

# Hardware Requirements

- Partlist & Costs

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## About This Project

Welcome to my Guide on the Parts and Components I used to build my Raspberry Pi 5 Cluster. My name is aeoneros, I'm a 24-year-old IT enthusiast from Switzerland, and I'm relatively new to the IT world. This project was a great learning experience for me, and I'm excited to share the journey with you. Below, you'll find a comprehensive list of all the parts I used, complete with links for purchasing the components within Switzerland.

To help you understand the financial aspect of the project, I've also included the prices I paid for each item in Swiss Francs (CHF) along with the equivalent in USD for your reference.

**Exchange Rate:** 1 CHF = 1.18009 USD

Whether you're a fellow hobbyist or a professional looking to replicate this setup, I hope you find this resource helpful!

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## Parts List & Costs

- Raspberry Pi 5 (8GB)**
  - **Quantity:** 3
  - **Price per Unit:** CHF 86.70 / USD 102.36
  - **Total Price:** CHF 260.10 / USD 307.08
  - **Link:** [Raspberry Pi 5 \(8GB\)](#)
- Samsung 970 EVO Plus (500 GB, M.2 2280)**
  - **Quantity:** 3
  - **Price per Unit:** CHF 65.70 / USD 77.52
  - **Total Price:** CHF 197.10 / USD 232.56
  - **Link:** [Samsung 970 EVO Plus SSD](#)
- Geekworm X1001 PCIe to M.2 NVMe KEY-M SSD Shield for Raspberry Pi 5**
  - **Quantity:** 3
  - **Price per Unit:** CHF 12.26 / USD 14.47
  - **Total Price:** CHF 36.78 / USD 43.41

- **Link:** [Geekworm X1001 Shield](#)
- 4. Delock M.2 Heatsink, 70x22x5.2mm**
    - **Quantity:** 3
    - **Price per Unit:** CHF 9.75 / USD 11.51
    - **Total Price:** CHF 29.25 / USD 34.53
    - **Link:** [Delock M.2 Heatsink](#)
  - 5. Raspberry Pi Active Cooler Fan for Raspberry Pi 5**
    - **Quantity:** 3
    - **Price per Unit:** CHF 8.90 / USD 10.51
    - **Total Price:** CHF 26.70 / USD 31.53
    - **Link:** [Raspberry Pi Active Cooler Fan](#)
  - 6. Official Raspberry Pi 5 USB-C Power Supply 27 W, White**
    - **Quantity:** 3
    - **Price per Unit:** CHF 13.53 / USD 15.97
    - **Total Price:** CHF 40.59 / USD 47.91
    - **Link:** [Official Raspberry Pi 5 USB-C Power Supply](#)
  - 7. SanDisk Ultra Android microSDXC UHS-I Memory Card 128 GB + Adapter**
    - **Quantity:** 1
    - **Price:** CHF 11.16 / USD 13.18
    - **Link:** [SanDisk Ultra 128 GB microSDXC](#)
  - 8. Beikell SD Card Reader, Dual Plug USB 3.0/USB C Card Reader**
    - **Quantity:** 1
    - **Price:** CHF 9.46 / USD 11.17
    - **Link:** [Beikell SD Card Reader](#)
  - 9. Micro HDMI to HDMI Multifunctional Adapter, Compatible with Raspberry Pi 5 / 4B**
    - **Quantity:** 3
    - **Price per Unit:** CHF 8.90 / USD 10.51
    - **Total Price:** CHF 26.70 / USD 31.53
    - **Link:** [Micro HDMI to HDMI Adapter](#)
  - 10. Amazon Basics 0.3m RJ45 Cat7 Gigabit Ethernet High-Speed Patch Cable (Pack of 5)**
    - **Quantity:** 1
    - **Price:** CHF 9.67 / USD 11.41
    - **Link:** [Amazon Basics Ethernet Cable](#)

11. **Geekworm Raspberry Pi Installation Tool (100 Pcs Hex Brass Spacer/Standoff + Nuts + Screws)**
  - **Quantity:** 1
  - **Price:** CHF 10.31 / USD 12.17
  - **Link:** [Geekworm Installation Tool Kit](#)
  
12. **EFB Elektronik 19" 04HE Wall Mount Case (450 mm Depth, 1-Piece, Flat Pack, RAL7035)**
  - **Quantity:** 1
  - **Price:** CHF 55.76 / USD 65.81
  - **Link:** [EFB Elektronik Wall Mount Case](#)
  
13. **GeeekPi Raspberry Pi 4 Cluster Case (4 Layers Acrylic Housing)**
  - **Quantity:** 1
  - **Price:** CHF 18.92 / USD 22.31
  - **Link:** [GeeekPi Raspberry Pi 4 Cluster Case](#)

*(Note: This case was used in my first version of the cluster, but I later switched to a custom-designed rackmount that I 3D printed on my Prusa MK4S due to better maintenance and accessibility.)*
  
14. **5 Port Switch**
  - **Quantity:** 1
  - **Price:** Free
  - I already had one laying around :)

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## Total Costs:

- **CHF:** CHF 722.90
- **USD:** USD 853.00