

**CERIO**  
*Amplify your Wireless Network*

**CERIO**

# Introduction to **DT-300N v2/A4**

**CenOS 5.0 Software Core**



eXtreme Power 11n 2.4GHz 2x2  
Access Point with Router (1000mW)





- 1000mW at 2.4Ghz eXtreme High Power Access Point
- Supports bandwidth of up to 300mbps
- Supports 5 Operation Modes (CenOS 5.0)
- 2x2 Built-in 2.4Ghz 10dBi Directional Antenna
- Two 10/100Mbps Fast Ethernet Ports
- IEEE802.3af/at compliant **Passive PoE** Design
- Water resistant IPX6 Housing
- Integrates a long-range power amplifier and high sensitivity receiver to deliver unmatched reliability and performance at large coverage application
- Supports PoE Bridge (Passthrough)

- Supports 802.11n/11g/11b wireless standards
- Operation modes include: Router Mode, AP with WDS Mode, Control Access Point Mode, Client Bridge Mode, and WISP Mode
- Can broadcast up to 8 SSIDs, all of which support VLAN tagging
- Control Access Point mode can centrally manage up to 16 AP devices without the need for an additional AP Controller
- Supports Captive Portal Authentication for easy client login
- Supports OAuth2.0 for user login through Facebook/Google+
- Integrates 802.11r/k Fast Roaming Protocol
- Supports Ping Watchdog feature, the OS smartly reboots the system before a major crash.



# Hardware Overview

**EX**TREME  
POWER

Grounding Port



ETH2 (PoE Bridge)

Reset Button

ETH1 (PoE-In)



Pole / Wall  
Mount

# PoE Bridge Application — CERIO

## CERIO's DT-300N v2/A4 utilizes PoE Bridge

- Conveniently supply both power and data to subsequent APs/Devices (IP Camera, VOIP) through the PoE Bridge Function. This allows for convenience in structuring your network infrastructure, eliminating the need for additional power cables.



# Mounting Options

Supports **Pole Mounting**



Supports **Wall Mounting**



# Mounting Installation

## Pole Mount



Easily mount device onto poles using provided self-locking cable ties

## Wall Mount: Step 1

**1**

First install the wall mount in desired position using screws provided in the mounting kit

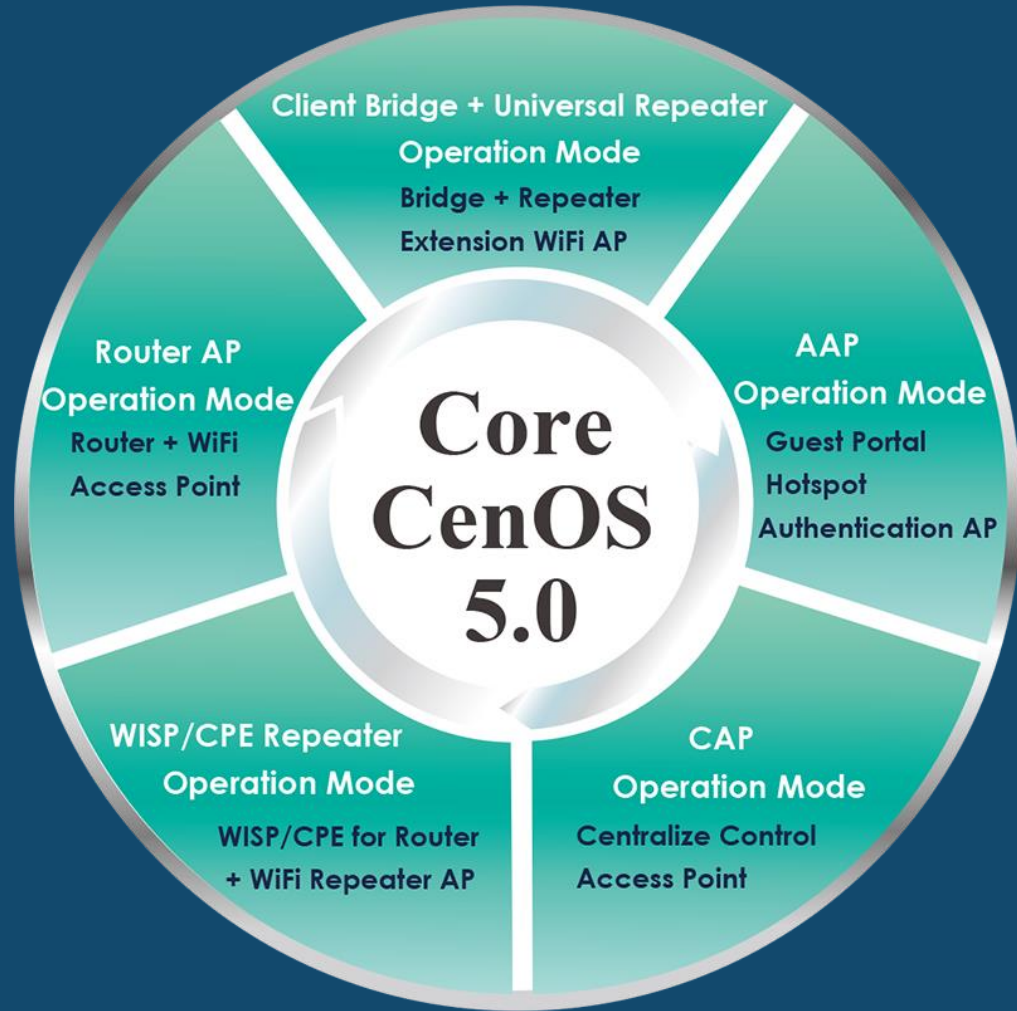
## Wall Mount: Step 2

**2**

After the wall mount is securely installed, simply click the device onto the wall mount



# Software Overview



Only Cerio's special model supports CAP / Router mode

# Captive Portal Authentication



Captive Portal Authentication conveniently allows wireless clients to access the network through a customized web login portal.



Local Account Login



Facebook Login



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.)



\*Router Mode does **NOT support** Captive Portal Login\*

# Integrated AP Management

Centralized AP Management

AP Management

AP Controller

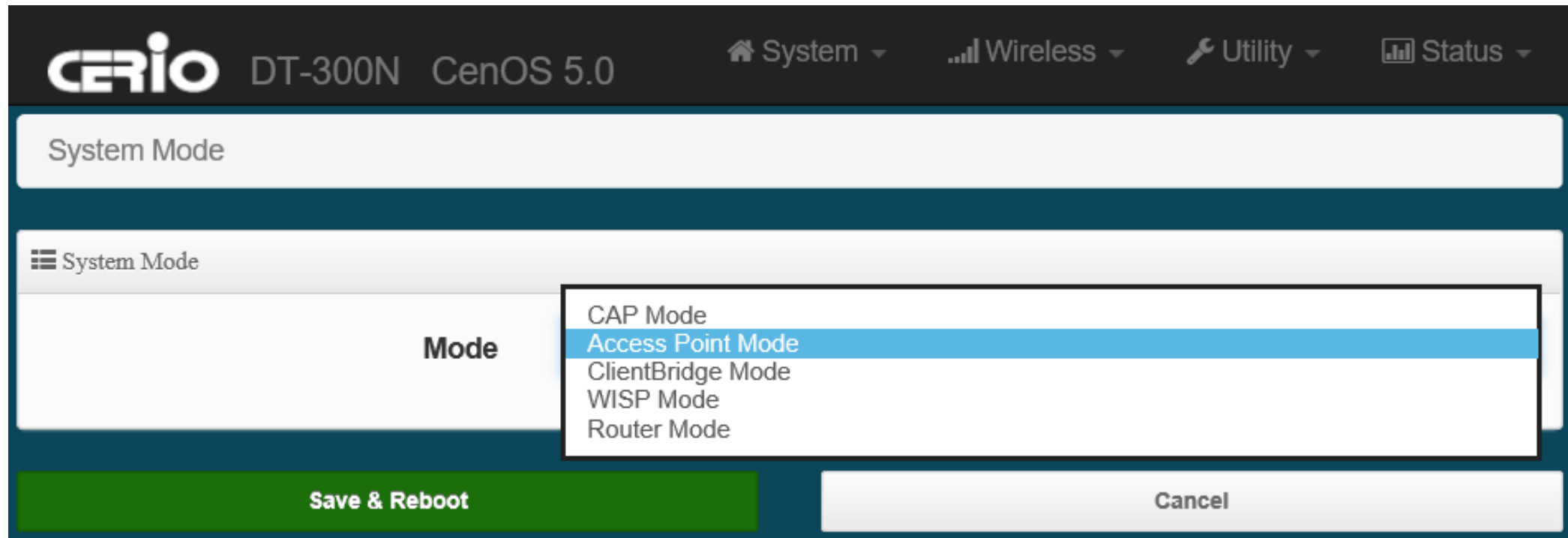


Fast and Convenient Client Login

Captive Portal Authentication



DT-300N v2/A4 supports five different Operation Modes: Control Access Point, Access Point Mode with WDS, Client Bridge + Repeater Mode, WISP/CPE Repeater AP Mode, and Router Mode



\*Notice: Router Mode does **NOT support** Client Authentication\*

Control Access Point (CAP) Mode's converts the device into a centralized AP management controller. When DT-300N v2/A4 is in CAP Mode, it can centrally manage up to **16 AP devices**.

The screenshot displays the CERIO web interface. The top navigation bar includes the CERIO logo, a home icon, and menu items for System, AP Control, Utility, and Status. The AP Control menu is expanded, showing options: Scan Device, Batch Setup, AP Setup, Group Setup, Map Setup, Authentication Profile, and Status. The main content area is divided into two panels. The left panel, titled 'Overview', shows system configuration details: Mode (CAP Mode), System Name (DT-300N), System Time (2015/01/01 08:02:42), and System Uptime (01:44). The right panel, titled 'Information', features a 'Memory' gauge showing 76% usage, with a scale from 0 to 100.

### Scan AP Device

#### Filter Device

**VLAN#**

**Default Password**

**Sort**

#### Update IP Address & Netmask

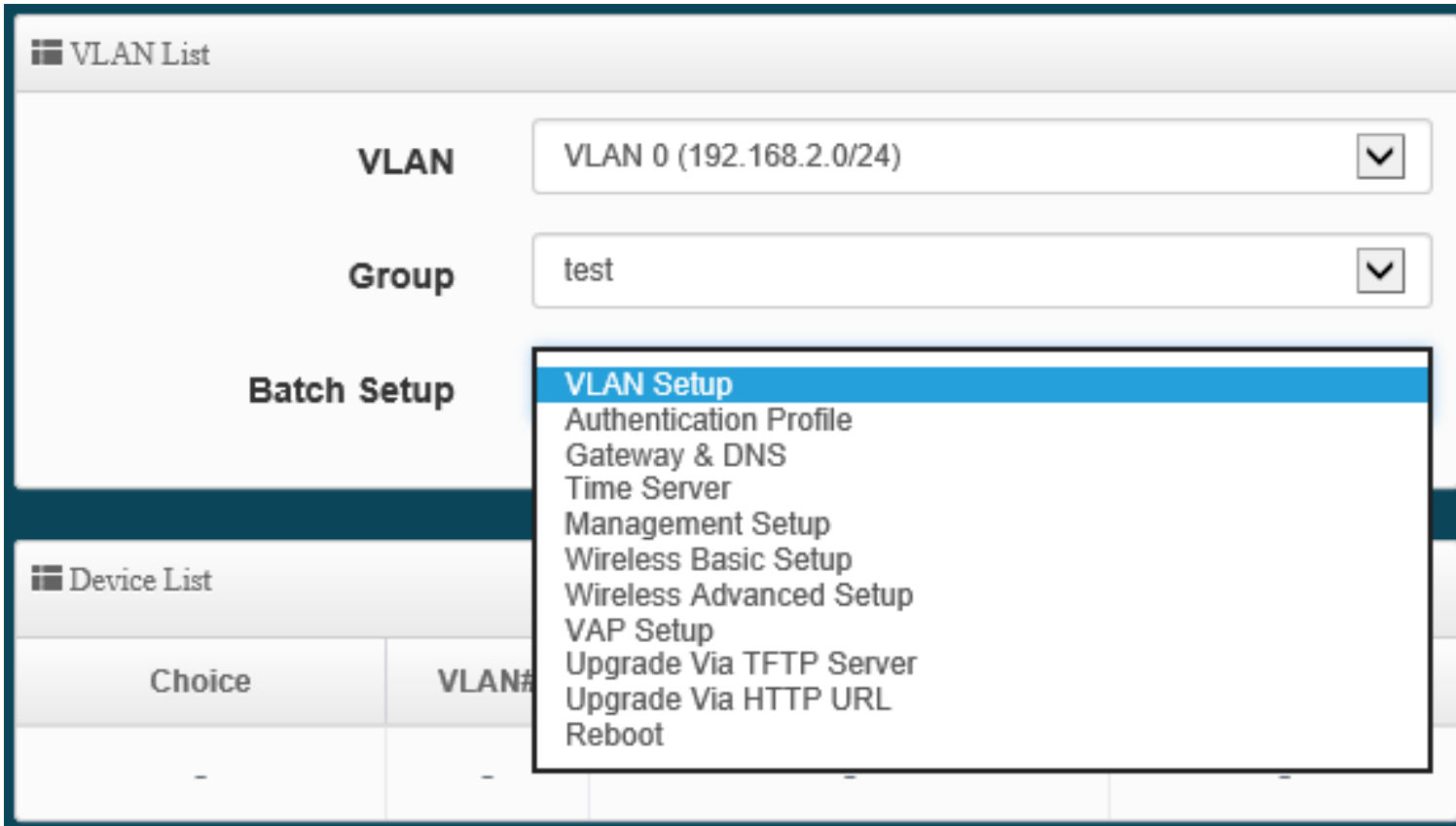
**Control Port**

**VLAN TAG**

**IP Address**

**Netmask**

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



The screenshot shows the 'Batch Setup' interface in CERIO. It features a 'VLAN List' section with two dropdown menus: 'VLAN' set to 'VLAN 0 (192.168.2.0/24)' and 'Group' set to 'test'. Below these is a 'Batch Setup' dropdown menu that is open, showing a list of configuration options: 'VLAN Setup' (highlighted), 'Authentication Profile', 'Gateway & DNS', 'Time Server', 'Management Setup', 'Wireless Basic Setup', 'Wireless Advanced Setup', 'VAP Setup', 'Upgrade Via TFTP Server', 'Upgrade Via HTTP URL', and 'Reboot'. At the bottom, there is a 'Device List' table with columns for 'Choice' and 'VLAN#', both containing dashes.

Choice	VLAN#
-	-

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.

### VLAN Setup

**Apply**

**VLAN**

**VLAN Mode**  Enable  Disable

**Access Point 0**  Enable  Disable

**802.1d Spanning Tree**  Enable  Disable

**Control Port**  Enable  Disable

**IAPP**

### IP Setup

**Apply**  Enable  Disable

**IP Mode**  Enable  Disable

**IP Address**

**Netmask**

### ETH0 VLAN Tag Setup

**ETH0**  Enable  Disable

**VLAN TAG**

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



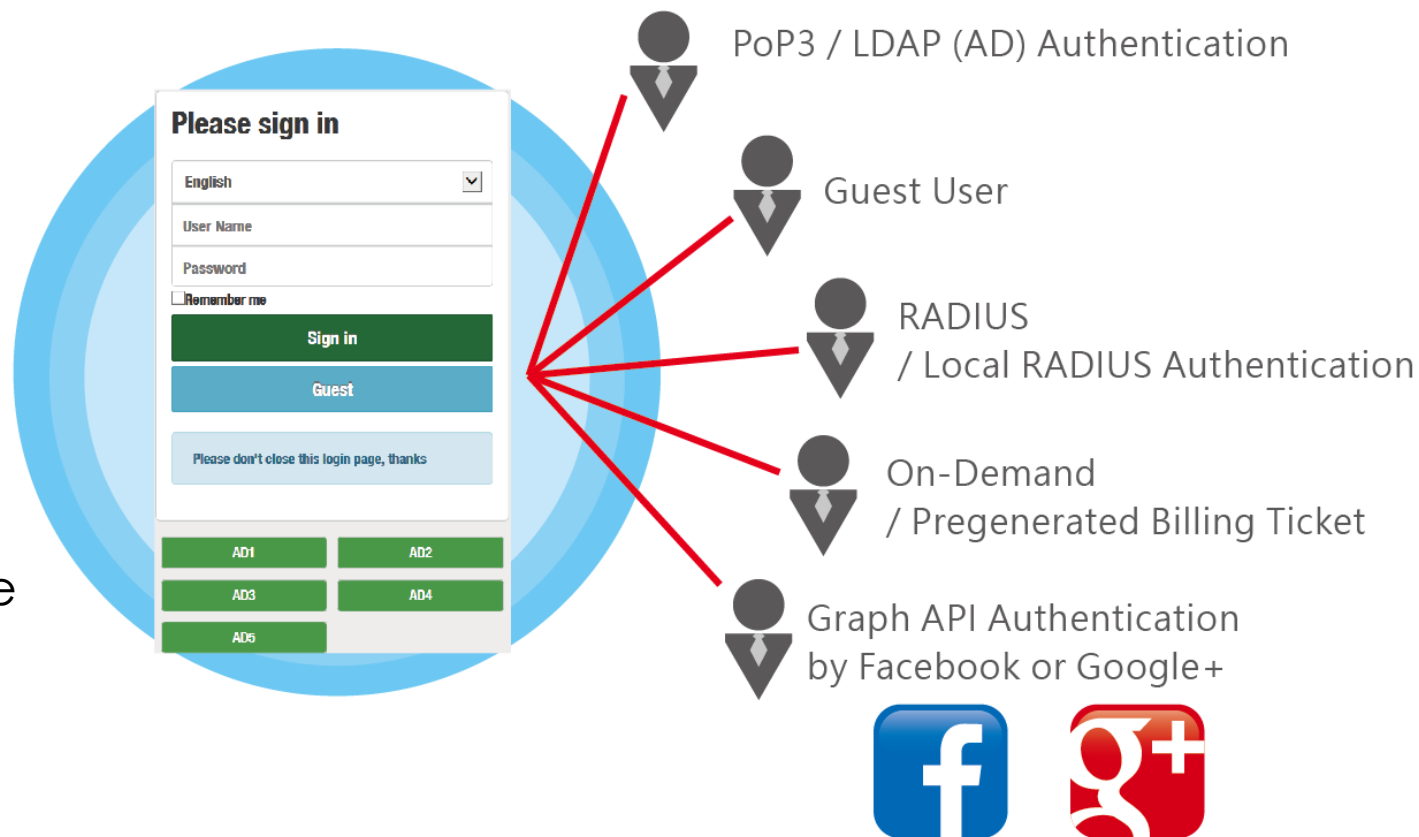
CAP Mode also supports Map Setup function for organizing your AP network. Administrators can create maps by uploading floor plan URLs and dragging APs to the correct location. Once complete, administrators can monitor AP statuses such as uptime, data rates, and connected clients

Map List				Create New Map
#	Name	Description	Action	
1	1F_plan	Location Map for man...	View	▼



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



\*Notice: Router Mode does **NOT support** Client 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.

OAuth 2.0 Provider List <span style="float: right;">Create New Provider</span>			
#	Active	Provider	Action
1	<span>On</span>	Google	<span>Edit</span> ▼
2	<span>On</span>	Facebook	<span>Edit</span> ▼



**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

Guest

Service  Enable  Disable

Login Type  One Time  Multiple Time

Count Limit

Login Time  Minutes

QoS  Enable  Disable

Upload  Kbps

Download  Kbps

**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

Local User List

#	Name	Action
1	Test Account 1	Delete
2	Test Account 2	Delete

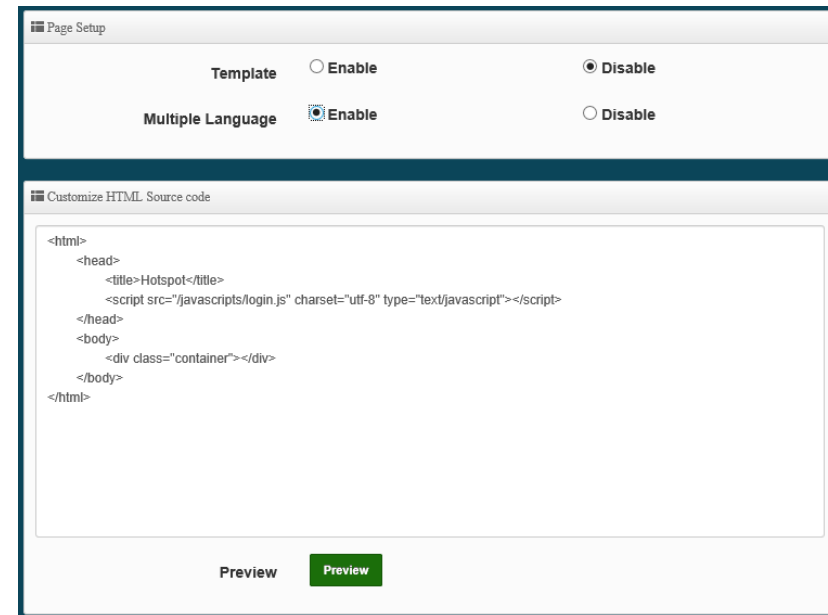
Administrators can create a customized Login Page which can become a platform for:

**(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.



**Customized Login Page**



**Customize through HTML Code**

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.

### Bandwidth Control

Peer Users	<input checked="" type="radio"/> Enable	<input type="radio"/> Disable
Upload	<input type="text" value="512"/>	Kbps
Download	<input type="text" value="512"/>	Kbps
Total	<input checked="" type="radio"/> Enable	<input type="radio"/> Disable
Upload	<input type="text" value="1024"/>	Kbps
Download	<input type="text" value="1024"/>	Kbps

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

Walled Garden

Display Name (4 -32 chars)

IP Address/Domain

Full URL

Enabled Walled Garden Websites



DT-300N v2/A4's design supports a total of 8 Virtual LANs (VLAN) and 8 SSIDs.

VLAN Setup						
VLAN List						
#	VLAN Mode	Flag	IP Address	Netmask	Radio 0	Action
0	<span>On</span>	<span>Native ETH0</span> <span>Native ETH1</span> <span>Access Control</span>	192.168.2.254	255.255.255.0	<span>NGS_AP0</span>	<span>Network</span>
1	<span>Off</span>	<span>ETH0.101</span> <span>ETH1.101</span>	-	-	<span>NGS_AP1</span>	<span>Network</span>



Supports 8 VLANs

Each VLAN supports 1 SSIDs



ETH1 VLAN Tag Setup	
ETH1	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
ETH1 Tag	<input checked="" type="checkbox"/> 1-4096

DT-300N v2/A4 supports up to **4096** Tags. This is a crucial feature that ensures successful directing of packet traffic for VLANs that span across multiple switches.



### WDS Setup

WDS Setup  Enable  Disable

Authentication

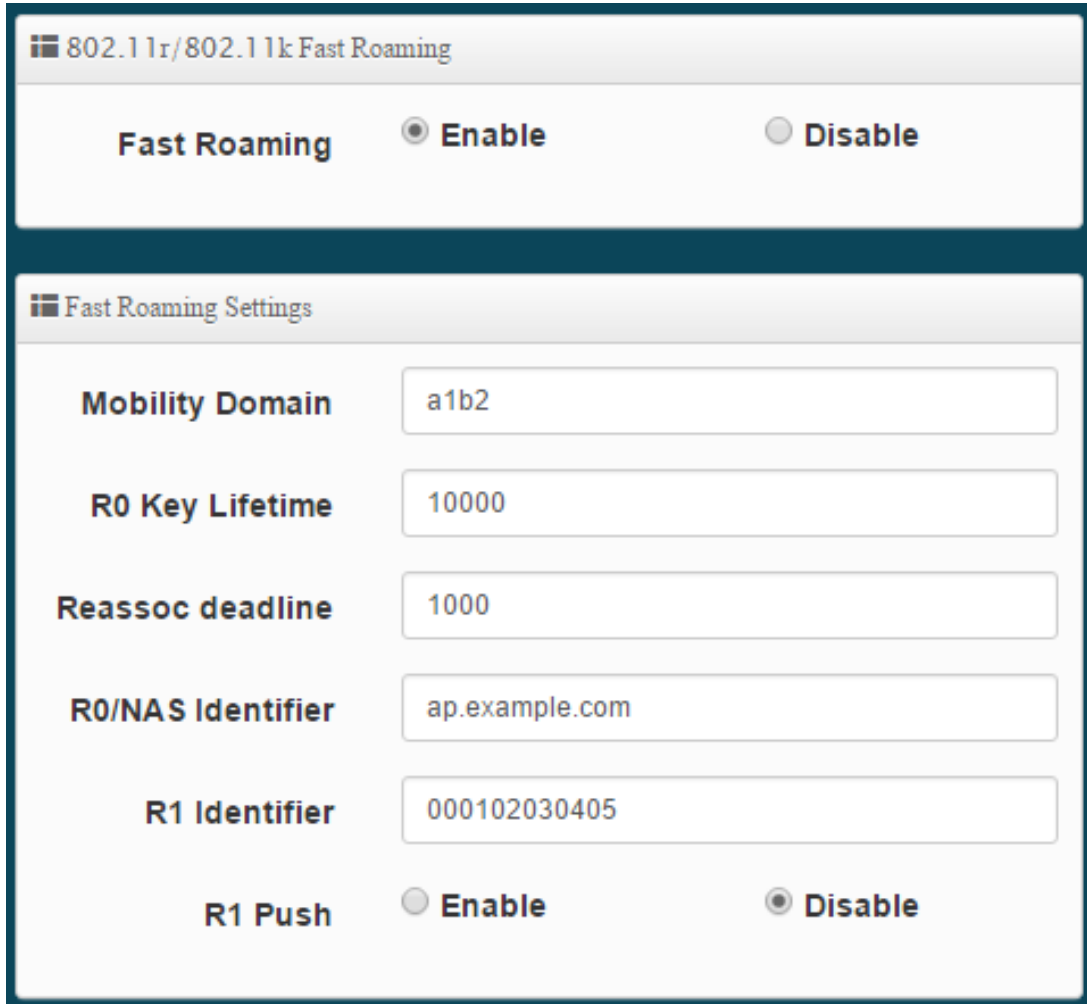
PassPhrase

### WDS Client Setup

Enable	MAC Address
<input type="checkbox"/>	<input type="text"/>
<input type="checkbox"/>	<input type="text"/>
<input type="checkbox"/>	<input type="text"/>
<input type="checkbox"/>	<input type="text"/>
<input type="checkbox"/>	<input type="text"/>
<input type="checkbox"/>	<input type="text"/>
<input type="checkbox"/>	<input type="text"/>
<input type="checkbox"/>	<input type="text"/>

**DT-300N v2/A4** with **CenOS 5.0** supports **WDS Setup** when operating in **Access Point Mode**

**DT-300N v2/A4 's Access Point mode** supports up to **8** WDS links, and includes a WDS Status page to monitor the WDS connection strength.  
*( 8x WDS on the 2.4GHz frequency band )*



**802.11r/802.11k Fast Roaming**

**Fast Roaming**  **Enable**  **Disable**

**Fast Roaming Settings**

**Mobility Domain**

**R0 Key Lifetime**

**Reassoc deadline**

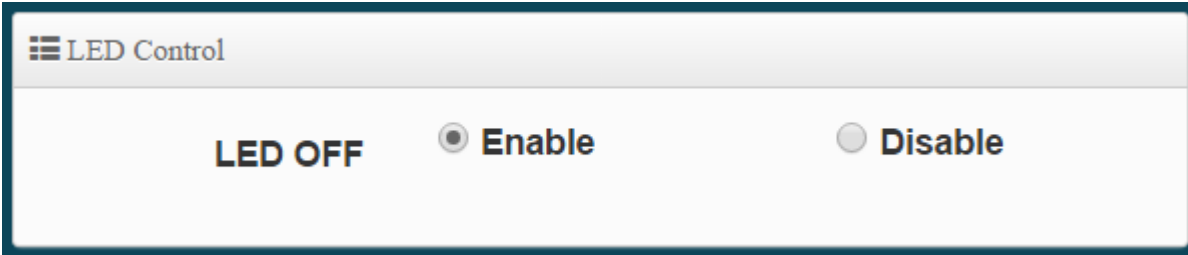
**R0/NAS Identifier**

**R1 Identifier**

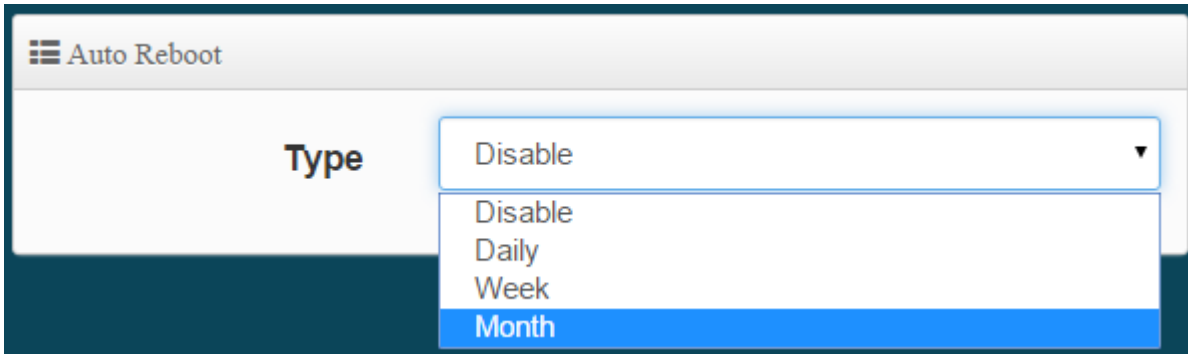
**R1 Push**  **Enable**  **Disable**

**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.



**LED Control-** Allows the devices LED lights to be disabled to reduce blinking irritation in sensitive environments.



**Auto Reboot-** Setup device auto reboot schedule to reduce CPU overloading and device crashes.



**PoE Bridge-** Supply power to subsequent devices such as IP Cameras and Access Points through RJ45 cabling.

# 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.

# Contact Information

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