

MNT RCORE RK3588 Processor Module

Dear MNT Customer,

thank you for purchasing the MNT RCORE with RK3588. This processor module for your MNT Reform offers significant CPU, GPU and I/O performance increases as well as up to 32GB of RAM. We hope you will enjoy the enhanced productivity and fun it brings.

Installation

During installation, refer to the pictures on the right side of this page for guidance.

1. Remove your previous heatsink and CPU module from MNT Reform, including the MIPI DSI flat cable.
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. Connect the flat cable coming out of RCORE (blue end up) to the fitting connector on the included HDMI to eDP adapter module. Disconnect Reform's display cable from the motherboard and connect it to this module instead, making sure the white dot on the cable's connector matches the corresponding marking on the adapter. Plug the adapter into the motherboard's internal display connector, taking care that all pins align.
4. Mount the shorter 2 hex M2 standoffs on the motherboard through the matching holes on RCORE. Mount the longer 2 hex M2 standoffs on the 2 other heatsink mounting holes on the motherboard.
5. Install the included heatsink using the thermal pad for heat transfer between the RK3588 processor and the heatsink. Remove protective foil from the thermal pad before attaching it. 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.



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



Specifications

- Includes Firefly iCore-3588Q (Rockchip RK3588, 16GB or 32GB RAM, 256GB eMMC)
- 4x2.4GHz Cortex-A76 + 4x1.8GHz Cortex-A55 CPUs
- ARM Mali G610 MP4 GPU (OpenGL/ES 3.1)
- 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 (on back side), 1x optional WiFi/BT expansion
- Dual PCIe controllers
- Dual display capable
- Gigabit Ethernet controller

Contents

- RCORE with iCore-3588Q and display cable
- MNT Reform Internal HDMI to eDP adapter
- MNT Reform RCORE Heatsink (copper)
- Thermal pad
- 4x heatsink hex standoffs (2x7mm, 2x8mm)
- 4x heatsink screws

Software and Sources

The RCORE module comes with the MNT Reform System Image preinstalled on the 256GB eMMC flash, so you don't need an SD card.

Should you want to start again with a fresh System Image, you can download the **rk3588** image from the following URL, unpack and image it to an SD card, which RCORE can boot automatically:

<https://mnt.re/system-image>

Hardware sources, schematics and software instructions are published at:

<https://source.mnt.re/reform/mnt-reform-rk3588-som>

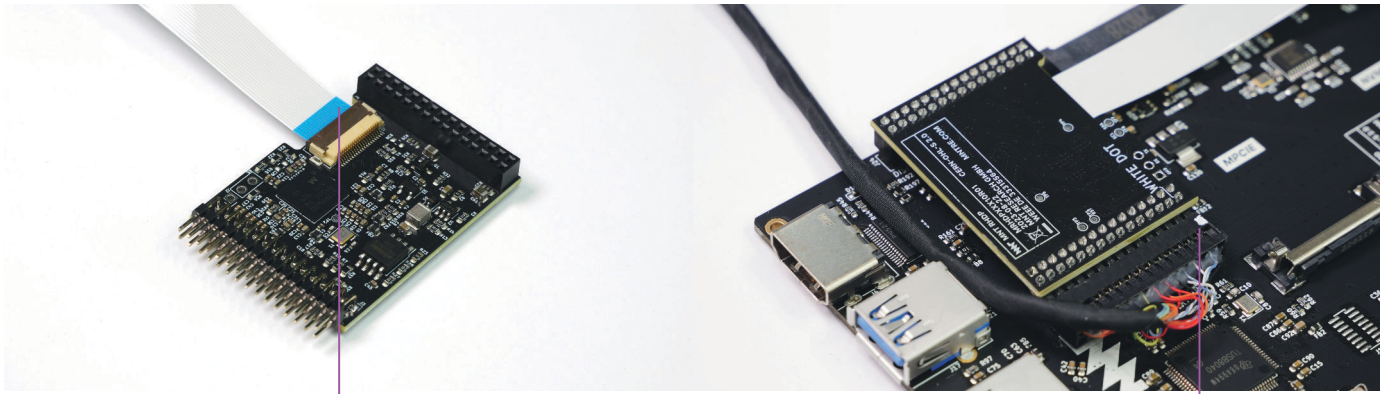
Warranty

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

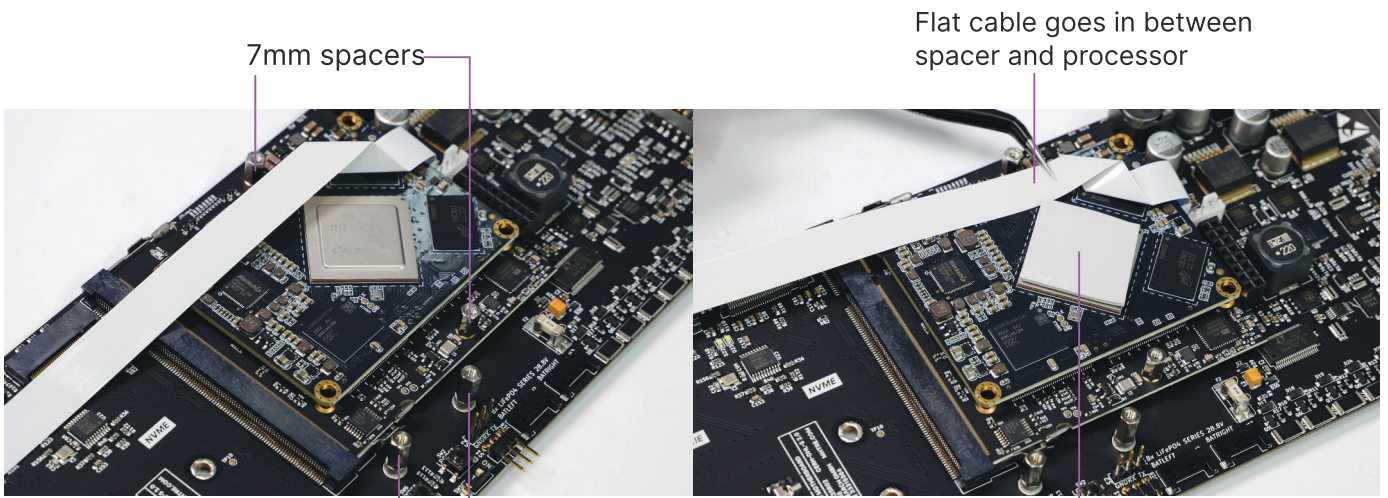
Need help? Join [community.mntre](https://community.mntre.com) or write to support@mntre.com

Join our IRC channel **#mnt-reform** on: irc.libera.chat



Blue end on top

Align white dot



7mm spacers

Flat cable goes in between spacer and processor

8mm spacers

Thermal pad

