

MNT Reform CM4 Adapter (RCM4)

Dear MNT Customer,

thank you for purchasing MNT RCM4, a solution for integrating the Raspberry Pi CM4 compute module and compatibles into MNT Reform. We hope you'll enjoy it.

Installation

1. Install the compute module on RCM4 in the correct orientation, so that the 4 holes of the compute module match the corresponding holes on RCM4.
2. Push the module into the CPU slot of your MNT Reform motherboard at a 45 degree angle and then press it down until it clicks into place.
3. If you use the Raspberry Pi CM4 as the compute module, also need use the internal HDMI to eDP adapter to make the laptop's internal display work. Unplug the MNT Reform's display cable and see **Figure 1** (on the back of this document) for an overview of how to install the parts. Make sure that the orientation is correct: the white dot on the cable's connector has to be near the marking "white dot" on the adapter.
4. Mount the shorter 2 hex M2 standoffs (included) on the motherboard through the matching holes on RCM4. Mount the longer 2 hex M2 standoffs on the remaining 2 heatsink mounting holes on the motherboard.
5. Install the included heatsink using the thermal pad for heat transfer between the CM4's System-on-Chip and the heatsink (remove foil). See **Figure 2** for reference. Mount the heatsink with 4x included M2 screws.
6. Exchange the motherboard screw next to the SD card slot with the remaining hex standoff. Mount the acrylic WiFi antenna carrier on it.

Safety Instructions

- The module and the adapter are sensitive electronic parts that can be damaged by static electricity. Make sure to ground yourself before touching.
- Before installation, consult the safety instructions of MNT Reform and remove all power sources including batteries from the system.



The product complies with the requirements of the European Directives and DIN standards:
EMC Directive 2014/30/EU (EN 55032:2015/A11:2020, EN 55035:2017/A11:2020)



Low Voltage Directive 2014/35/EU (EN 62368-1:2014)
RoHS Directive 2011/65/EU (EN 63000:2018)

Specifications

- Compatible with Raspberry Pi CM4 and Banana Pi BPI-CM4 (Amlogic A311D)
- Size: 68×67.5mm. PCB thickness 1mm.
- Card Edge Connector: 200 pin SO-DIMM card edge (mates with TE 1717254-1 or TE 1473005-1)
- FPC Connectors for: 1x internal HDMI, 1x MIPI-DSI, 1x MIPI-CSI

PCIe

Please note that CM4 compute modules support only one PCIe lane. This is routed to the mPCIe slot on the MNT Reform motherboard, so you will not be able to use the M.2 slot. To install your NVMe SSD, use the included M.2 to mPCIe adapter.

OSHW Sources and Software

Raspberry Pi CM4 works with its stock OS booted from eMMC or SD card, but you will need additional device tree overlays for complete integration of audio, real-time clock, charger status etc. For third-party modules such as BPI-CM4, Reform System Image exist. For details and updates, please see the link below.

Hardware sources, schematics and software instructions are published at: <https://source.mnt.re/reform/mnt-reform-raspberry-pi-cm4-som>

Contents

- RCM4 circuit board
- RHDP circuit board (HDMI to eDP Adapter)
- Internal HDMI Cable (FPC)
- MNT Reform Generic Heatsink (Aluminum)
- 2mm thermal pad
- 4x heatsink hex standoffs (2×5mm, 2×6mm)
- 4x heatsink screws
- Complimentary M.2 to mPCIe adapter
- Acrylic antenna carrier with hex standoff and screw

Warranty

MNT Research covers the warranty to the extent required by law for the unmodified product and following the safety instructions. Warranty does not cover any modifications made to the product.

Get updates and source code at: mntre.com/reform

Need help? Join community.mnt.re or write to support@mntre.com

Join our IRC channel [#mnt-reform](https://irc.libera.chat) on: irc.libera.chat

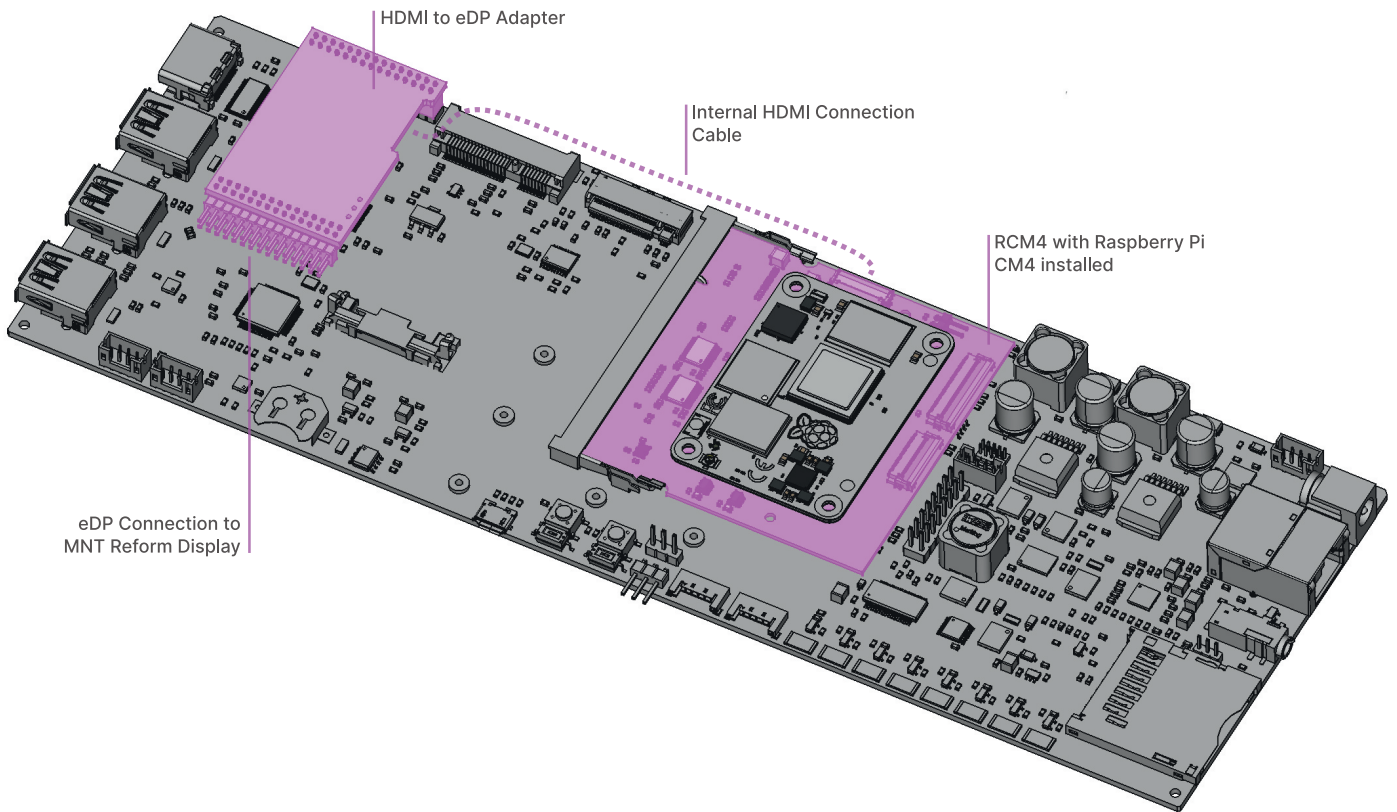


Figure 1: Installation of RCM4 and HDMI to eDP Adapter

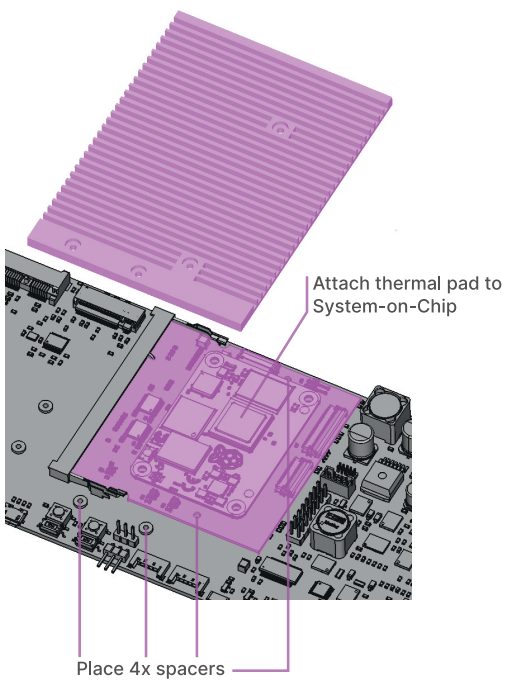


Figure 2: Installation of Generic Heatsink on RCM4