AMR Operation Guide

This document provides a concise guide to operating the Autonomous Mobile Robot (AMR), covering essential steps from powering on the device to establishing ROS integration. It includes instructions for battery status interpretation, hotspot setup, network configuration, payload activation, cobot power-up, TMFlow connection, and ROS integration.

Battery Status Indication

The LED indicator located on the top of the workstation provides real-time battery status information:

- **Red Blinking:** Indicates a low battery level. Immediate charging is recommended.
- **Green Blinking:** Indicates that the AMR is currently charging.

Powering ON the AMR

1. **Locate the Power Switch:** Find the On/Off rotary switch. It is positioned on the corner diagonally opposite the charging port.
2. **Switch ON:** Rotate the switch to the "On" position to power up the AMR. Also press the green button next manual/auto dial.

> *Note:* The corner adjacent to the charging port houses a Manual/Auto mode selector switch. Ensure this switch is in the desired mode before proceeding.

Hotspot Setup

A hotspot is required for initial configuration and network connectivity. Configure a hotspot with the following credentials:

- **SSID:** IAFSM2
- **Password:** iafsm#2017

Ensure the device you will use to control the AMR (e.g., a laptop) is connected to this hotspot.

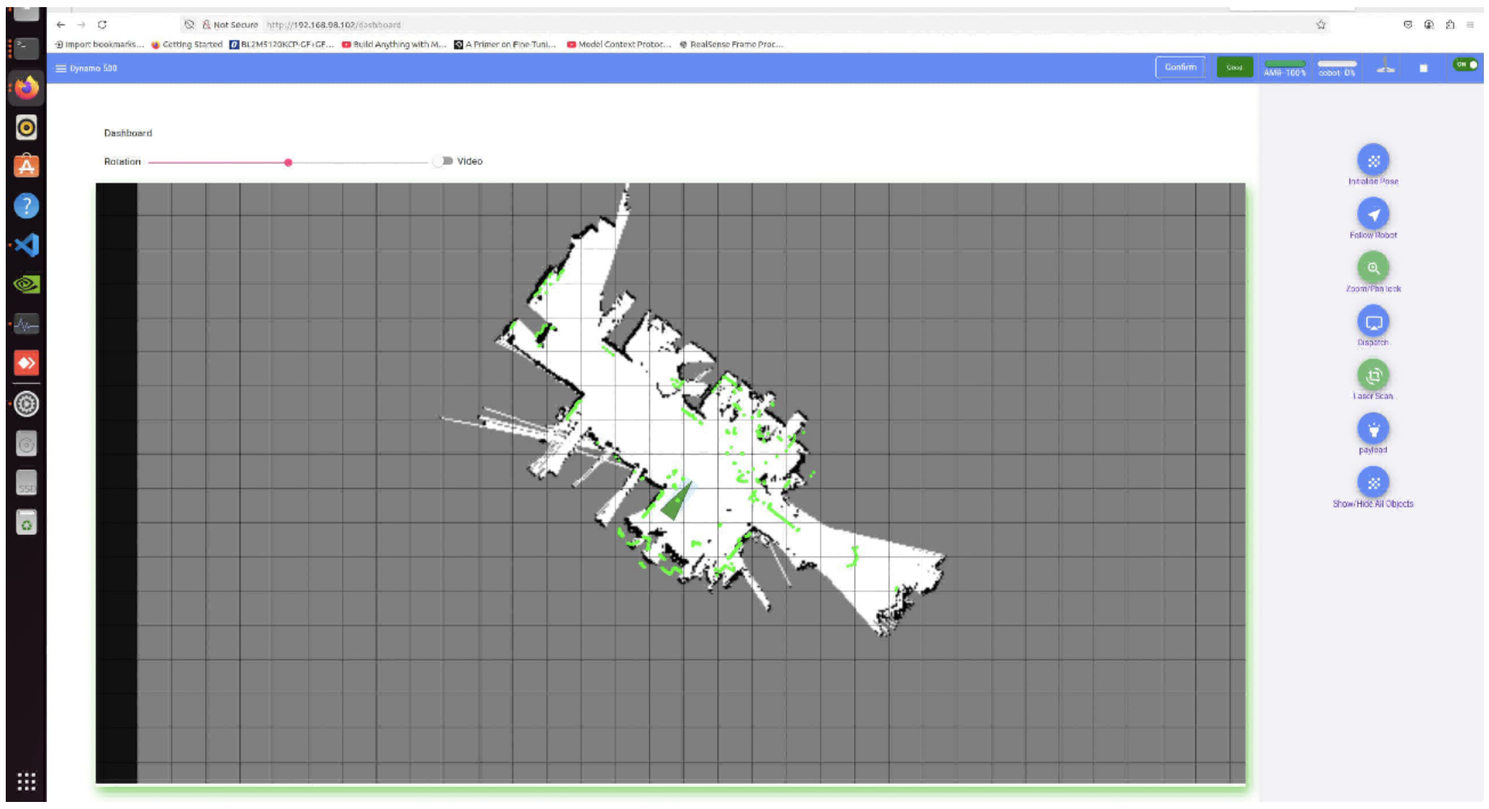
Network Configuration via IP

1. **Access the Web Dashboard:** Open a web browser on a device connected to the IAFSM2 hotspot. Navigate to the following IP address: http://192.168.98.102
2. **Login:** Use the following credentials to access the dashboard:
    - **Username:** admin
    - **Password:** admin
3. **Set Wi-Fi Mode:** In the dashboard, locate the Wi-Fi settings. Set the Wi-Fi mode to "Manual". This allows for specific network configurations.

Payload Activation

The payload system needs to be activated to enable its functionalities.

1. **Payload Power Button:** On the same IP dashboard (accessed in the previous section), locate the "Payload Power" button.
2. **Enable Payload:** Press the "Payload Power" button to enable the payload systems. This will provide power to any attached payloads.



Powering ON the Cobot

The Cobot (Collaborative Robot) requires a two-step power-on process.

1. **Web Dashboard Switch:** In the web dashboard, find the "Cobot Power" toggle or button. Switch it to the "On" position.
2. **Physical Cobot Remote:** Locate the physical Cobot Remote. Press and hold the "Power ON" button on the remote until the cobot powers up. This may take a few seconds.

TMFlow Connection

TMFlow is a software application used to control the cobot.

1. **Network Connection:** Ensure that the controlling device (the computer running TMFlow) is connected to the same network as the cobot. This is typically the IAFSM2 hotspot or a network the cobot has been configured to connect to.
2. **Open TMFlow:** Open the TMFlow application. *Note: A specific version of TMFlow may be required for compatibility. Consult the relevant documentation for version requirements.*
3. **Connect to Cobot:** Within TMFlow, follow the instructions to connect to the cobot. This usually involves specifying the cobot's IP address or selecting it from a list of available devices.

ROS Integration

ROS (Robot Operating System) integration allows for advanced control and communication with the cobot.

1. **Run Listen Node:** In TMFlow, locate and run the "Listen Node". This node establishes communication between the cobot and the ROS environment.
2. **Verify Connection:** Verify that the ROS environment is receiving data from the cobot. This can be done by monitoring ROS topics or using ROS visualization tools.

These steps outline the basic procedure for operating the AMR and integrating it with a cobot and ROS environment. Always refer to the specific documentation for the AMR, cobot, TMFlow, and ROS versions being used for detailed instructions and troubleshooting information.