Electronic devices

Group-2-Factory-Display

To beginning, we choose to use computers to display and for this, we have two possibilities of hardware which must have a minimum of 2GB of memory, an ethernet connection and an HDMI or micro-HDMI port, the first one is:

Raspberry Pi 4 Model B : (link)

- What is Raspberry Pi 4 Model B:

Raspberry Pi is a series of small single-board computers (SBCs) developed in the United Kingdom by the Raspberry Pi Foundation in association with Broadcom. The Raspberry Pi project originally leaned towards the promotion of teaching basic computer science in schools and in developing countries. The original model became more popular than anticipated selling outside its target market for uses such as robotics. It is widely used in many areas, such as for weather monitoring, because of its low cost, modularity, and open design. It is typically used by computer and electronic hobbyists, due to its adoption of the HDMI and USB standards.

- Price: From 116,00€ (link)

Advantages	Defaults
- More OS available, - More reliable, - Choice of the ram (1 GB, 2GB, 4GB and 8GB)	- Uncertain delivery time (approximately 2 months) and it is generally out of stock, - Uses micro-HDMI, - Need an external stockage (Micro SD card of 8GB, 16GB, 32GB, …)

The Raspberry Pi 4 Model B has multiple reasons that pushed us to turn to another solution, and it is for this, we found this other solution:

Rock Pi 4 Plus model B : (link)

- What is Rock Pi 4 Plus Model B?

ROCK Pi 4 is a Rockchip RK3399 based SBC (Single Board Computer) by Radxa. It can run android or some Linux distributions (Debian). **ROCK Pi 4** features a six core ARM processor, 64bit dual channel 3200Mb/s LPDDR4, up to 4K@60 HDMI, MIPI DSI, MIPI CSI, 3.5mm jack with mic, 802.11 ac WIFI, BT 5.0, USB Port, GbE LAN, 40-pin color expansion header, RTC. Also, **ROCK Pi 4** supports USB PD and QC powering. **ROCK Pi 4** has 1GB, 2GB or 4GB ram options.

- Price: 142,99€ (link)

Advantages	Defaults
- Fast delivery, - Choice of the ram (1 GB, 2GB, 4GB and 8GB), - Opens a field of possibility of improvement in the future	- Expensive, - Several features that will not be used, - Need an external stockage (Micro SD card of 8GB, 16GB, 32GB, …)

To conclude with the Single Board Computer, the second of our choices is for us the most suitable choice to realize this project, because it guarantees us to be able to deliver the project on time and will allow us to present you multiple improvements. It is important to note that to use these two solutions we need storage per device in the form of **microSD card** (link) of minimum 16GB.

For the screen part, we decided to choose a monitor instead of a Smart TV to be able to have a full control of the device

The main criteria were about the size of the monitor and the uptime

We asked the Project Owner and he wanted to let the monitor all the time on.

We also wanted a monitor between 50” and 60”.

Our choice was between these three:

- Iiyama 54.6" LED - ProLite LH5542UHS-B3 (link)

- Sony FW-55BZ40H (link)
- Samsung 50" LED - QM50R-B (link)

	Sony	Samsung	Iiyama
size	55”	49.5”	54.6”
uptime	24/7	24/7	18/7
network	Wi-Fi, Bluetooth, HDMI, Ethernet	Wi-Fi, HDMI, DisplayPort	Wi-fi via optional module, HDMI
price	999€	899€	899.95€
display	portrait, landscape	portrait, landscape	portrait, landscape
Speaker	no	yes	no

	Quantity	Price	Link to buy
Rock Pi 4 Plus Model B	x2	142,99€	Rock Pi 4
Micro-SD card	x2	6,40€	MicroSD card
Screen	x2	899,00€	liyama
	Total:	2096,78€	