

Lanner

Network Computing

Hardware Platforms for Network Computing

RC-PCIEM201A User Manual

Version: 1.0

Date of Release: 2018-01-25

Icon Descriptions

The icons are used in the manual to serve as an indication of interest topics or important messages. Below is a description of these icons:



Note: This check mark indicates that there is a note of interest and is something that you should pay special attention to while using the product.



Warning: This exclamation point indicates that there is a caution or warning and it is something that could damage your property or product.

Online Resources

The listed websites are links to the on-line product information and technical support.

Resources	URL
Lanner	http://www.lannerinc.com
Product Resource	http://www.lannerinc.com/download-center
RMA	http://eRMA.lannerinc.com

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Revision History

Version	Date	Descriptions
1.0	2018/01/25	1st Release

Table of Contents

Chapter 1: Product Overview	5
Ordering Information	5
Package Content.....	5
Specifications.....	5
Physical Overview.....	6
Supported MPCIe Slot Size	7
Chapter 2: board Information	8
Motherboard Layout	8
Chapter 3: Hardware Setup	10
Installing the Adapter Board	10
Installing the M.2 Card	11
Appendix: Terms and Conditions	12
Warranty Policy	12
RMA Service.....	12
RMA Service Request Form	13

CHAPTER 1: PRODUCT OVERVIEW

Thank you for choosing **RC-PCIEM201A**. This adapter board enables the use of M.2-based modules on a Mini PCIe Full-Size Socket.

Ordering Information

Item	Description
RC-PCIEM201A	Transfer board to extend Mini-PCIe golden finger to M.2 connector (M2-B key design) with SIM socket

Package Content

Your package contains the following items:

- ▶ 1x RC-PCIEM201A Adapter Board
- ▶ 1x Screw Pack

Specifications

Form Factor		M.2 Type
Dimension		54.55x30mm
Connector	Interface	SATA / PCIe / USB
	Type	Connector design M.2 B key design and support M.2 B or B+M Device
	SIM Socket	SIM holder
Environment	Operating/Storage Temperature	0 to 40°C / -20 to 70°C
	Relative Humidity	5% to 90%, non-condensing
Compliant	EU RoHS 2.0	Required
	China RoHS	Required

Physical Overview



No.	Description	
F1	Screw Hole	Based on the size of the M.2 card and Mini-PCIe slot, lock the screw through suitable screw holes onto the board to secure the M.2 card as well as the adapter board. If necessary, use a standoff screw to support the card.
F2	SIM Card Holder	For a Nano SIM card
F3	M.2 Card Slot	
F4	Mini-PCIe Card Connector	

 **Note:** Depending on the design of the main board, the number of screw holes for the adapter board’s fixture may vary. It is recommended that at least one side of the adapter board be secured by a screw to ensure rigid mounting; however, with single-side mounting, in certain applications such as an in-vehicle solution, you may observe slight vibration of the adapter board when the vehicle is in motion.



Supported Mini-PCIe Slot Size

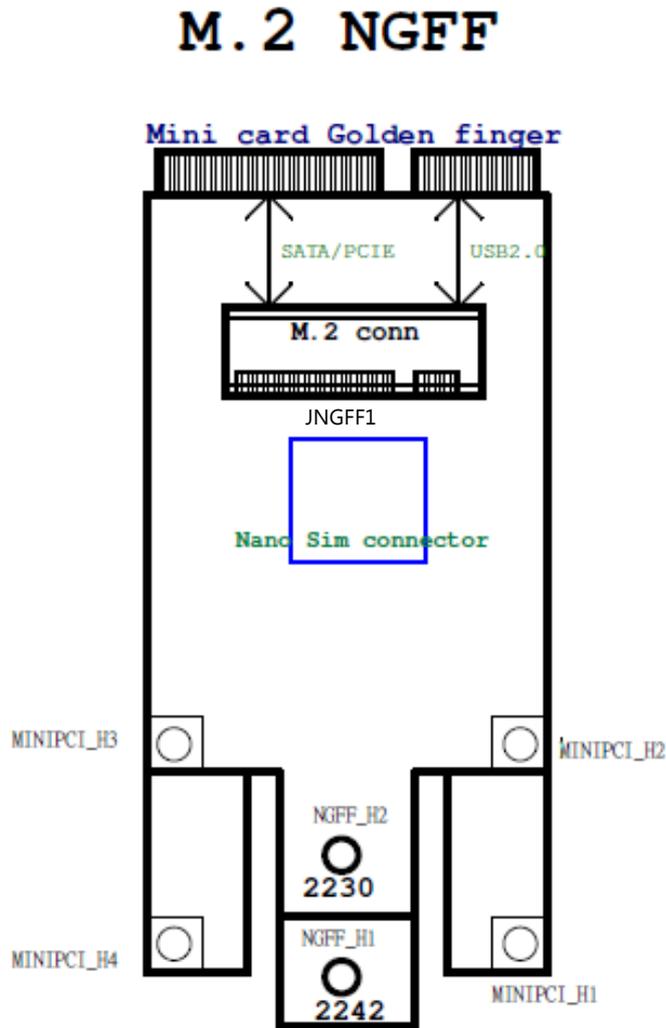
The Adapter board comes with 5 mounting holes and breakable partitions for required Mini-PCIe slot of shorter size. By removing the partitions, you can transform the board into the desired size to fit your motherboard.

Mini-PCIe Size	M.2 Type	Adapter Board Appearance
Full Size	2242/3042	
	2230/3030	
Half-Size	2242/3042	
	2230/3030	

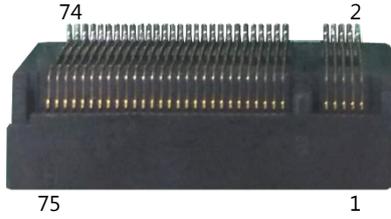
CHAPTER 2: BOARD INFORMATION

Main Board Layout

The main board layout shows the connectors and jumpers on the board. Refer to the following picture as a reference of the pin assignments and the internal connectors.



JNGFF1: M.2 Connector



1	GND_PRESENCE_IND	2	
3	GND<3>	3V3_AUX2	4
5	GND<5>	3V3_AUX4	6
7	USB2_D+	F_CARD_PWROFF#	8
9	USB2_D-	W_DIS#	10
11	GND<11>	LED#1DAS/DSS#	12
13	NOTCH<1>	NOTCH<5>	14
15	NOTCH<2>	NOTCH<6>	16
17	NOTCH<3>	NOTCH<7>	18
19	NOTCH<4>	NOTCH<8>	20
21		AUDIO_0	22
23	GND-WWAN/OC-SSD	AUDIO_1	24
25	NC<23>	AUDIO_2	26
27	NC<25>	AUDIO_3	28
29	GND<27>	UIM_RFU	30
31	PERn1/USB3RX-	UIM_RESET	32
33	PERp1/USB3RX+	UIM_CLK	34
35	GND<33>	UIM_DATA	36
37	PETn1/USB3TX-	UIM_PWR	38
39	PETp1/USB3TX+	DEVSLP	40
41	GND<39>	GNSS0	42
43	PERn0/SATA-B+	GNSS1	44
45	PERp0/SATA-B-	GNSS2	46
47	GND<45>	GNSS3	48
49	PETn0/SATA-A-	GNSS4	50
51	PETp0/SATA-A+	PERST#	52
53	GND<51>	CLKREQ#	54
55	REFCLKN	WAKE#	56
57	REFCLKP	NC_56	58
	GND<57>	NC_58	
59			60
61	ANTCTL0	COEX3	62
63	ANTCTL1	COEX2	64
65	ANTCTL2	COEX1	66
	ANTCTL3	SIM_DET	
67			68
69	RESET#	SUSCLK	70
71	PEDET	3V3_AUX70	72
73	GND<71>	3V3_AUX72	74
75	GND<73>	3V3_AUX74	
	OC-USB3/GND-OTHER		

Pin 10 is connected with Pin 42 on Mini-PCIe through a zero-ohm resistor for LED indicator.

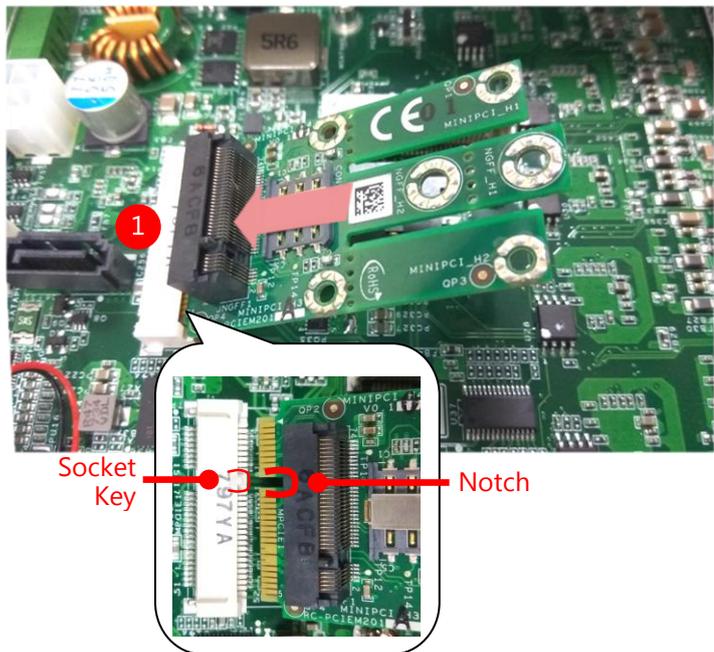
CHAPTER 3: HARDWARE SETUP

To access some components and perform certain service procedures, you must perform the following procedures first:

- (1) To reduce the risk of personal injury, electric shock, or damage to the equipment, please remove all power sources
- (2) Please wear ESD protected gloves before conducting the following steps.

Installing the Adapter Board

1. Locate Mini-PCIe slot. Align the notch of the adapter board with the socket key in the slot. Insert the adapter board at 30 degrees into the socket until it is fully seated in the connector.

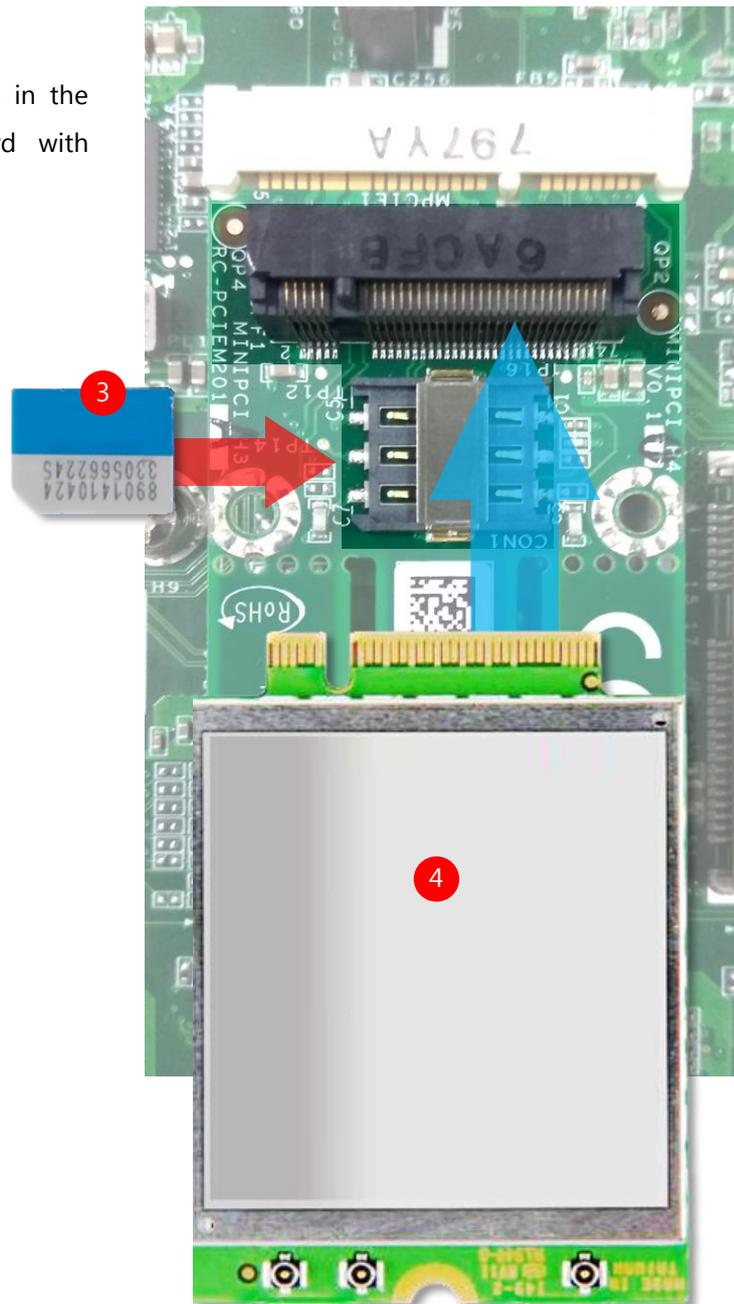


2. Push down on the adapter board and secure it with screws that come with it.



Installing the M.2 Card

3. Insert nano-SIM card.
4. Insert the M.2 card as shown in the picture. Secure the M.2 card with screws that come with it.



APPENDIX: TERMS AND CONDITIONS

Warranty Policy

1. All products are under warranty against defects in materials and workmanship for a period of one year from the date of purchase.
2. The buyer will bear the return freight charges for goods returned for repair within the warranty period; whereas the manufacturer will bear the after service freight charges for goods returned to the user.
3. The buyer will pay for the repair (for replaced components plus service time) and transportation charges (both ways) for items after the expiration of the warranty period.
4. If the RMA Service Request Form does not meet the stated requirement as listed on "RMA Service," RMA goods will be returned at customer's expense.
5. The following conditions are excluded from this warranty:
 - ▶ Improper or inadequate maintenance by the customer
 - ▶ Unauthorized modification, misuse, or reversed engineering of the product
 - ▶ Operation outside of the environmental specifications for the product.

RMA Service

Requesting an RMA#

1. To obtain an RMA number, simply fill out and fax the "RMA Request Form " to your supplier.
2. The customer is required to fill out the problem code as listed. If your problem is not among the codes listed, please write the symptom description in the remarks box.
3. Ship the defective unit(s) on freight prepaid terms. Use the original packing materials when possible.
4. Mark the RMA# clearly on the box.



Note: Customer is responsible for shipping damage(s) resulting from inadequate/loose packing of the defective unit(s). All RMA# are valid for 30 days only; RMA goods received after the effective RMA# period will be rejected.

RMA Service Request Form

When requesting RMA service, please fill out the following form. Without this form enclosed, your RMA cannot be processed.

RMA No:	Reasons to Return: <input type="checkbox"/> Repair(Please include failure details) <input type="checkbox"/> Testing Purpose
Company:	Contact Person:
Phone No.	Purchased Date:
Fax No.:	Applied Date:
Return Shipping Address: _____	
Shipping by: <input type="checkbox"/> Air Freight <input type="checkbox"/> Sea <input type="checkbox"/> Express _____	
<input type="checkbox"/> Others: _____	

Item	Model Name	Serial Number	Configuration

Item	Problem Code	Failure Status

***Problem Code:**

- | | | | |
|------------------------|------------------------------|--------------------|--------------------------|
| 01: D.O.A. | 07: BIOS Problem | 13: SCSI | 19: DIO |
| 02: Second Time R.M.A. | 08: Keyboard Controller Fail | 14: LPT Port | 20: Buzzer |
| 03: CMOS Data Lost | 09: Cache RMA Problem | 15: PS2 | 21: Shut Down |
| 04: FDC Fail | 10: Memory Socket Bad | 16: LAN | 22: Panel Fail |
| 05: HDC Fail | 11: Hang Up Software | 17: COM Port | 23: CRT Fail |
| 06: Bad Slot | 12: Out Look Damage | 18: Watchdog Timer | 24: Others (Pls specify) |

Request Party

Confirmed By Supplier

Authorized Signature / Date

Authorized Signature / Date