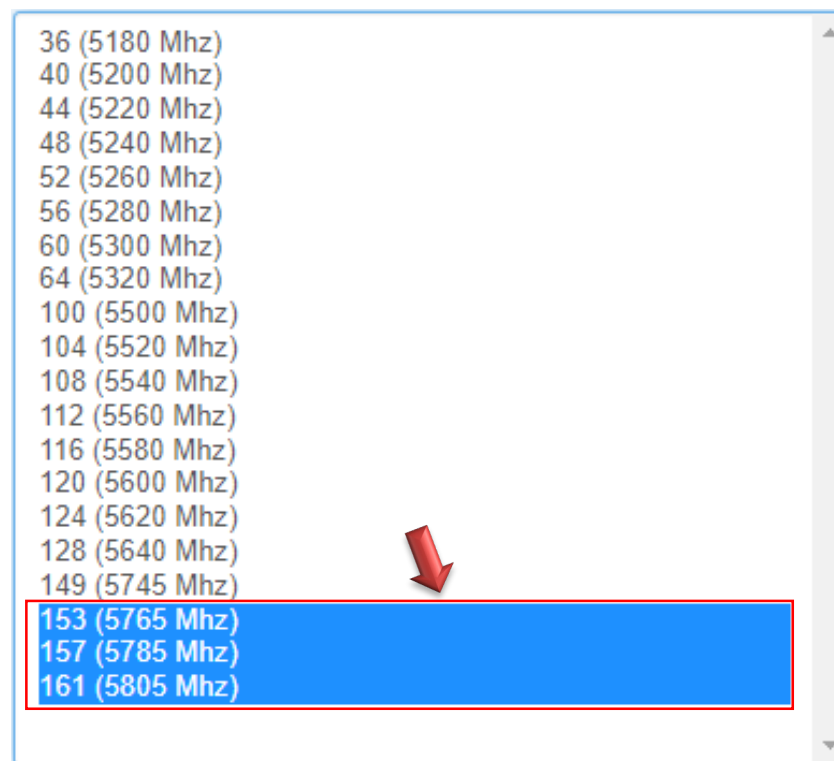
Status Link Chart

The MAN-MESH system status can display link chart and view the connection information of MESH and the signal information of MESH equipment, including the transmission rate of the Mac address, TX / RX and the RSSI value, etc., so that managers can grasp the connection status of MESH Network at any time.

MAN-Mesh Client		

radio 0

MAC Address	Rate(RX/TX)	RSSI
-	-	-

radio 1

MAC Address	Rate(RX/TX)	RSSI
8c:4d:ea:05:33:fd	6Mb / 292Mb	28
8c:4d:ea:05:34:02	6Mb / 390Mb	35
8c:4d:ea:05:34:11	325Mb / 325Mb	27
8c:4d:ea:05:34:07	6Mb / 433Mb	30

radio 2

MAC Address	Rate(RX/TX)	RSSI
-	-	-

Link Chart
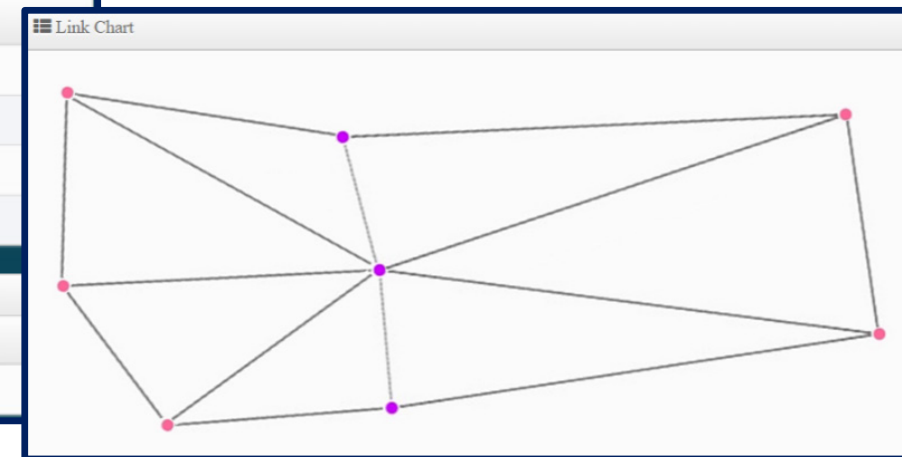
Control Access Point

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Control Access Point (CAP) Mode's converts the device into a centralized AP management controller. When MAN-MESH AP is in CAP Mode, it can centrally manage up to 64 AP devices.

Scan and Import

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CAP Mode allows administrators to scan for AP devices within their virtual LAN and import them into the management database. Once imported, administrators can make quick changes such as changing IP addresses for organization and easy management. Also it supports multi-VLAN centralized management.

Batch Setup

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CAP Mode's control function supports centralized configuration of managed APs. This allows administrators to make convenient batch changes to the network of AP devices from one centralized location. This main function of CAP mode can save time and cost by reducing servicing and installation time.

Batch Setup

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VLAN Setup   [Apply]

VLAN	VLAN 0 ▾
VLAN Mode	⦿ Enable ◯ Disable
Access Point 0	⦿ Enable ◯ Disable
Access Point 1	⦿ Enable ◯ Disable
Access Point 2	◯ Enable ◯ Disable
802.1d Spanning Tree	⦿ Enable ◯ Disable
Control Port	⦿ Enable ◯ Disable
IAPP	Disable ▾
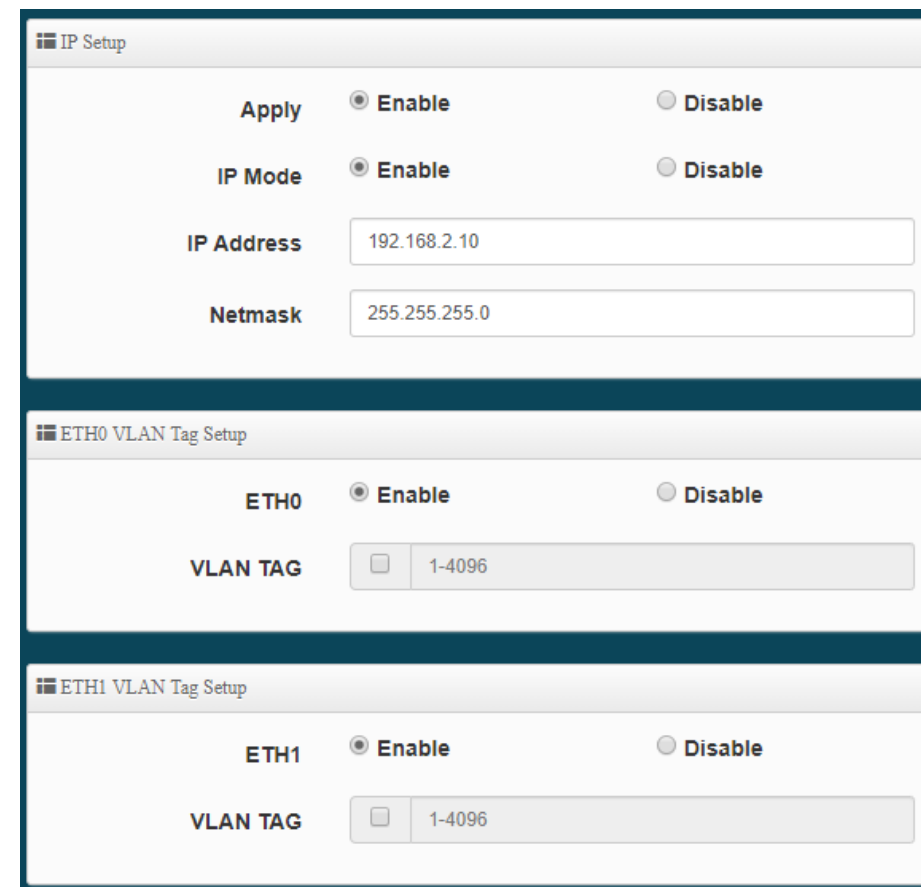
IP Setup

Apply	⦿ Enable ◯ Disable
IP Mode	⦿ Enable ◯ Disable
IP Address	192.168.2.10
Netmask	255.255.255.0

ETH0 VLAN Tag Setup

ETH0	⦿ Enable ◯ Disable
VLAN TAG	☐ 1-4096

ETH1 VLAN Tag Setup

ETH1	⦿ Enable ◯ Disable
VLAN TAG	☐ 1-4096

Administrators can enable VLAN Mode, Spanning tree, Control Port capabilities, IAPP Roaming, change IP settings and setup VLAN tag (IEEE 802.1Q) for batches of access points. These changes can be implemented differently for each VLAN, allowing for both centralized and organized control.

Map Setup

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CAP Mode also supports Map Setup function for organizing your AP network. Administrators can create maps by uploading floor plan URLs and dragging APs to the correct location. Once complete, administrators can monitor AP statuses such as uptime, data rates, and connected clients

Authentication AP

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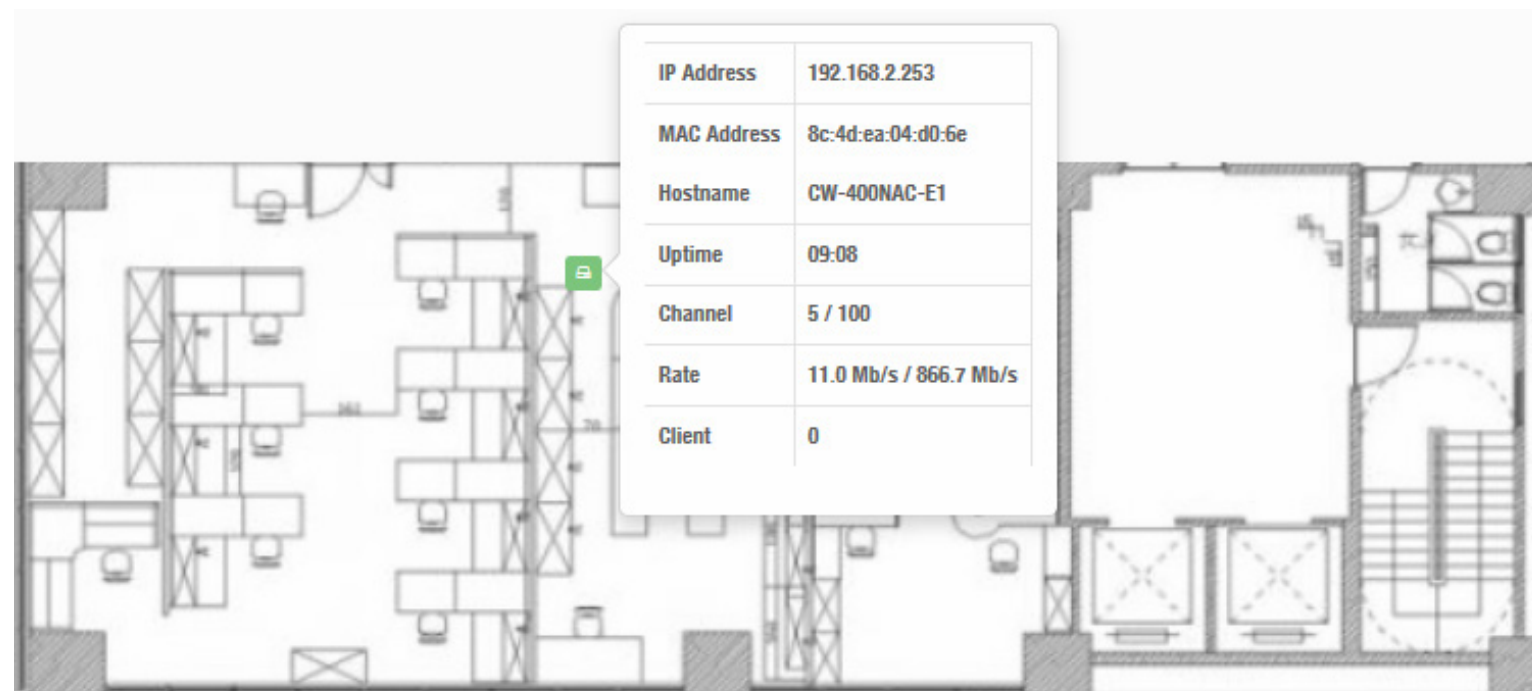
CenOS 5.0 supports Authentication Access Point Mode for versatile AP deployment. Administrators can choose from many authentication options to best suit their network needs.

This enables convenient access to the wireless network for public clients, as well as improved management and organization for network administrators
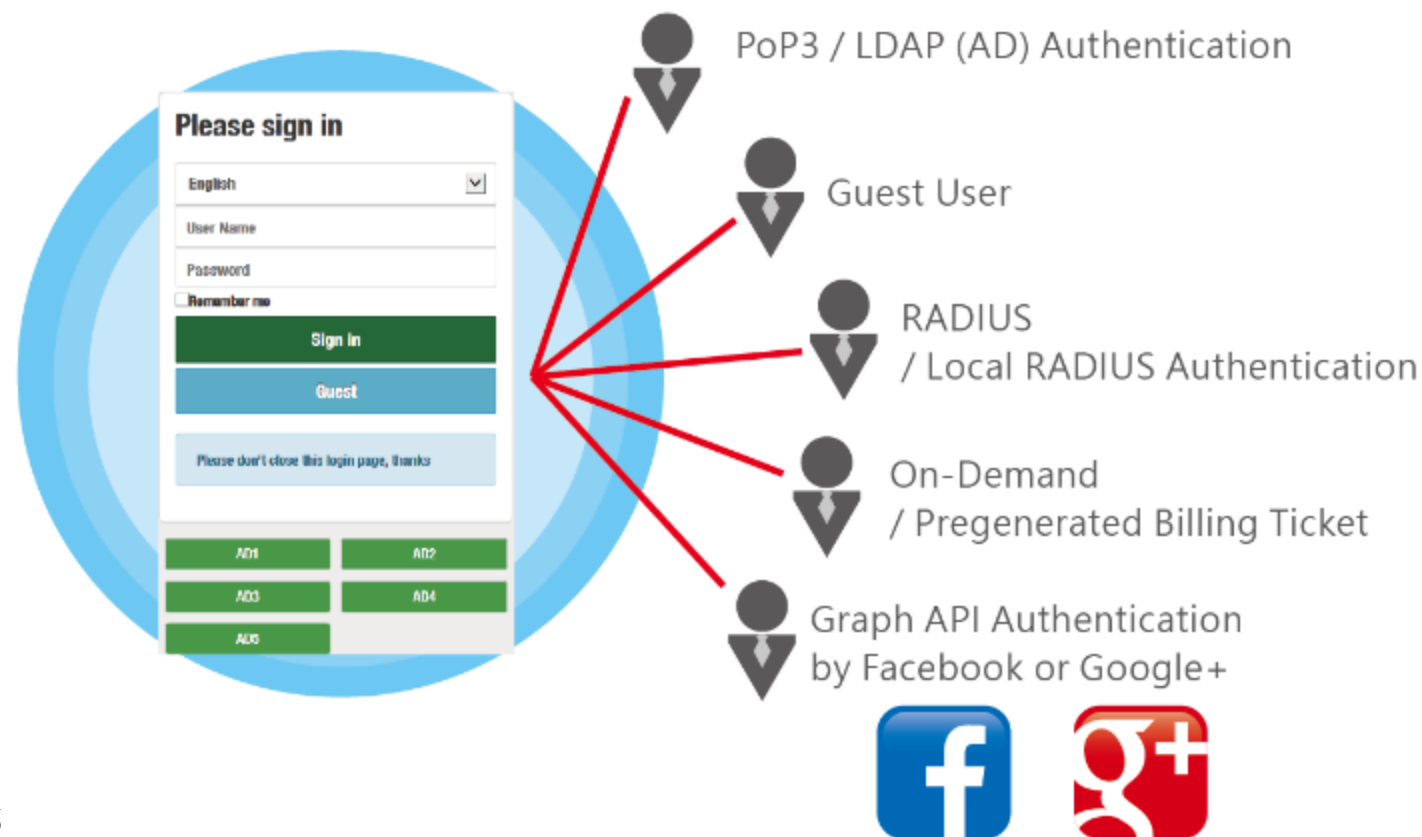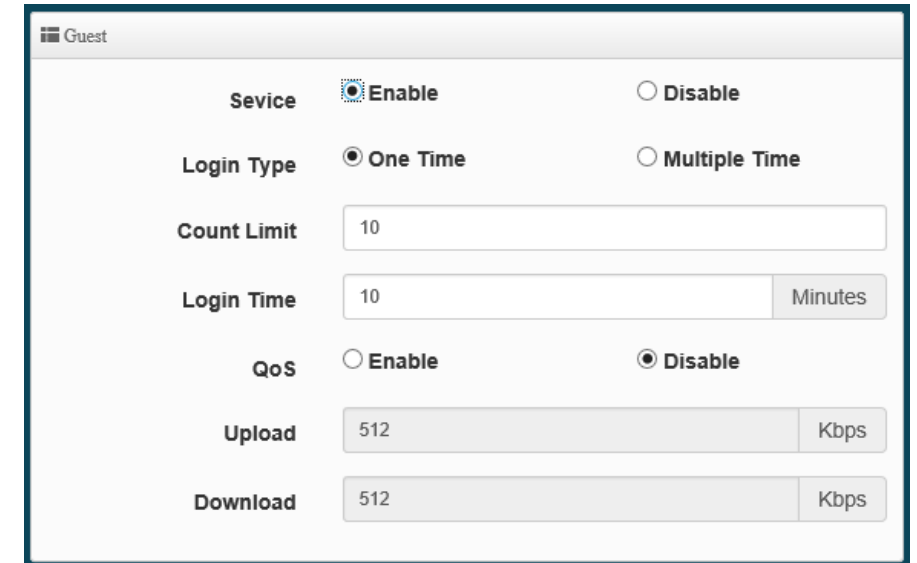
Authentication

CenOS 5.0 supports multiple methods of authentication for user management, security and convenience.

OAuth2.0 : Allows devices to use third-party credentials such as Facebook and Google+ for user authentication. This provides login convenience for public clients and also allows administrators to collect data through Facebook / Google analytics.

Authentication
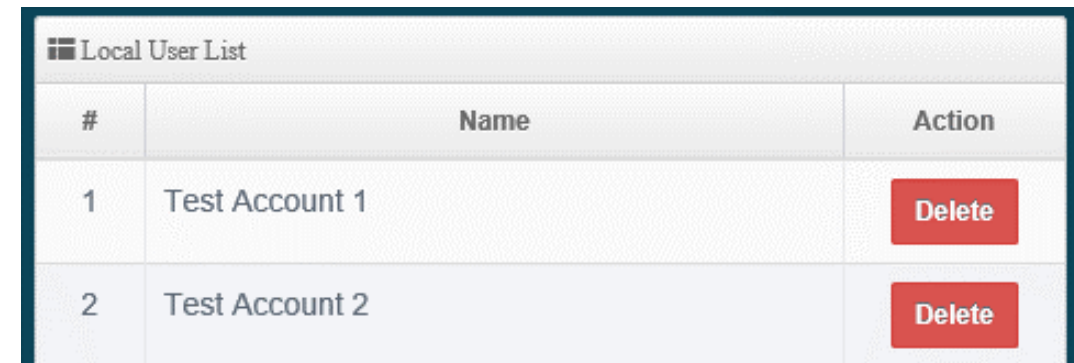
Guest Login : Provides limited WiFi connection to clients to an open network. Limitations can be put in place to manage client limits, connection time, and control bandwidth

Local User: Provides fixed authentication user accounts for controlled client login and data management. Administrators can track Local Account usage, connection time, etc. CenOS 5.0 supports up to 10 Local User accounts
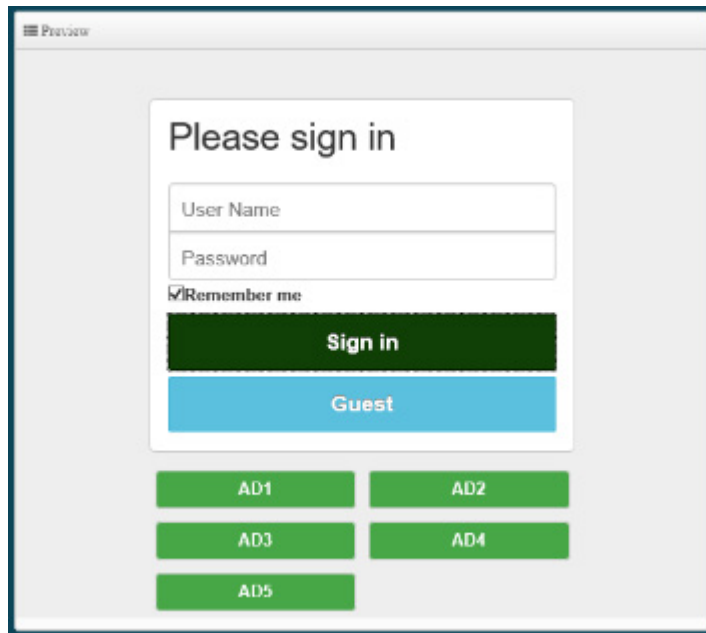
Customized Login Page

CERIO

Administrators can create a customized Login Page which can become a platform for:
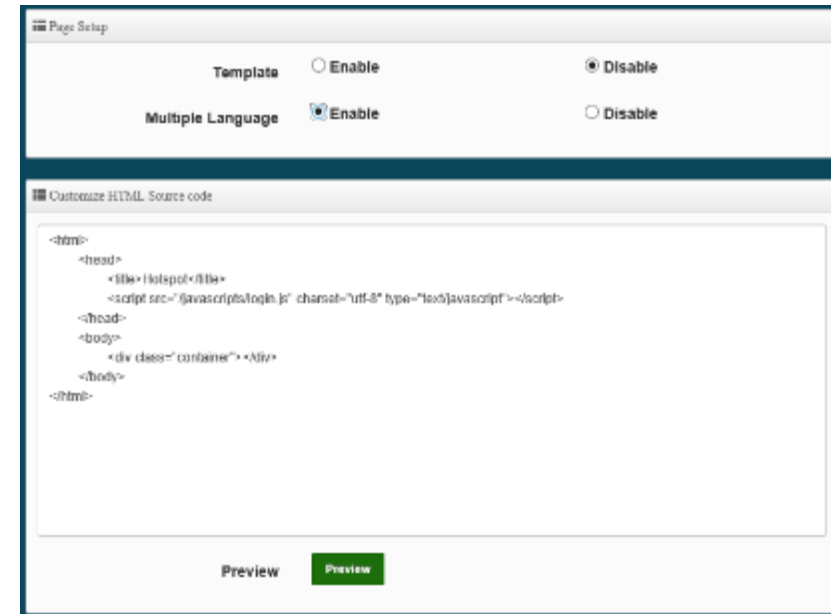
(1.) Promotions **(2.)** Brand Exposure **(3.)** Advertisements **(4.)** Platform for providing Information

This customized Captive Portal supports login through **1.** Guest Users **2.** Local Accounts

3. Facebook, Google+, etc using OAuth2.0.

Default Template

Customize through HTML Code

Bandwidth Control

CERIO

Bandwidth Control of connected clients allows administrators to control individual user upload and download speeds, as well as set a maximum limit on the total amount of bandwidth that can be used at a single time.

VLAN Setup / VLAN 0 ▾ / Bandwidth Control

Bandwidth Control

Mode	● Enable ○ Disable
Airtime Fairness	○ Enable ● Disable

Total Bandwidth Control

Mode	○ Enable ● Disable
Upload	10240 Kbps
Download	10240 Kbps
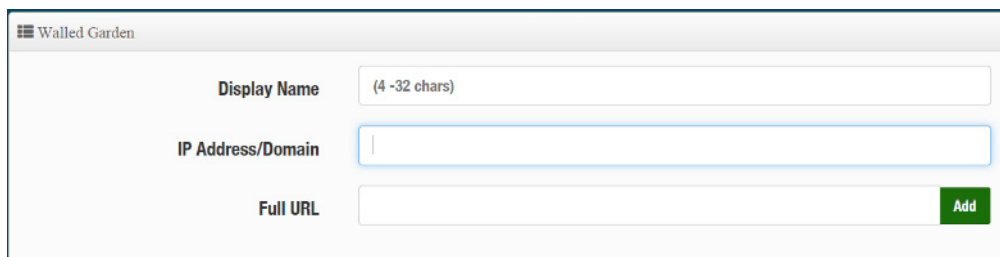
QoS RuleList

#	Active	Rule Mode	Value1	Value2	Upload(Kbps)	Download(Kbps)	Comment
1	☐	ANY ▾			1024	1024	

Walled Garden

Modes Walled Garden function allows administrators to create a browsing environment that controls user access and accessible information. This function is ideal for directing users to specific parts of the Web such as;

1. Paid Content
2. Self-Promotions
3. Free access to specific websites
4. Advertisement web pages

Enabled Walled Garden Websites

Built-in 802.1x RADIUS

Supports integrated 802.1x RADIUS Server authentication for small to medium network environments. This supports a maximum of 50 built-in RADIUS Users.

Increased Security- Individual user sessions are encrypted uniquely, which prevents other users from acquiring private information

Cost Efficient – The built-in RADIUS server design removes the need to purchase additional equipment such as external servers.

Virtual LANs & SSIDs

CERIO

MAN-MESH Wireless AP Series supports a total of 16 Virtual LANs (VLAN) and Max. up to 48 SSIDs.

Each VLAN supports three SSIDs, one on the 2.4GHz frequency band and one on the 5GHz

Radio1 and one on the 5GHz Radio2 frequency band.

VLAN Setup

VLAN List

#	VLAN Mode	Flag	IP Address	Netmask	Radio 0	Radio 1	Radio 2	Action
0	On	Native ETH0 Access Control	192.168.2.253	255.255.255.0	2.4G_0_0	5G_0_1	5G_0_2	Network

★ Supports 16 VLANS (#0 to 15)

★ ★ ★

Each VLAN supports 3 SSIDs, one for 2.4G and one for 5G Radio1 and one for 5G Radio2

ETH1 VLAN Tag Setup

ETH1	⦿ Enable	○ Disable
ETH1 Tag	☑ 1-4096	

Support up to **4096** Tags. This is a crucial feature that ensures successful directing of packet traffic

for VLANs that span across multiple switches.

WDS Support

CERIO

WDS Setup

WDS Setup

WDS Setup	● Enable	○ Disable
Radio0 ESSID	default_wds0	
Radio1 ESSID	3	
Radio2 ESSID	default_wds2	
Security Type	Disable	▼
PassPhrase		

MAC Address

Radio 0	00:11:a3:1e:00:17
Radio 1	00:11:a3:1e:00:18
Radio 2	00:11:a3:1e:00:19

WDS Client Setup

Radio 0		Radio 1		Radio 2	
Enable	**MAC Address**	**Enable**	**MAC Address**	**Enable**	**MAC Address**
☐		☑	8c:4d:ea:05:33:1d	☑	8c:4d:ea:05:33:22
☐		☐		☐	

MAN-MESH Wireless AP Series with **CenOS 5.0** supports **WDS Setup** when operating in **Access Point Mode**

WDS Support

MAN-MESH Series Access Point mode supports **8** WDS links per radio and Max. up to **24 links** of device

(8x WDS on the 2.4GHz frequency band)

(8x WDS on the 5GHz Radio1 frequency band)

(8x WDS on the 5GHz Radio2 frequency band)   Supports multi-tags on same WDS channel

VLAN Setup	Radio 0			Radio 1			Radio 2		
VLAN#	Native	TAG	TAG ID	Native	TAG	TAG ID	Native	TAG	TAG ID
VLAN 0	●	☐		●	☐		●	☐	
VLAN 1	○	☐	101	○	☐	101	○	☐	101
VLAN 2	○	☐	102	○	☐	102	○	☐	102
VLAN 3	○	☐	103	○	☐	103	○	☐	103
VLAN 4	○	☐	104	○	☐	104	○	☐	104
VLAN 5	○	☐	105	○	☐	105	○	☐	105

Fast Roaming

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VLAN Setup / VLAN 0 ▾ / Radio 0 / Fast Roaming

802.11r/802.11k Fast Roaming
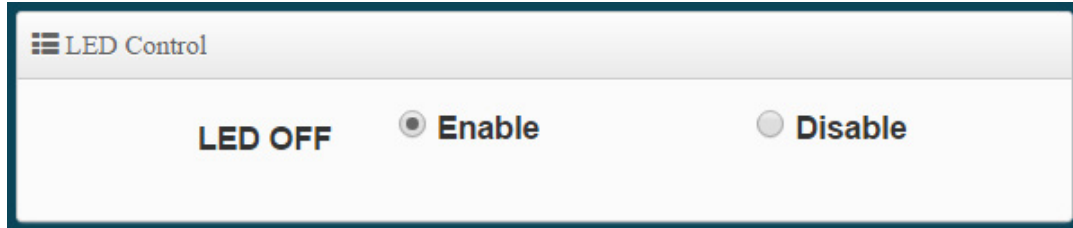
Fast Roaming ⦿ Enable ○ Disable

Fast Roaming Settings

Mobility Domain: a1b2

R0 Key Lifetime: 10000

Reassoc deadline: 1000

R0/NAS Identifier: ap.example.com

R1 Identifier: 000102030405

R1 Push: ○ Enable ⦿ Disable

802.11k- Smartly provides roaming client with information regarding nearby APs and their channels, which prepares the client for easier roaming.
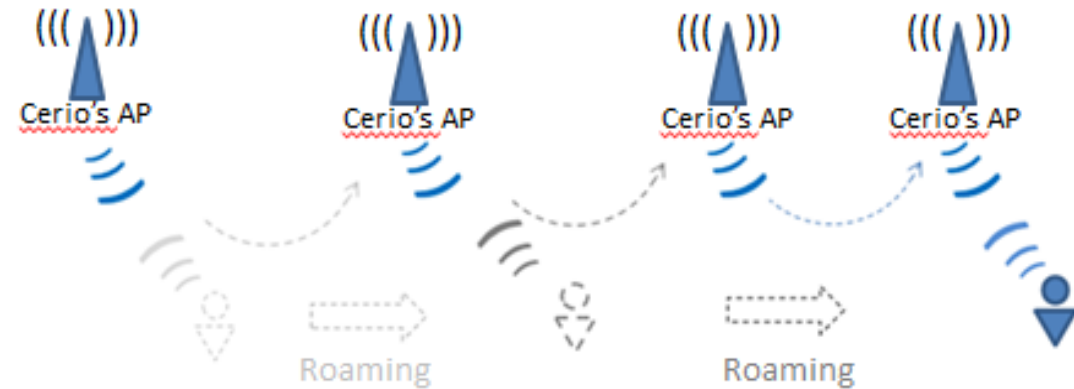
802.11r- Stores encryption keys on all the APs within the network. This simplifies the authentication process when clients roam to new APs, greatly reducing CPU loading and latency.

Additional Features

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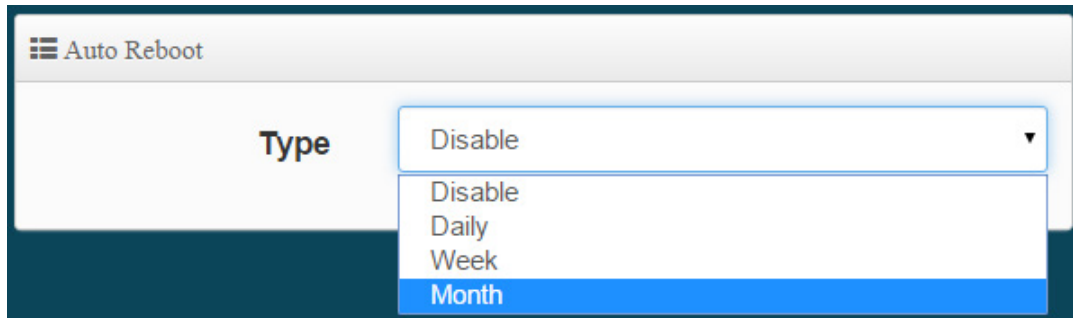
LED Control- User can select LED disable or enable by their preferences or environmental needs
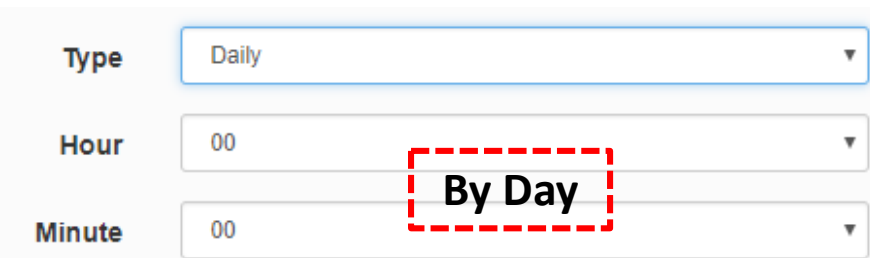
Auto Reboot- Setup device auto reboot schedule to reduce CPU overloading and device crashes.

What we do

Innovation & Design
Our R&D team continues to incorporate the newest wireless protocols and features to make our products perfect for enterprise deployment.

Wireless Solutions
Our Field Application Engineers and Specialists have unparalleled experience providing the perfect solution for any wireless projects (e.g. Hotels, Long Distance PTP Backhaul, Universities)

Software Development & Design
Our software provides a high featured and easily operated User Interface and also supports centralized AP Management for convenient device deployment.

Outstanding Customer Service
CERIO's customer service staff are experts on our products and possess clear and patient communication skills.

www.cerio.com.tw

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