

MNT Reform CM4 Adapter (RCM4)

Dear MNT Customer,

thank you for purchasing MNT RCM4, a flexible solution for integrating the Raspberry Pi CM4 compute module and compatibles (such as BPI-CM4) into MNT Reform. We hope you will 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, you will have to also use the internal HDMI to eDP adapter, because the Pi's MIPI-DSI capabilities are incompatible with the requirements of the MNT Reform display.

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. When connecting MNT Reform's display cable to the HDMI to eDP Adapter, 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. Install the included heatsink using the thermal pad for heat transfer between the CM4's System-on-Chip and the heatsink. See **Figure 2** for reference. After placing the spacers, mount the heatsink with 4x included M2 screws.

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.

Specifications

- Compatible with Raspberry Pi CM4 and Banana Pi BPI-CM4 (MediaTek 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 NVMe slot on the MNT Reform motherboard, so you will not be able to use a WiFi card in the mPCIe slot. Instead, we recommend to use the WiFi functionality integrated into the compute module itself.

OSHW Sources and Software

The Raspberry Pi CM4 should work 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. CM4 support is being integrated into MNT Reform's system image. For third-party modules such as BPI-CM4, a different build of u-boot is required. 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)
- MNT Reform Generic Heatsink (Aluminum)
- Thermal Pad
- 4x Heatsink Spacers
- 4x Heatsink Screws
- Internal HDMI Cable

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.



The product complies with the requirements of the European Directives and DIN standards:
EMC Directive 2014/30/EU, Low Voltage Directive 2014/35/EU
RoHS Directive 2011/65/EU, DIN EN 55022:2011-12
DIN EN 55024:2016-05, DIN EN 61000-6-1:2007
DIN EN 61000-6-3:2007/A1:2011/AC:2012
DIN EN 61000-3-2:2014, DIN EN 61000-3-3:2013



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

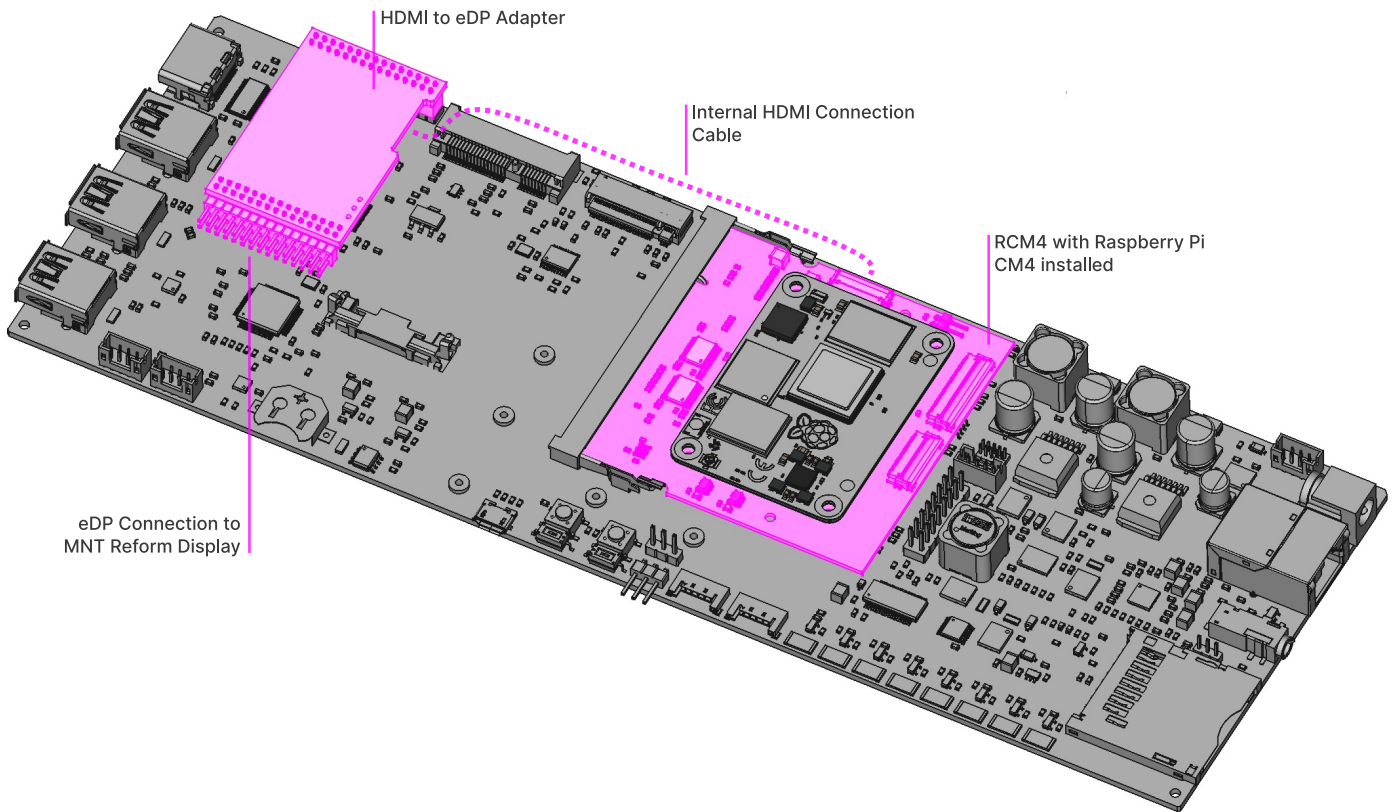


Figure 1: Installation of RCM4 and HDMI to eDP Adapter

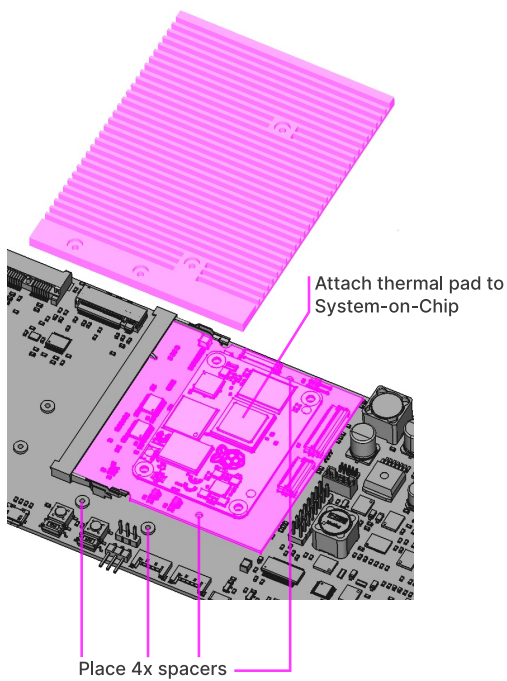


Figure 2: Installation of Generic Heatsink on RCM4