



MNT Reform A311D Open Hardware 13" Laptop



Description

MNT Reform A311D is an upgraded and improved version of the original MNT Reform 13 inch open hardware laptop from MNT Research. New feature highlights:

- Amlogic A311D hexacore processor with 2-3x performance and ARM Mali GPU with GLES 3.1
- Wi-Fi 5 + BT 5 integrated
- New keyboard layout with traditional stagger, homing keycaps, and anti-flexing bars
- Motherboard V2.5 with small fixes and improvements
- Battery boards with integrated protection chips for each cell
- Steel port covers

Processors and RAM

Modular (you can choose and exchange CPU/RAM modules):

- Standard: Amlogic A311D (4× ARM Cortex-A73 @ 2.2GHz, 2x ARM Cortex-A53 @ 1.8GHz), 4 GB DDR4, ARM Mali G52 MP4 GPU, NPU) on BPi CM4 module



- Option: Raspberry Pi CM4 module with 4x ARM Cortex-A72 and 8 GB LPDDR4 RAM
- Option: NXP LS1028A open hardware module with 2x ARM-Cortex A72 and 16 GB of DDR4 RAM
- Option: FPGA AMD/Xilinx Kintex-7 open hardware module (for industrial use, RISC-V SoC possible)

Display

- 13" diagonal, Full HD (1920 × 1080 pixels), matte IPS eDP panel

Enclosure

- Black anodized, bead-blasted milled Aluminum
- Clear acrylic bottom plate

Input

- Keyboard with ortholinear matrix, 86 keys
- Mechanical switches (Kailh Choc Brown)
- International layouts
- White dimmable backlight
- Optical trackball with 5 buttons (capacitive trackpad available)

Portability

- Size: 29 × 20.5 × 4 cm
- Weight: 1900 g

Sound

- Wolfson WM8960 ADC/DAC
- Stereo speakers
- 3.5" headset/microphone jack (no internal microphone)

Connectivity

- Gigabit Ethernet port
- Integrated RTL8822CS (Wi-Fi 5, BT 5)

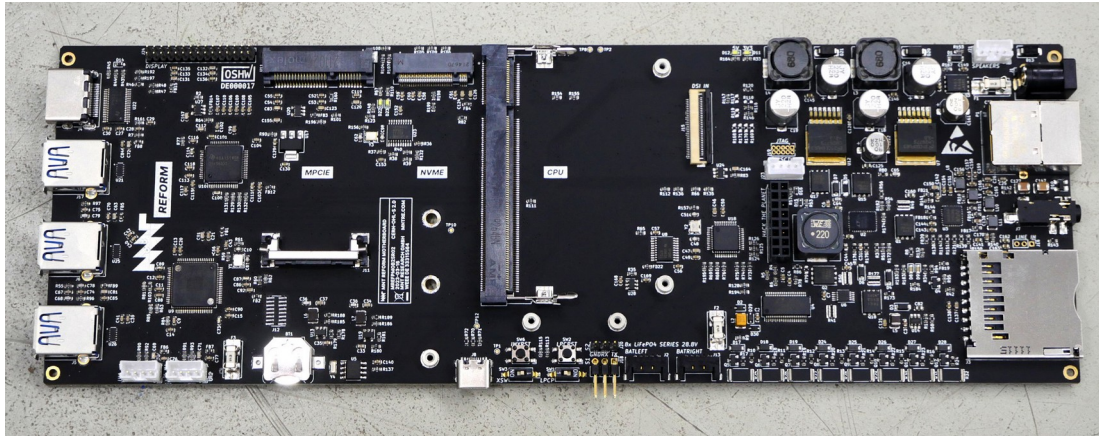
Storage

- Internal mPCIe / M.2 M-key socket for NVMe SSD
- Full size SD card slot
- 16GB eMMC

Ports

- 3x USB Type-A external ports
- 2x USB 2.0 internal (for input devices)

Open Hardware



- Open Source Hardware: full KiCAD sources available under CERN-OHL-S 2.0 of the following parts:
 - Motherboard
 - Keyboard
 - Trackball
 - Trackpad
 - CM4 mezzanine adapter
- STEP, STL and Autodesk Fusion files of case parts available
- Open source system controller and input device firmware
- Contribute to and improve the device with custom modifications

Power

- 8× LiFePO4 18650 battery cells (user servicable)
- 24V, 2.5A power supply (standard barrel jack input)

Sleeve

- Eco-friendly and vegan Piñatex material (add-on)

OS

- Preloaded with Debian GNU/Linux, up-to-date kernel