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# install MagicMirror on Waveshare

### Sources

- the Device at Pi-Shop.ch
- Waveshare Wiki for installation
- Update NodeJS
- SmartBuilds.io MagicMirror with Touchscreen

## Base System

Install the Base System via RaspberryPiInstaller

## Install Magic Mirror

Download latest MM Package from GitHUB MagicMirrorPage in my case it was Version 2.20.0.

```
git clone https://github.com/MichMich/MagicMirror
cd MagicMirror/
npm install --only=prod --omit=dev
```

### clean Config and first Start

```
cp config/config.js.sample config/config.js
```

start it with `npm run start`

### Install MMM-MacAddressScan

To make sure you have all dependencies, issue a

```
npm install ping
```

```
npm install sudo
```

as those both were missing in my case. And of corse you should have installed the package `arp-scan`. `sudo apt install arp-scan`.

### Install MMM-RemoteControl

https://github.com/Jopyth/MMM-Remote-Control

### Install MMM-Modulebar

https://github.com/Snille/MMM-Modulebar/

### additional Modules

List of additional Modules: 3rd-party-modules

- SwissCommute Swiss Timetable via Sear.ch
- MagicMover
- WeatherGraph
- SwissLakeTemperature (Zürisee, Greifensee, Genfersee)
- smartTouch
- FlightRadarTracker
- Flights with Map
- News-QR
- OpeningHours-GooglePlaces
- Reddit Ticker
- CyberSecurity News
- WatchDog
- Touch rsp. Touch Wiki

### additional Calendars

- Schweizer Feiertage

### additional Ideas

- OnScreenMenü
- SmartTouch
- FlightRadarTracker
- CyberSecurityNews

# Server & Client Mode

Because the Raspi inside the Waveshare MM is very weak in Terms of Performance, I would try to run it in Server and Client mode.

So we copy over the whole Code to an other Raspi and run it there in Server Mode. This Way the Raspi in the Waveshare MM only needs to display the "Browser" Window.

Start the Server part with `npm run server` and the Client with `node clientonly –address 192.168.1.5 –port 8080`

### Update NodeJS ?

During Install, I see, we need NodeJS Version 14 or newer. On my Raspi there were NodeJS in Version 12, so we have to upgrade NodeJS... No! I did it, and afterwards I was not able to get FlightRadar running. The Client was rejected and

# Control Monitor Settings

In order to be able to change the Brightness and Backlight of the Monitor you need to tweak a few things. Idea taken from MagicMirror Forum Post by aprilmaccydee

### Enable i2c in boot.ini

Edit `nano /boot/config.txt`
Add: `dtparam=i2c2_iknowwhatimdoing`
and then reboot the Raspberry

### Install ddcutil

Then `sudo apt install ddcutil`
Run `sudo ddcutil detect`

You should see an output like:

```
pi@raspberrypi:~ $ sudo ddcutil detect
Display 1
   I2C bus:             /dev/i2c-2
   EDID synopsis:
      Mfg id:           RTK
      Model:            RTK FHD
      Serial number:    [redacted]
      Manufacture year: 2011
      EDID version:     1.3
```

```
   VCP version:         2.2
```

## get Values

If you do, you can then run:
`sudo ddcutil getvcp 10 to get the brightness`

## set Values

`sudo ddcutil setvcp 10 [1-100]`
to set the brightness, where 1-100 is the desired value of the brightness

## known Values

| Number | Description | Values (default) |
|---|---|---|
| 10 | Brightness | 1-100 (20) |
| 12 | Contrast | 1-100 (50) |
| 14 | Color Preset | 0x01 = sRGB |
| 16 | Red Color Gain | 1-100 (50) |
| 18 | Green Color Gain | 1-100 (50) |
| 20 | Horizontal Position (Phase) | 0-100 (0) |
| 22 | Horizontal Size | unsupported |
| 30 | Vertical Position (Phase) | 0-100 (0) |
| 32 | Vertical Size | unsupported |
| 44 | Rotation | unsupported |

From:
https://aha-it.ch/wiki/ - **AHa-IT**

Permanent link:
**https://aha-it.ch/wiki/lx/pi/mm/waveshare-install?rev=1668010955**

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