CINCOZE RTX3000 Embedded MXM GPU Module Installation Guide

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Contents

Preface

Revision

Revision	Description	Date
1.00	First Release	2020/12/22
1.01	Correction Made	2023/04/14

Copyright Notice

Acknowledgement

Cincoze is a registered trademark of Cincoze Co., Ltd. All registered trademarks and product names mentioned herein are used for identification purposes only and may be trademarks and/or registered trademarks of their respective owners.

Disclaimer

This manual is intended to be used as a practical and informative guide only and is subject to change without notice. It does not represent a commitment on the part of Cincoze. This product might include unintentional technical or typographical errors. Changes are periodically made to the information herein to correct such errors, and these changes are incorporated into new editions of the publication.

Declaration of Conformity

FCC

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part

15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CE

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CE

The product(s) described in this manual complies with all application European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

Product Warranty Statement

Warranty

Cincoze products are warranted by Cincoze Co., Ltd. to be free from defect in materials and workmanship for 2 years from the date of purchase by the original purchaser. During the warranty period, we shall, at our option, either repair or replace any product that proves to be defective under normal operation. Defects, malfunctions, or failures of the warranted product caused by damage resulting from natural disasters (such as by lightening, flood, earthquake, etc.), environmental and atmospheric disturbances, other external forces such as power line disturbances, plugging the board in under power, or incorrect cabling, and damage caused by misuse, abuse, and unauthorized alteration or repair, and the product in question is either software, or an expendable item (such as a fuse, battery, etc.), are not warranted.

RMA

Before sending your product in, you will need to fill in Cincoze RMA Request Form and obtain a RMA number from us. Our staff is available at any time to provide you with the most friendly and immediate service.

RMA Instruction

- Customers must fill in Cincoze Return Merchandise Authorization (RMA) Request Form and obtain an RMA number prior to returning a defective product to Cincoze for service.

- Customers must collect all the information about the problems encountered and note anything abnormal and describe the problems on the "Cincoze Service Form" for the RMA number apply process.

- Charges may be incurred for certain repairs. Cincoze will charge for repairs to products whose warranty period has expired. Cincoze will also charge for repairs to products if the damage resulted from acts of God, environmental or atmospheric disturbances, or other external forces through misuse, abuse, or unauthorized alteration or repair. If charges will be incurred for a repair, Cincoze lists all charges, and will wait for customer's approval before performing the repair.

- Customers agree to ensure the product or assume the risk of loss or damage during transit, to prepay shipping charges, and to use the original shipping container or equivalent.

- Customers can be sent back the faulty products with or without accessories (manuals, cable, etc.) and any components from the system. If the components were suspected as part of the problems, please note clearly which components are included. Otherwise, Cincoze is not responsible for the devices/parts.

- Repaired items will be shipped along with a "Repair Report" detailing the findings and actions taken.

Limitation of Liability

Cincoze' liability arising out of the manufacture, sale, or supplying of the product and its use, whether based on warranty, contract, negligence, product liability, or otherwise, shall not exceed the original selling price of the

product. The remedies provided herein are the customer's sole and exclusive remedies. In no event shall Cincoze be liable for direct, indirect, special or consequential damages whether based on contract of any other legal theory.

Technical Support and Assistance

1. **Visit** the Cincoze website at **www.cincoze.com** where you can find the latest information about the product.
2. **Contact your distributor or our technical support team or sales representative for technical support if you need additional assistance. Please have following information ready before you call:**
   - Product name and serial number
   - Description of your peripheral attachments
   - Description of your software (operating system, version, application software, etc.)
   - A complete description of the problem
   - The exact wording of any error messages

Conventions Used in this Manual

⚠️ **WARNING**

This indication alerts operators to an operation that, if not strictly observed, may result in severe injury.

🔶 **CAUTION**

This indication alerts operators to an operation that, if not strictly observed, may result in safety hazards to personnel or damage to equipment.

✅ **NOTE**

This indication provides additional information to complete a task easily.

Safety Precautions

Before installing and using this device, please note the following precautions.

1. Read these safety instructions carefully.
2. Keep this Quick Installation Guide for future reference.
3. Disconnected this equipment from any AC outlet before cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
8. Use a power cord that has been approved for using with the product and that it matches the voltage and current marked on the product's electrical range label. The voltage and current rating of the cord must be greater than the voltage and current rating marked on the product.

9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.

10. All cautions and warnings on the equipment should be noted.

11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.

12. Never pour any liquid into an opening. This may cause fire or electrical shock.

13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.

   If one of the following situations arises, get the equipment checked by service personnel:

   - The power cord or plug is damaged.
   - Liquid has penetrated into the equipment.
   - The equipment has been exposed to moisture.
   - The equipment does not work well, or you cannot get it work according to the Quick Installation Guide.
   - The equipment has been dropped and damaged.
   - The equipment has obvious signs of breakage.

14. **CAUTION:** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.

15. Equipment intended only for use in a **RESTRICTED ACCESS AREA.**

Package Contents

Before installation, please ensure all the items listed in the following table are included in the package.

Item	Description	Q'ty
1	NVIDIA® Quadro® Embedded RTX3000 GPU card	1
2	GPU Heatsink	1
3	GPU Thermal Pad Kit	1
4	Screws Pack	1

Note: Notify your sales representative if any of the above items are missing or damaged.

Ordering Information

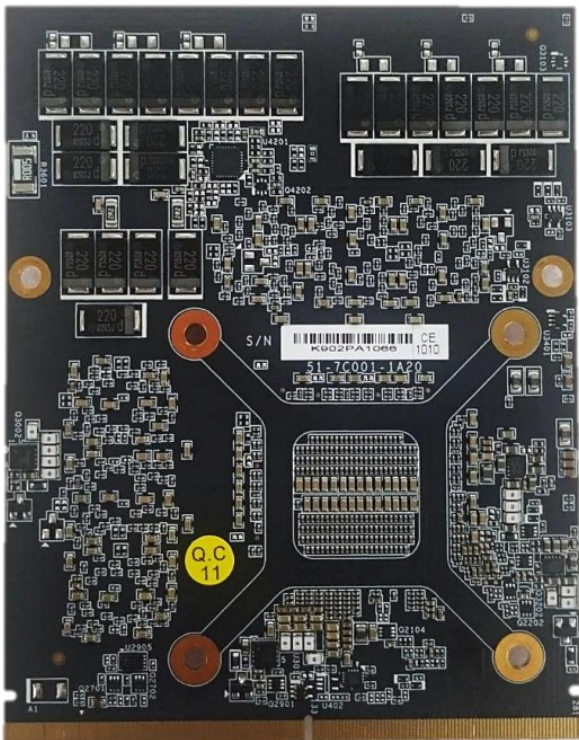| Model No.	Product Description
MXM-RTX3000-R10	Nvidia Quadro Embedded RTX3000 MXM Kit with Heatsink and Thermal Pad

Product Introductions

Product pictures

Front

Rear

Key Features

- NVIDIA® Quadro® RTX3000 Embedded Graphics
- Standard MXM 3.1 Type B Form Factor (82 x 105 mm)
- 1920 NVIDIA® CUDA® Cores, 30 RT cores, and 240 Tensor Cores
- 5.3 TFLOPS Peak FP32 Performance
- 6GB GDDR6 Memory, 192-bit
- 5-year Availability

Specifications

GPU	NVIDIA® Quadro® RTX3000
Memory	6GB GDDR6 memory, 192-bit (Bandwidth: 336 GB/s)
CUDA Cores	1920 CUDA® cores, 5.3 TFLOPS Peak FP32 performance
Tensor Cores	240 Tensor Cores
Compute API	CUDA Toolkit 8.0 and above, CUDA Compute version 6.1 andabove, OpenCL™ 1.2
Graphics API	DirectX® 12, OpenGL 4.6, Vulkan 1.0 API
Display Outputs	4x DisplayPort 1.4b digital video outputs, 4K at 120Hz or 8K at60Hz
Interface	MXM 3.1, PCI Express Gen3 x16 support
Dimensions	82 (W) x 105 (D) x 4.8 (H) mm
Form Factor	Standard MXM 3.1 Type B
PowerConsumption	80W
OS Support	Windows 10, Linux support by project

Mechanical Dimension
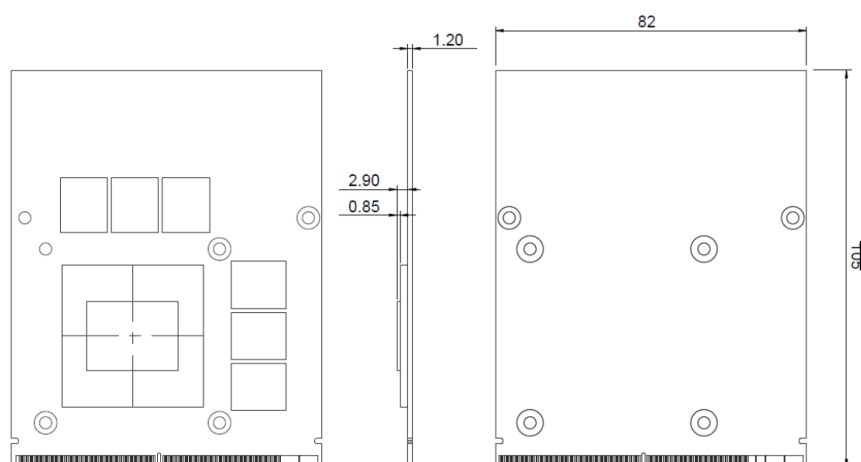
Module Setup

Installing an MXM Module

This chapter is to demonstrate how to setup an MXM Module onto an MXM Module supported system. Before this chapter gets started, users need to follow the instructions of the system's user manual to remove the system's chassis cover and to install the MXM carrier board.
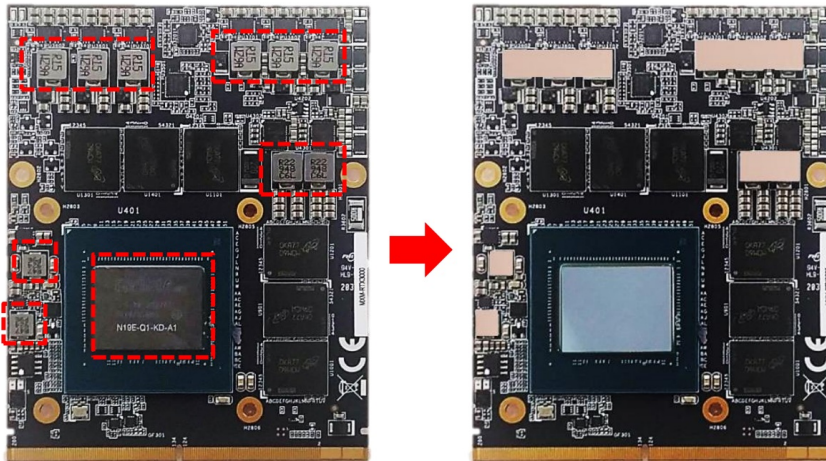
1. Locate the slot on the MXM carrier board installed on the MXM Module supported system. The system used here is GM-1000.

An MXM carrier board installed on GM-1000

This slot is used to connect an MXM Module
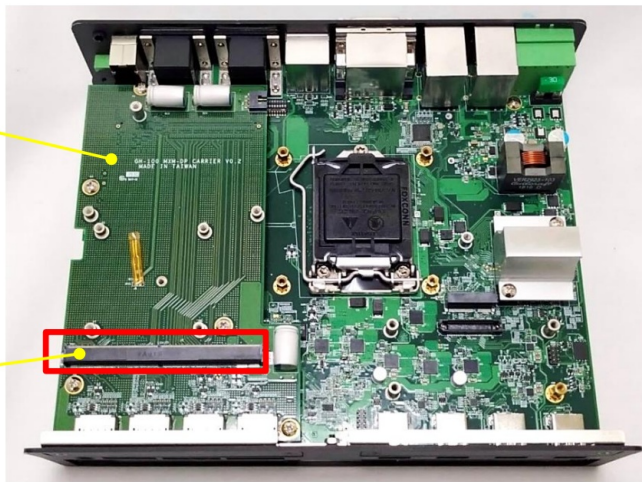
2. Place the thermal pads on the chips of the **MXM** Module.

Note: Before putting on the thermal block (in the step 4), please make sure the transparent protective films on the Thermal Pads have been removed!

3. Insert the MXM Module into the slot on the MXM carrier board at 45 degrees.

45°

4. Press down the MXM module and put on the thermal block with aligning the screw-holes, and then fasten the 7 screws by the sequel No.1 to No.7 (M3X8L).
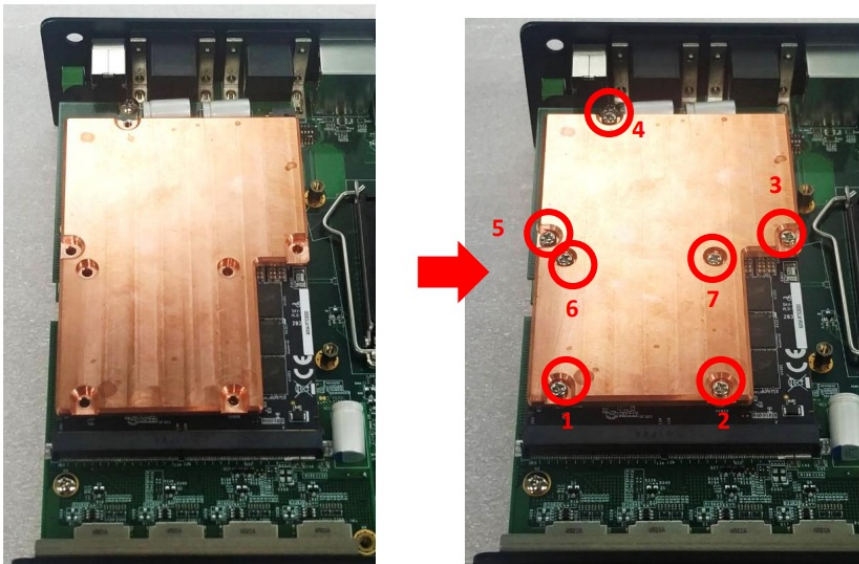
5. Place the thermal pad on the thermal block.

Note: Before assembling the system's chassis cover, please make sure the transparent protective film on the Thermal Pad has been removed!

Embedded MXM GPU Module
Nvidia Quadro Embedded RTX3000 MXM Kit with Heatsink and Thermal Pad.

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Documents / Resources

	CINCOZE RTX3000 Embedded MXM GPU Module [pdf] Installation Guide RTX3000 Embedded MXM GPU Module, RTX3000, Embedded MXM GPU Module, MXM GPU Module, GPU Module, Module

References

- **Cincoze – Expertise in Embedded Computing**
- **Cincoze – Expertise in Embedded Computing**
- **User Manual**