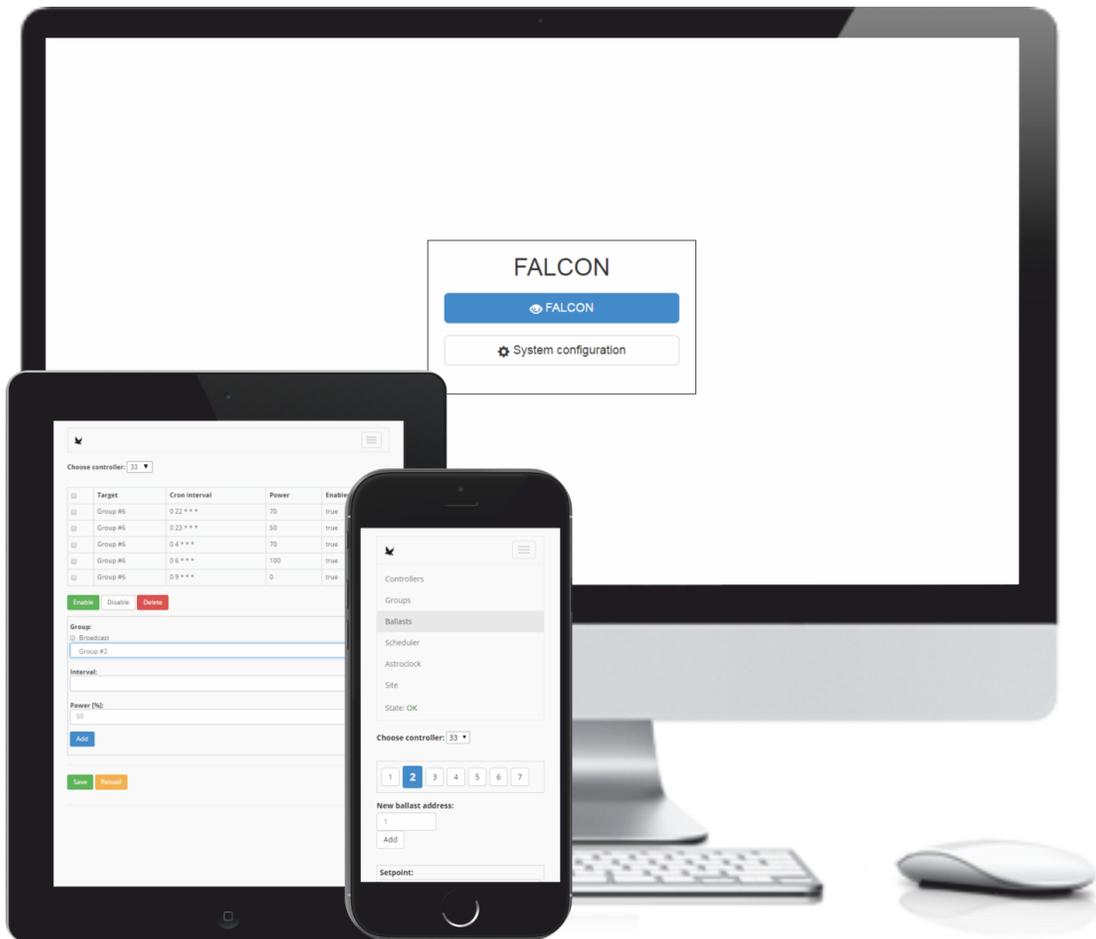


# LUMiMASTER WiFi Setup



## WiFi Adapter

LUMiMASTER SLC-NOM (version 2018) has built-in a USB port, which can be used to attach WiFi adapter and thus use WiFi to connect to LUMiMASTER (by creating a dedicated WiFi hotspot<sup>1</sup>).

There are many USB WiFi adapters on the market, not all of them are equal in capabilities. We have tested and recommend the ones with Ralink chips, for example this one:



<https://www.datart.sk/wifi-adapter-zircon-wa-150-s-antenou-cierny.html?lang=en>

Also, please make sure you have up-to-date firmware in order to have the latest security patches.

## WiFi Setup

### 1. Connect

Connect your notebook using Ethernet cable to LUMiMASTER, make sure the notebook network settings are compatible with LUMiMASTER network setup (by default it is on address 192.168.0.254), log in and go to System configuration.



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<sup>1</sup> Note, that this does not connect your LUMiMASTER to internet. It only creates local WiFi hotspot, that allows devices connected to this hotspot to open LUMiMASTER configuration or webui.

## 2. Create Access Point

RTUAdmin

System Network **Wifi** DHCP server Modem VPN User management E-Mail DDNS Firewall HTTP server Tools ▾

Journal OpenDAF Maintenance

System-wide settings

Regulatory domain: SK

Enable wifi on boot: Yes

Access point on wlan0 Remove

Enabled: Yes

Interface: wlan0

Channel: 3

SSID: falcon  Hidden

Operation mode: g

Maximum stations: 10

Authentication: wpa2

Passphrase: SomeSafePassPhrase

Add station Add access point Save Reload

In the Tab WiFi make sure the "Enable WiFi on boot" is selected. Fill in the details of your access point, especially the SSID (this is how the WiFi network will be named) and Passphrase. We do recommend using wpa2 Authentication method and non-trivial passphrase.

### 3. Set Static IP for wlan0

The screenshot shows the RTUAdmin web interface. At the top, there is a navigation menu with 'Network' selected. Below the menu, the 'Network' section is active, displaying two network interface configurations: 'NIC eth0' and 'NIC wlan0'.

**NIC eth0** (ethernet):

- Status:** 2: eth0: <BROADCAST,MULTICAST,UP,LOWER\_UP> mtu 1500 qdisc pfifo\_fast state UP group default qlen 1000  
Link/ether 50:2d:f4:10:ad:19 brd ff:ff:ff:ff:ff:ff  
inet 192.168.0.94/24 brd 192.168.0.255 scope global eth0:50  
valid\_lft forever preferred\_lft forever
- Configuration:**
  - Enabled
  - DHCP:** YES

**NIC wlan0** (wlan):

- Status:** 4: wlan0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc mq state DOWN group default qlen 1000  
Link/ether 00:0f:00:5c:39:ab brd ff:ff:ff:ff:ff:ff
- Configuration:**
  - Enabled
  - DHCP:** NO
  - Static addresses:** 192.168.50.1/24
  - Default gateways:** (empty)
  - DNS servers:** (empty)

At the bottom of the configuration page, there are three buttons: 'Save' (green), 'Revert' (orange), and 'OK' (grey).

Wlan0 is our new wireless interface. To keep things simple, we want it to have static IP address. Note, that this must not collide with the network on our eth0 interface.

In our example above, the LUMiMASTER's IP address on the wifi will be 192.168.50.1. DHCP must be OFF, as we are using static IP address on wifi interface.

#### 4. Setting up DHCP for clients

For all the client devices that will connect to our LUMiMASTER wifi hotspot, we will automatically provide network configuration using DHCP server. This will allow easy connection for our clients.

The screenshot shows the RTUAdmin web interface for configuring a DHCP server. The navigation menu includes System, Network, Wifi, DHCP server (selected), Modem, VPN, User management, E-Mail, DDNS, Firewall, HTTP server, and Tools. Below the menu, the configuration is as follows:

- Enabled:** Yes (indicated by a green button)
- Domain:** falcon
- Interfaces:** wlan0 (with a close button)
- IP ranges:** 192.168.50.100 - 192.168.50.200, 1h lease time (with a close button)
- Add IP range:** A section with input fields for First IP (ip address), Last IP (ip address), and Lease time [h] (1). It includes an Add range button and Save/Reload buttons at the bottom.

In the tab DHCP server we now configure range of IP addresses within the network, that we had set up in previous step.

In the picture we have defined the range 192.168.50.100 - 192.168.50.200.

That's it. Now your clients will be able to connect to wifi hotspot "Falcon" and then access LUMiMASTER from the browser on <http://192.168.50.1>.