



Lite Management to Cloud



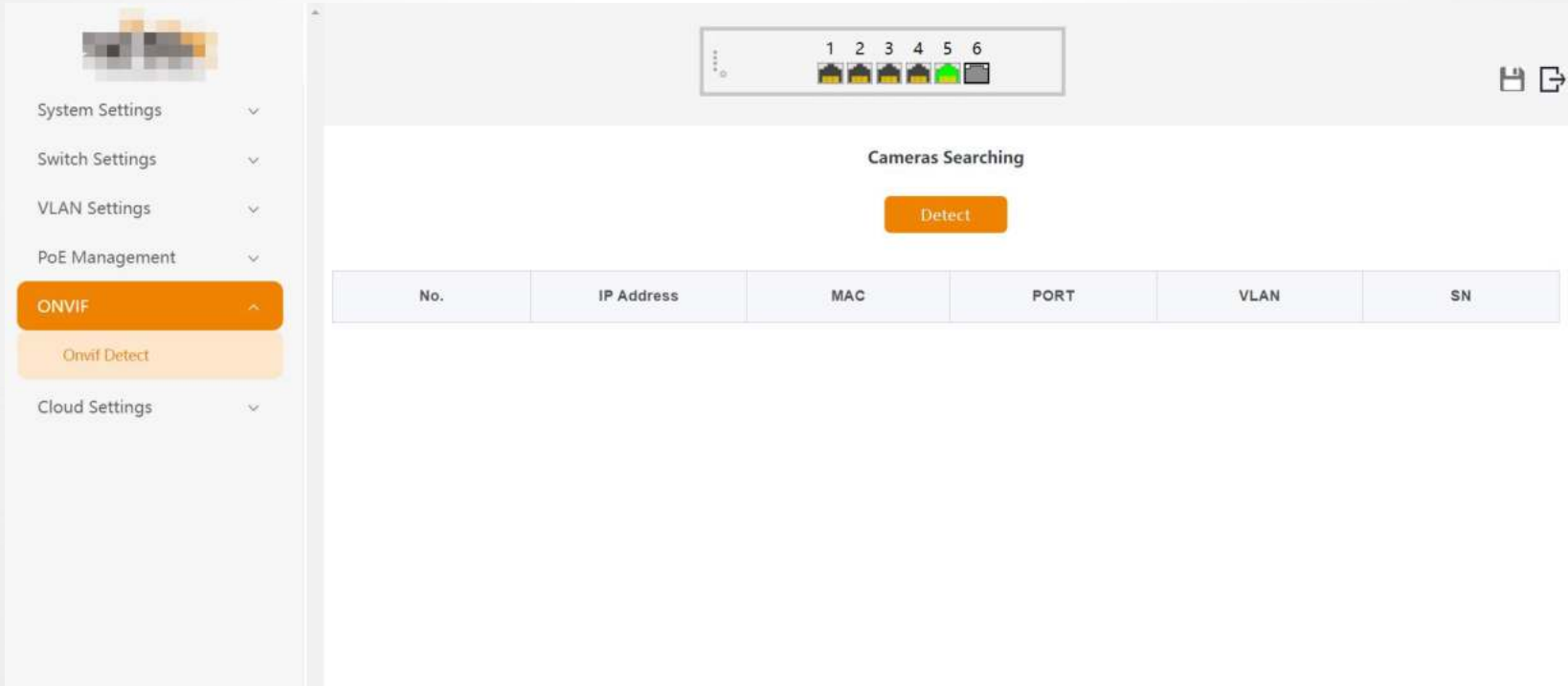
Key Requirements:

1. Switch to Cloud based on JSON/MQTT protocol
2. Report the switch status to cloud
3. Can configure the switch from Cloud
4. Add the ONVIF/Switch discovery function on switch

Difficulties:

1. No system for the lite management switches
2. Limited resources from C51 CPU(4,8 ports model) and MIPS CPU (16 and 24 ports models)

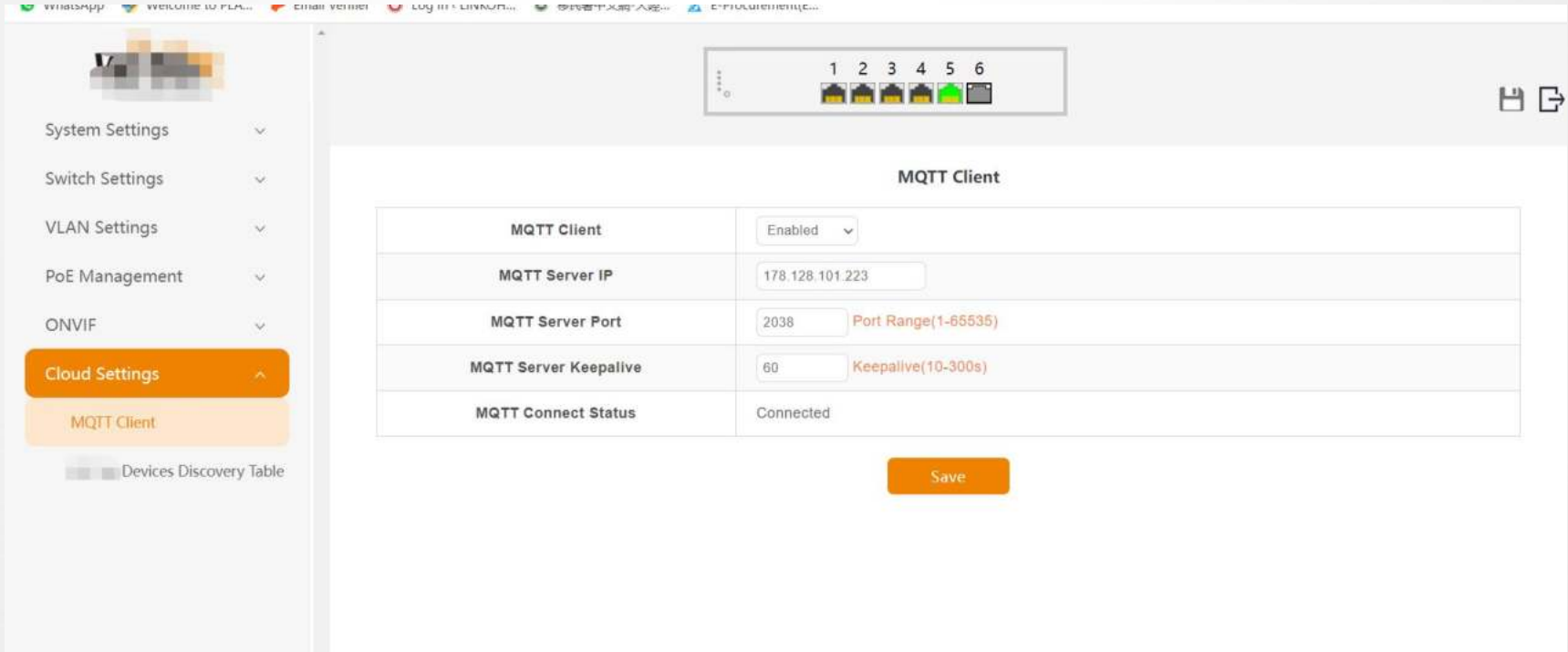
ONVIF Camera Searching on Switch



The screenshot shows a web management interface for a switch. On the left is a navigation menu with the following items: System Settings, Switch Settings, VLAN Settings, PoE Management, ONVIF (highlighted in orange), Onvif Detect (highlighted in light orange), and Cloud Settings. The main content area is titled "Cameras Searching" and features a "Detect" button. Above the button is a status bar with six ports labeled 1 through 6, each with a corresponding icon (ports 1-4 are grey, port 5 is green, and port 6 is grey). To the right of the status bar are icons for saving and refreshing. Below the "Detect" button is a table with the following columns: No., IP Address, MAC, PORT, VLAN, and SN.

No.	IP Address	MAC	PORT	VLAN	SN
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MQTT on Switch

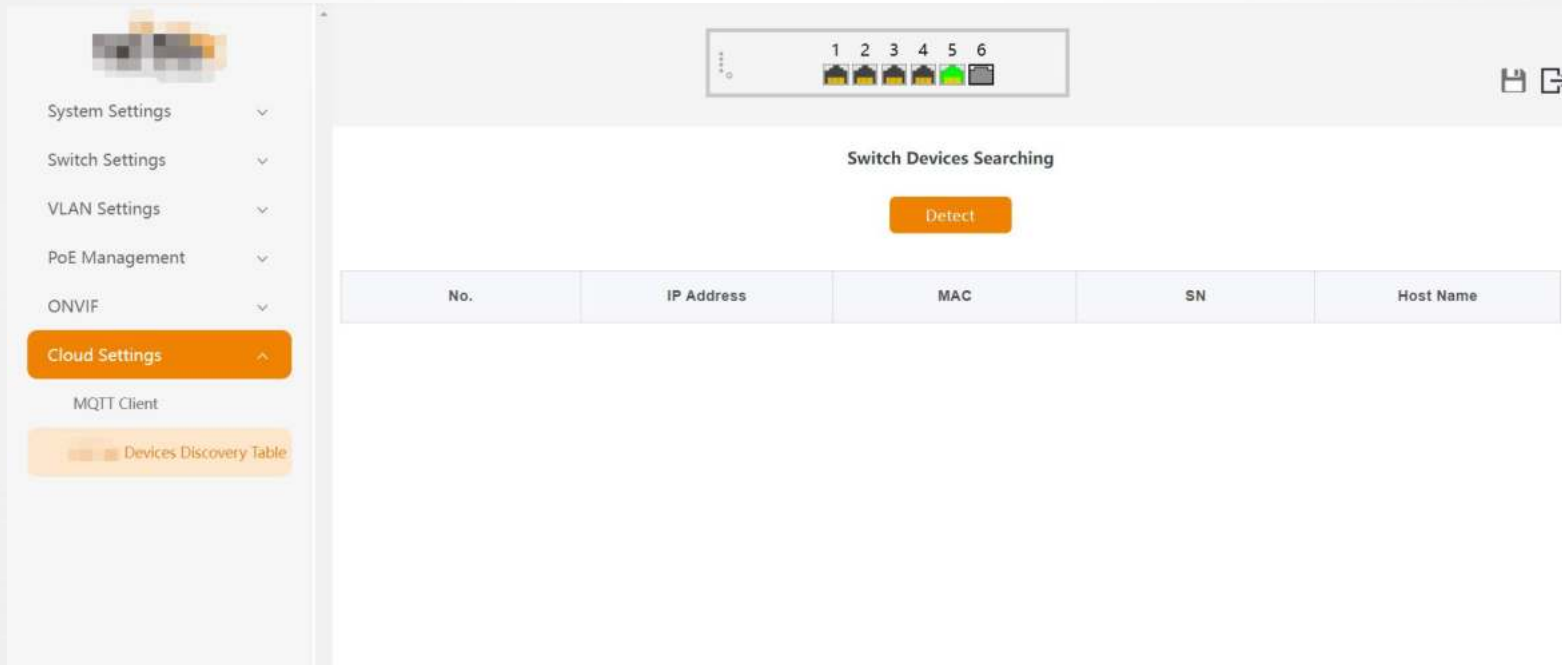


The screenshot shows a web management interface for a PoE switch. On the left is a navigation menu with options: System Settings, Switch Settings, VLAN Settings, PoE Management, ONVIF, Cloud Settings (highlighted), MQTT Client, and Devices Discovery Table. The main content area is titled 'MQTT Client' and contains a table of configuration parameters. At the top of the main area, there is a status bar with six PoE ports (1-6) and a 'Save' button at the bottom right.

MQTT Client	Enabled
MQTT Server IP	178.128.101.223
MQTT Server Port	2038 <small>Port Range(1-65535)</small>
MQTT Server Keepalive	60 <small>Keepalive(10-300s)</small>
MQTT Connect Status	Connected

Save

Devices Discovery Function on Switch



System Settings

Switch Settings

VLAN Settings

PoE Management

ONVIF

Cloud Settings

MQTT Client

Devices Discovery Table

1 2 3 4 5 6

Switch Devices Searching

Detect

No.	IP Address	MAC	SN	Host Name
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Lite Management PoE Switch to Cloud

Overview of the switch from Cloud, can reset/reboot upgrade switch

MONITORING CONFIGURATION MAINTENANCE SERVICE

1 Network

1 / 2 Online/Total Device

4 Unread Alarm

Device: All Network: All

DELETE DEVICE RESET FACTORY REBOOT UPGRADE MOVE EWEB

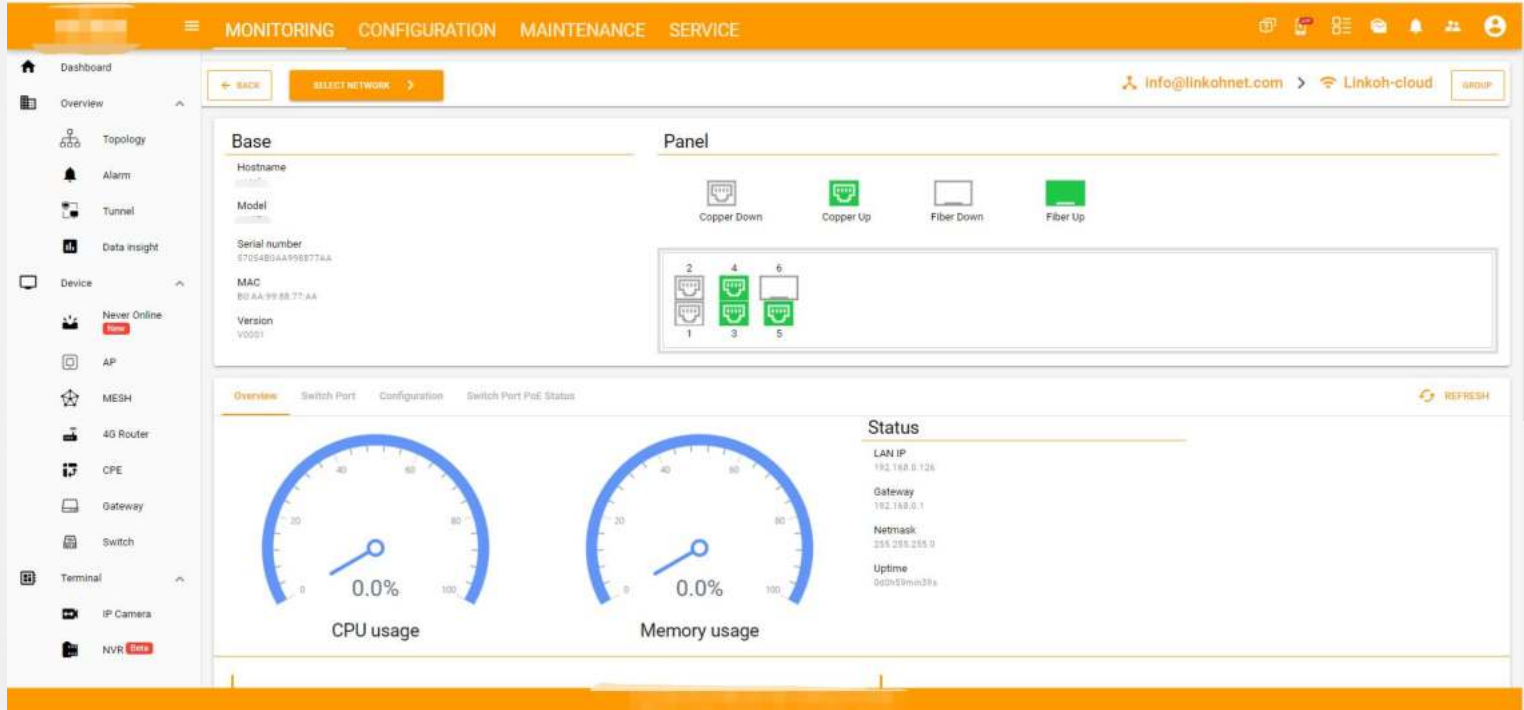
Serial number, hostname

REFRESH

<input type="checkbox"/>	Status	Network Name	Serial number	Model	Hostname	Version	Last update	MAC	WAN IP	Notes
<input type="checkbox"/>	Offline	Linkoh-cloud	AP210002103080003			v4.3.build20220803-0943-e891e78	2023-05-10 14:46:56	44:D1:FA:8A:8B:7E	192.168.0.112	AP
<input type="checkbox"/>	Online	Linkoh-cloud	57054B0AA998877AA			20.92%	2023-05-23 20:26:47	B0:AA:99:88:77:AA	192.168.0.126	test

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Switch status on Cloud



The screenshot displays a cloud management interface for a PoE switch. The interface is organized into several sections:

- Navigation:** A top bar contains 'MONITORING', 'CONFIGURATION', 'MAINTENANCE', and 'SERVICE'. A left sidebar lists various system components like Dashboard, Overview, Topology, Alarm, Tunnel, Data insight, Device, AP, MESH, 4G Router, CPE, Gateway, Switch, Terminal, IP Camera, and NVR.
- Base Information:** A section titled 'Base' provides details for the selected device:
 - Hostname: [redacted]
 - Model: [redacted]
 - Serial number: 870548DAAY98877AA
 - MAC: 80 AA 99 88 77 AA
 - Version: V0001
- Panel Status:** A section titled 'Panel' shows the operational status of different connection types:
 - Copper Down: [Red indicator]
 - Copper Up: [Green indicator]
 - Fiber Down: [Red indicator]
 - Fiber Up: [Green indicator]
- Port Status Grid:** A grid of 6 ports (numbered 1-6) with status indicators:
 - Port 1: [Red indicator]
 - Port 2: [Green indicator]
 - Port 3: [Green indicator]
 - Port 4: [Green indicator]
 - Port 5: [Green indicator]
 - Port 6: [Red indicator]
- Usage Gauges:** Two large circular gauges show current resource usage:
 - CPU usage: 0.0%
 - Memory usage: 0.0%
- Status Details:** A 'Status' section on the right provides network parameters:
 - LAN IP: 192.168.0.126
 - Gateway: 192.168.0.1
 - Netmask: 255.255.255.0
 - Uptime: 00h35m43s

Lite Management PoE Switch to Cloud

Configure port on cloud

The screenshot displays a network management dashboard with an orange header. The main navigation bar includes 'MONITORING', 'CONFIGURATION', 'MAINTENANCE', and 'SERVICE'. A left sidebar lists various system components like Dashboard, Overview, Topology, Alarm, Tunnel, Data insight, Device, AP, MESH, 4G Router, CPE, Gateway, Switch, Terminal, IP Camera, and NVR. The central area shows a 'Switch Port' configuration page with a 'Switch Port List' table. Above the table, there are status indicators for 'Copper Down', 'Copper Up', 'Fiber Down', and 'Fiber Up', and a small diagram of a switch with ports 1-6. The table lists 6 ports with their respective configurations and link statuses.

Switch Port	Switch Port Name	Switch Port Description	Link status	Speed	Duplex	Flow(Tx/Rx)	Rate(Tx/Rx)	Port mode	PVID	TAG VLAN	UNTAG VLAN
1	Port 1		Down	10Mbps	Auto	0/0	0/0 Kbps	trunk	1	-	1
2	Port 2		Down	10Mbps	Auto	0/0	0/0 Kbps	trunk	1	-	1
3	Port 3		Up	100Mbps	Full duplex	0MB/0MB	1/2 Kbps	hybrid	1	-	1
4	Port 4		Up	100Mbps	Full duplex	0MB/0MB	2/0 Kbps	hybrid	1	-	1
5	Port 5		Up	100Mbps	Full duplex	0MB/0MB	4/0 Kbps	hybrid	1	-	1
6	Port 6		Down	100Mbps	Full duplex	0/0	0/0 Kbps	hybrid	1	-	1

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Lite Management PoE Switch to Cloud

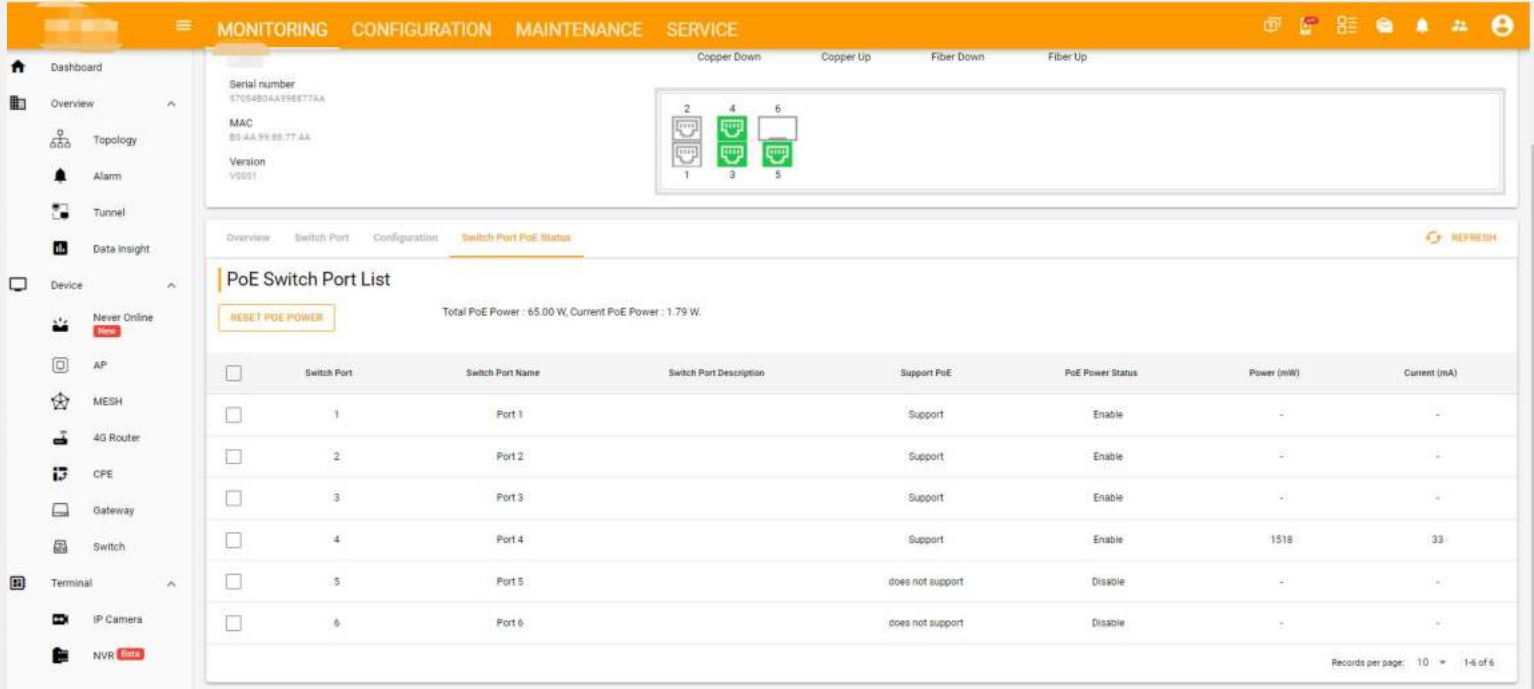


Configure VLAN on cloud

The screenshot shows a network management interface with a top navigation bar containing 'MONITORING', 'CONFIGURATION', 'MAINTENANCE', and 'SERVICE'. A left sidebar lists various system components like Dashboard, Overview, Topology, Alarm, Tunnel, Data insight, Device, Naver Online, AP, MESH, 4G Router, CPE, Gateway, Switch, Terminal, IP Camera, and NVR. The main content area is titled 'Base' and displays device details: Hostname, Model, Serial number (S70480AA99877AA), MAC (88 AA 99 88 77 AA), and Version (V0001). Below this, the 'Configuration' tab is active, showing a 'VLAN List' table with one entry: VLAN ID 1, Description, Untagged Ports 1-56, and Tagged Ports. An 'ADD VLAN' button is visible above the table. The interface also includes a 'REFRESH' button and a footer indicating 'Records per page: 10' and '1-1 of 1'.

VLAN ID	Description	Untagged Ports	Tagged Ports	Configure
1		1-56	-	-

Configure PoE function on cloud



Serial number
S70S4B04AA156E77AA

MAC
8S AA 9A 8S 77 AA

Version
V05D1

Overview Switch Port Configuration **Switch Port PoE Status** REFRESH

RESET POE POWER Total PoE Power : 65.00 W, Current PoE Power : 1.79 W.

<input type="checkbox"/>	Switch Port	Switch Port Name	Switch Port Description	Support PoE	PoE Power Status	Power (mW)	Current (mA)
<input type="checkbox"/>	1	Port 1		Support	Enable	-	-
<input type="checkbox"/>	2	Port 2		Support	Enable	-	-
<input type="checkbox"/>	3	Port 3		Support	Enable	-	-
<input type="checkbox"/>	4	Port 4		Support	Enable	1518	33
<input type="checkbox"/>	5	Port 5		does not support	Disable	-	-
<input type="checkbox"/>	6	Port 6		does not support	Disable	-	-

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02

Lite Management with STP/RSTP



Key Requirements:

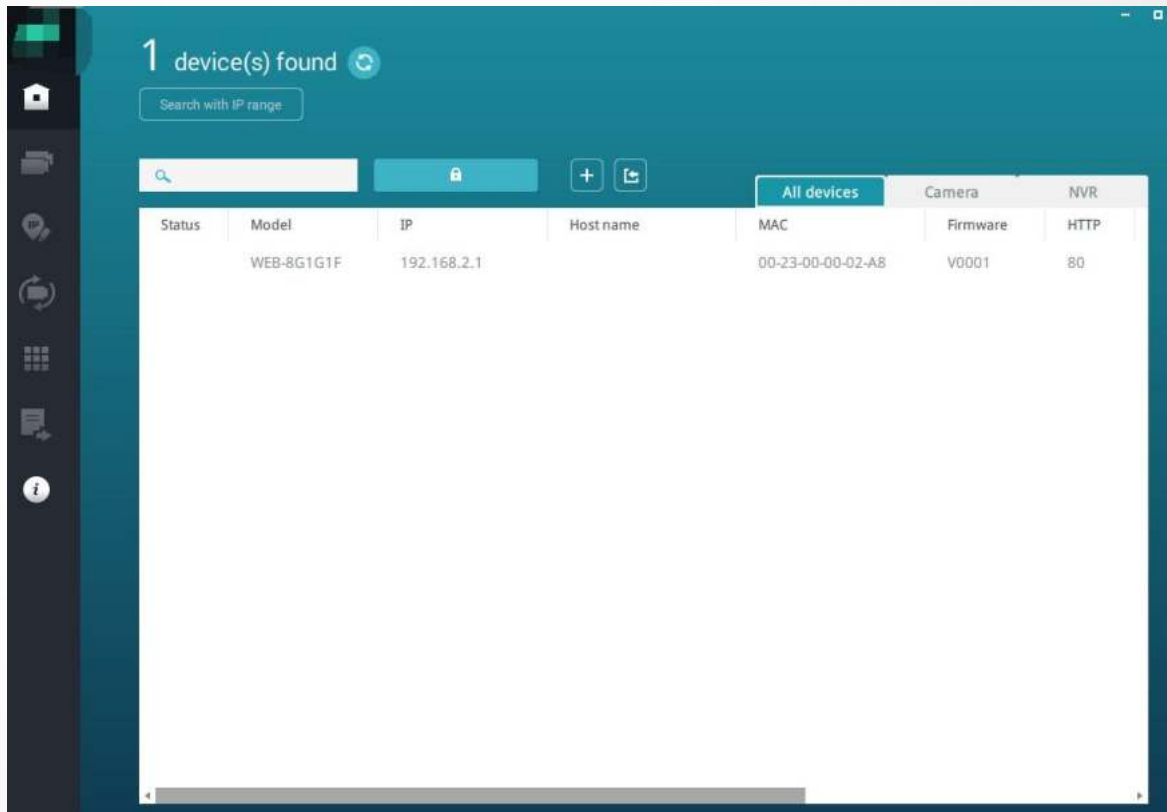
1. Switch can be discovery by search tool: in DHCP enable mode can allocate 169.254.xx.xxx IP for switch
2. PoE management: PoE watchdog and Extend PoE on each Port
3. STP/RSTP function

Difficulites:

1. No system for the lite management switches
2. Limited resources from C51 CPU(4,8 ports model) and MIPS CPU (16 and 24 ports models)

Lite Management PoE Switch with STP/RSTP

Switch Discovery



The screenshot displays a network management interface with a teal header and a dark sidebar. The main content area shows the results of a switch discovery process. At the top, it indicates "1 device(s) found" with a refresh icon. Below this is a search bar labeled "Search with IP range". The interface includes a search input field, a lock icon, and buttons for adding (+) and sharing (📄) devices. A table lists the discovered device, with tabs for "All devices", "Camera", and "NVR". The table has columns for Status, Model, IP, Host name, MAC, Firmware, and HTTP. The discovered device is a WEB-8G1G1F switch with IP 192.168.2.1, MAC 00-23-00-00-02-A8, Firmware V0001, and HTTP port 80.

Status	Model	IP	Host name	MAC	Firmware	HTTP
	WEB-8G1G1F	192.168.2.1		00-23-00-00-02-A8	V0001	80

PoE Management Switch on Switch: Extend PoE Mode & PoE Auto-checking

WEB-8G1G1F

- > System
- > VLAN
- > MAC Address
- ▼ PoE Management
 - PoE Setting
- > Port Management
- > STP
- > Link Aggregation
- > Maintenance



Global Configuration

Power Supply W


Port Setting

Port	PoE Mode	Extend PoE Mode	PoE Auto-checking	PoE Reboot
Port 1	Disable	OFF	OFF	<input type="checkbox"/>
Port 2	Disable	OFF	OFF	<input type="checkbox"/>
Port 3	Disable	OFF	OFF	<input type="checkbox"/>
Port 4	Disable	OFF	OFF	<input type="checkbox"/>
Port 5	Disable	OFF	OFF	<input type="checkbox"/>
Port 6	Disable	OFF	OFF	<input type="checkbox"/>
Port 7	Disable	OFF	OFF	<input type="checkbox"/>
Port 8	Disable	OFF	OFF	<input type="checkbox"/>

STP/RSTP on Lite Management PoE Switch

WEB-8G1G1F

- > System
- > VLAN
- > MAC Address
- √ PoE Management
 - PoE Setting
- > Port Management
- √ STP
 - STP general
 - STP config
- > Link Aggregation
- > Maintenance



1 2 3 4 5 6 7 8 9 10

STP General

STP Mode: RSTP

Apply

STP state

STP Mode	802.1W RSTP
Bridge Max Age	20
Bridge Forward Delay	15
Bridge Priority	32768
Bridge Mac Address	00:23:00:00:02:A8
Root Priority	32768
Root Mac Address	00:23:00:00:02:A8
Bridge Root Port	0
Root Path Cost	0

STP/RSTP on Lite Management PoE Switch

NEB-8G1G1F

- > System
- > VLAN
- > MAC Address
- ✓ PoE Management
 - PoE Setting
- > Port Management
- ✓ STP
 - STP general
 - STP config
- > Link Aggregation
- > Maintenance

STP Config

Priority	32768
Max.Age	20
Hello Time	2
Forward Delay	15

Apply

