Opale 5G Robot

Installation Guide

1 GENERAL INFORMATION

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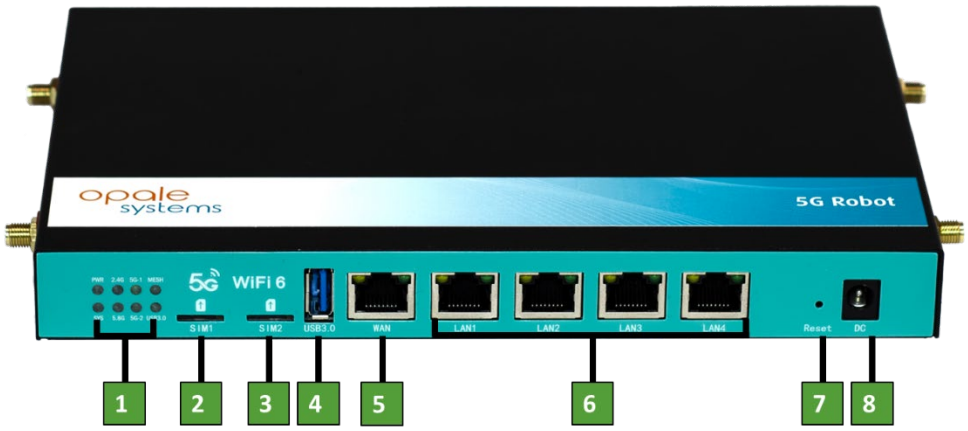
2 INTRODUCTION

Overview

The Opale 5G Robot is a telecommunication device for automating tests over 3G, 4G or 5G networks. It provides a complete API which can be used through different ways and covering all services & capabilities available on mobile networks.

An Opale 5G Robot can be equipped with one or two 5G modems.

Description



Where the above elements are described hereafter:

1. Set of LEDs showing the operational status of the device
2. Nano-SIM Tray for the Opale 5G Robot Port 0
3. Nano-SIM Tray for the Opale 5G Robot Port 1
4. USB Port for extension – UNSUPPORTED.
5. WAN Port
6. LAN Ports 1 to 4 – 1 Gbits/s
7. Reset buton
8. Power supply connector.

3 UNPACKING OPALE 5G ROBOT

Overview

The Opale 5G robot is delivered within a box protecting it from shocks during shipping. The content of the box is described hereafter.

Inventory

When you are ready to install the Opale 5G Robot, remove all items from the box. Visually inspect all items for any damage or omission before starting the installation.

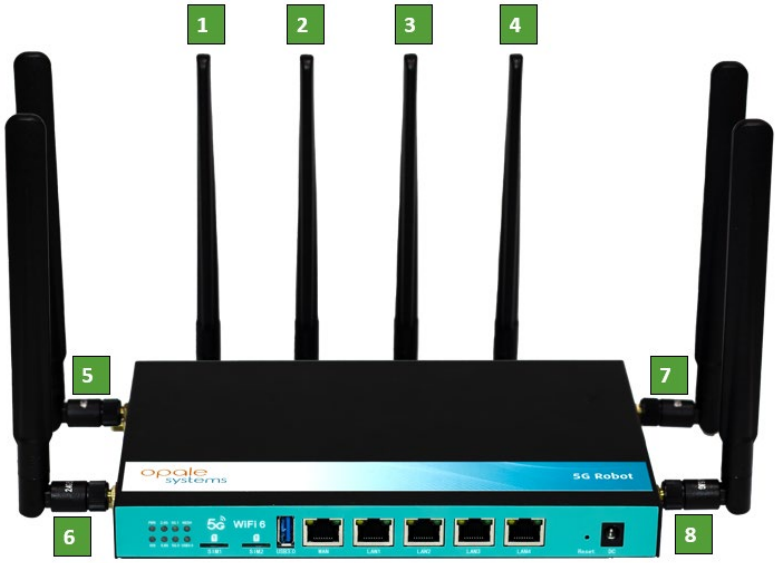
The package should include:

- An European or US standard power adapter,
- An ethernet cable with RJ45 connectors,
- Between 4 to 8 4G/5G antennas depending on the configuration of the robot. Each 5G Modem requires 4 x 4G/5G Antennas.
- An Opale 5G Robot equipped with one or two 5G ports.

4 CONNECTING ANTENNAS

Overview

The picture below shows the antennas configuration of the Opale 5G Robot:



Antennas connectivity

All the antennas supplied should be connected prior to using the Opale 5G Robot.

The Antennas configuration is as follows:

Opale 5G Robot with 1 x 5G Port :

- Outputs 1, 2, 3, 4 for 5G Port 0

Opale 5G Robot with 2 x 5G Port :

- Outputs 1,2,5, 6 for 5G Port 0
- Outputs 3,4,7,8 for 5G Port 1

5 INSTALLATION

Connectivity

The Opale 5G Robot need to be connected to an IP network.

Use the provided ethernet cable to connect one of the LAN port of the robot to a network or directly to a computer.

The default IP address of the Robot is:

- **192.168.1.1**

The default credentials are as follow :

- User: root
- Password: admin

You can then connect to the robot using SSH or to the web interface of the robot with the following url: http://192.168.1.1

Using SSH

You can use any SSH software client to connect to the Robot. Different tools can be used. See https://www.putty.org/

The credentials given above should be used to connect to SSH as well.

Using HTTP

You can point a browser to http//192L168.1.1 :

And use the credentials provided above.

6 CONFIGURING

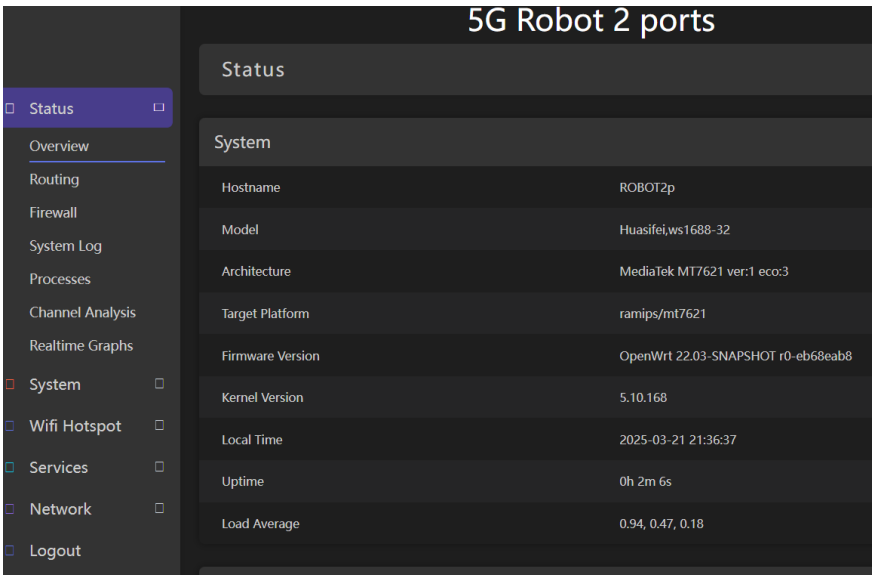
Introduction

The main setting for configuration the Opale 5G Robot is its IP address.

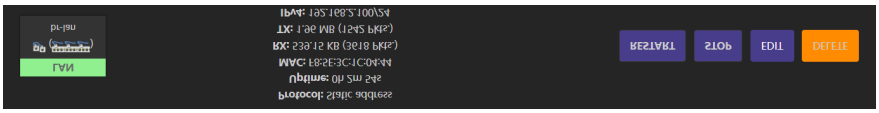
With the current version of the robot the only way to configure is through the web interface of the robot.

Configuring through the Web interface

Once logged in the web interface the following screen shows up:



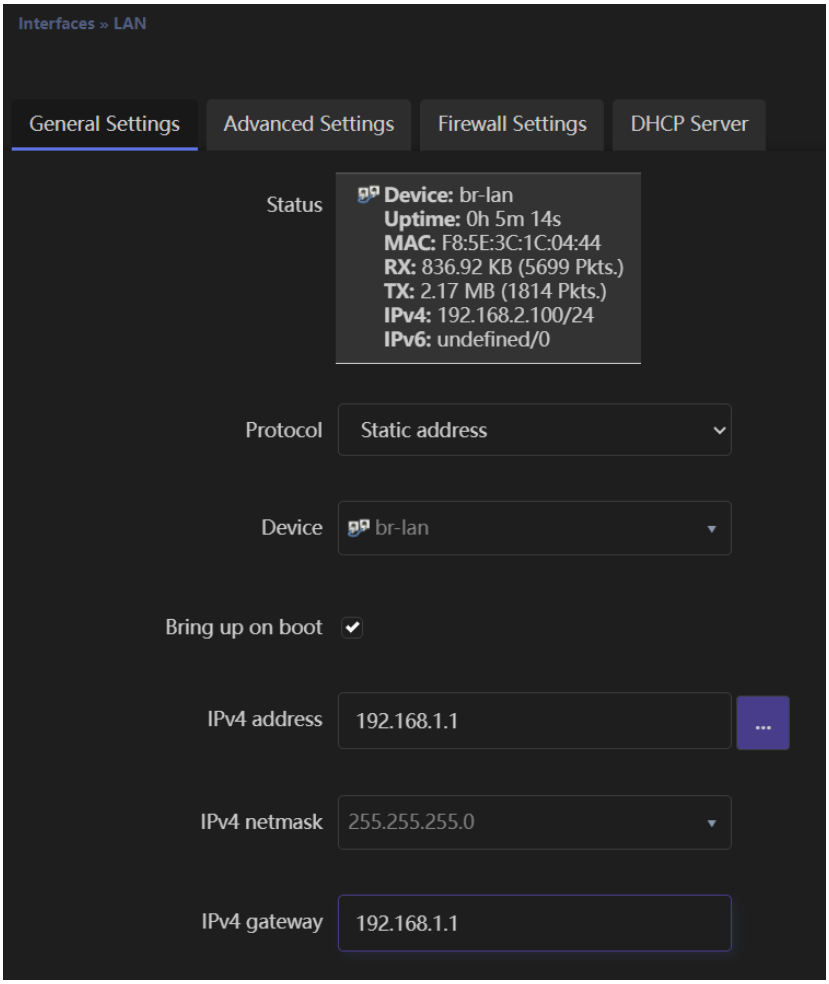
Then Click on **'Network'**, then **'Interface'**, to see the following:



Then Click on **'Edit'** to see the IP configuration window:

Configuring the Robot IP settings

The screen below is used to configure the IP address, netmask, and default gateway which correspond to your own network configuration.



One you've entered your settings:

- Click on **'Save'** at the of the window
- Then click on **'Save & apply'** on the **'Interface'** window.

And you're done! The robot should be accessible through your new IP settings. You may have to change the ethernet wiring though.

8 USING THE ROBOT

SIM Cards

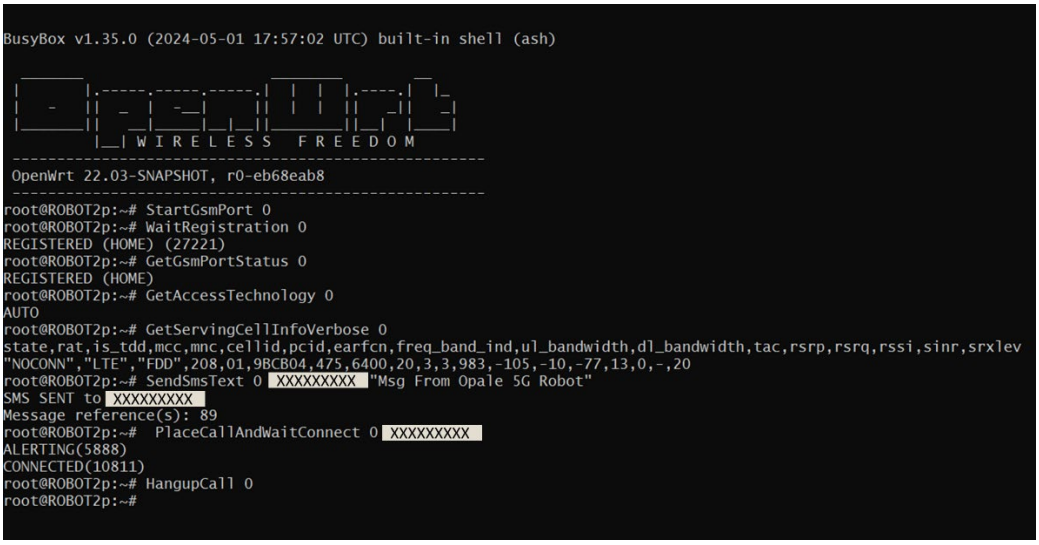
The Opale 5G Robot is a device designed to automate 3G/4G or 5G services on a public or private 3G/4G or 5G network. In order to connect any ports of the robot to the network you'll need SIM Cards.

See **§ introduction** which indicates where the SIM trays are located on the Opale 5G Robot. There is on nano SIM Tray for each of the available ports of the robot.

Using the Robot

Once proper SIM Cards are inserted, you can start using it by entering through a SSH session connected to the Opale 5G Robot.

And example of a basic test is given below:



Where the following commands are used:

- **StartGsmPort** : Initialize a communication Port.
- **WaitRegistration**: Wait for complete registration of a communication Port.
- **GetGsmStatusPort:** Return the status of a communication Port.
- **GetAccessTechnology;** Return what technology is selected for a Port.
- **GetServingCellInfoVerbose:** Return all available cell information seen by a Port.
- **SendSmsText:** Send a SMS on a port to a give subscriber.
- **PlaceCallAndWaitConnect:** Place a call and wait until it connects.
- **HangupCall:** Hang up a previous connected call.

API Link

You can find a more complete description as well as all other commands or API available on the Opale 5G Robot at the address below.

The list of all available commands with appropriate description and examples is at https://wiki.opalesystems.com/.

Please note that In order to get access you'll need to ask support@opalesystems.com to get a user Id and a Password.