

EPM-1605

USB to mini-PCIe module with USIM interface

User's Manual



1st Ed – 04 September 2024

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1. Getting Started

1.1 Safety Precautions

Warning!



Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

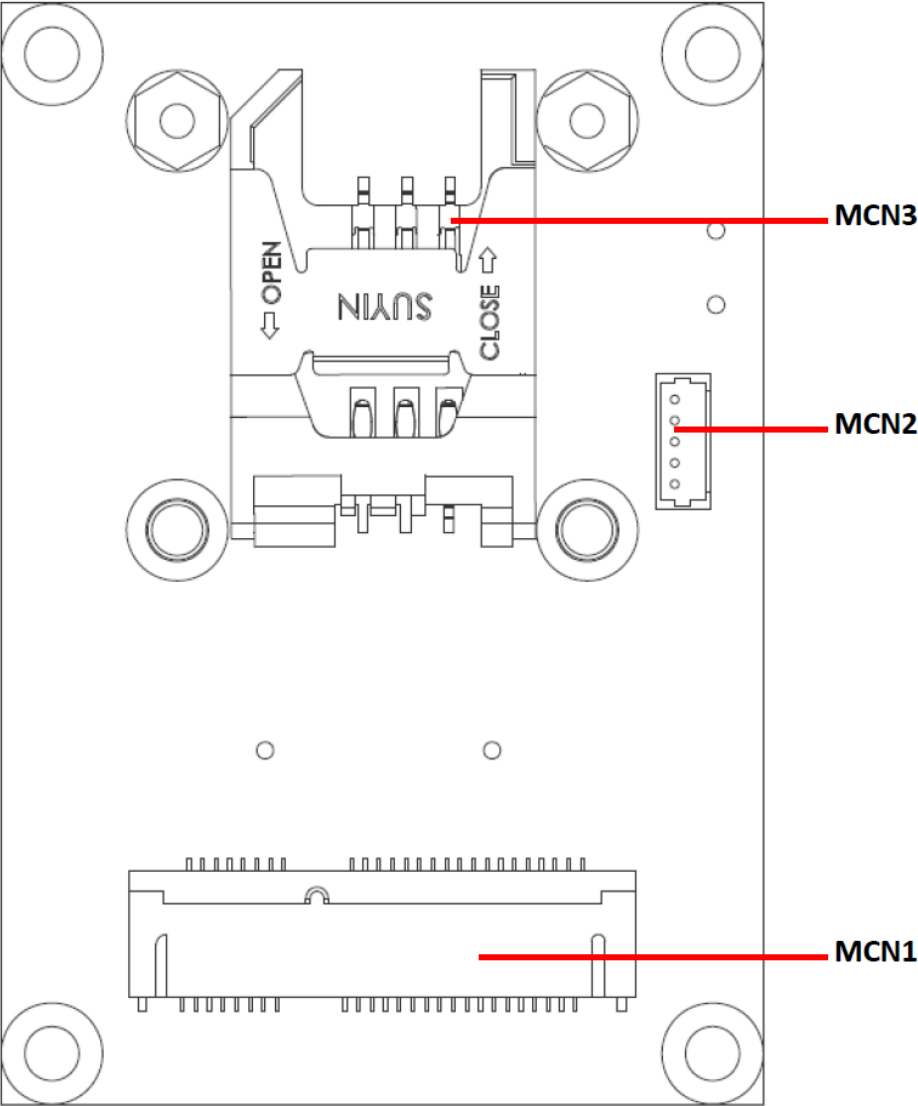
Caution!



Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

Always note that improper disassembling action could cause damage to the motherboard. We suggest not removing the heatsink without correct instructions in any circumstance. If you really have to do this, please contact us for further support.

1.2 Product Overview

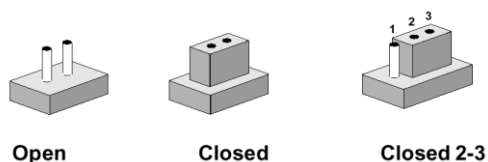


2 Hardware Configuration

2.1 Jumper and Connector List

You can configure your board to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch.

It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To “close” a jumper you connect the pins with the clip. To “open” a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2, and 3. In this case, you would connect either two pins.



The jumper settings are schematically depicted in this manual as follows:



A pair of needle-nose pliers may be helpful when working with jumpers.

Connectors on the board are linked to external devices such as hard disk drives, a keyboard, or floppy drives. In addition, the board has a number of jumpers that allow you to configure your system to suit your application.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes.

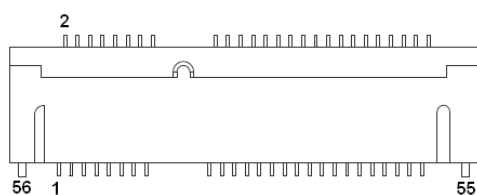
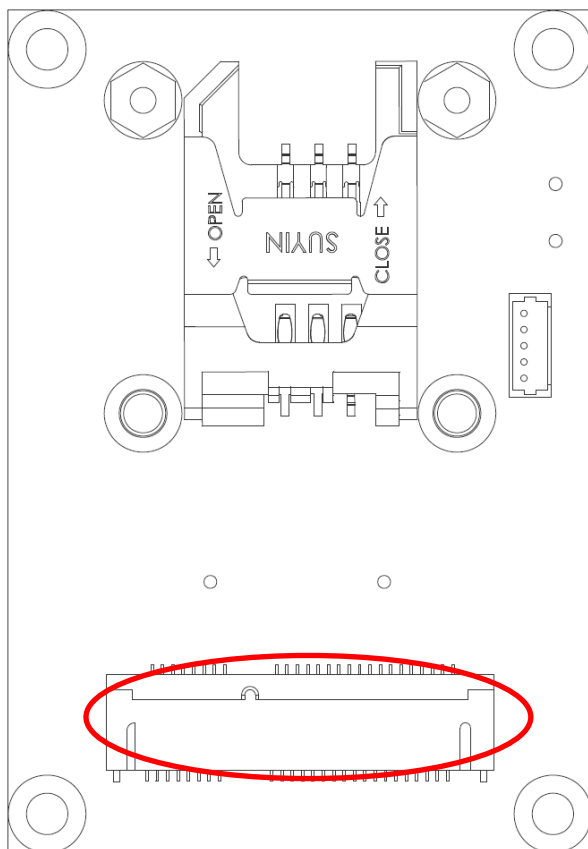
The following tables list the function of each of the board's jumpers and connectors.

Connectors

Label	Function	Note
MCN1	Mini PCI Express connector	52 header
MCN2	USB power inverter	5 x 1 wafer, pitch 1.25mm
MCN3	SIM CARD slot	6 header X-SIM

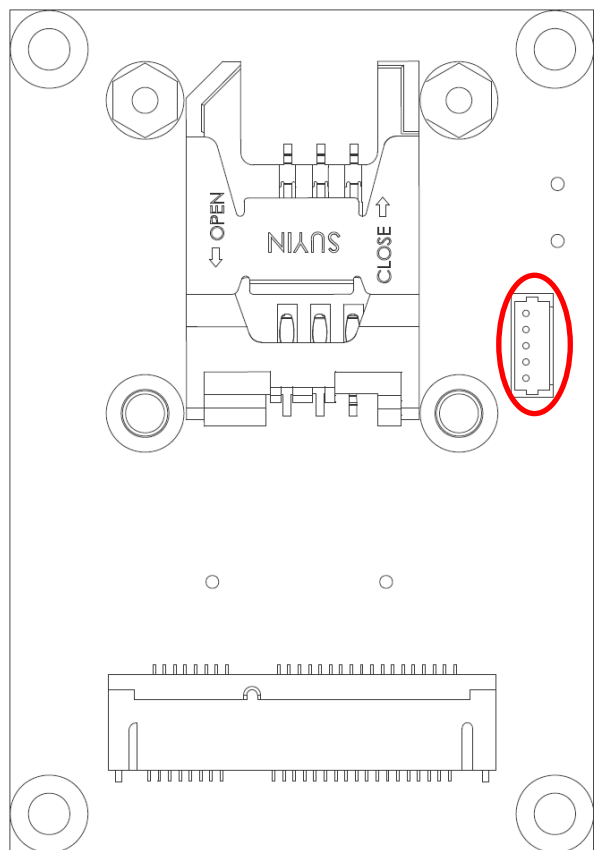
2.2 Setting Jumpers & Connectors

2.2.1 Mini PCI Express connector (MCN1)



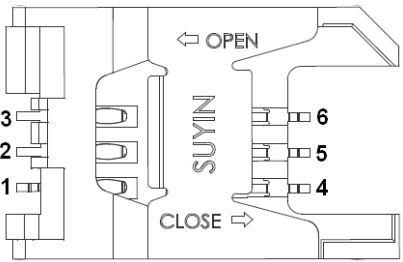
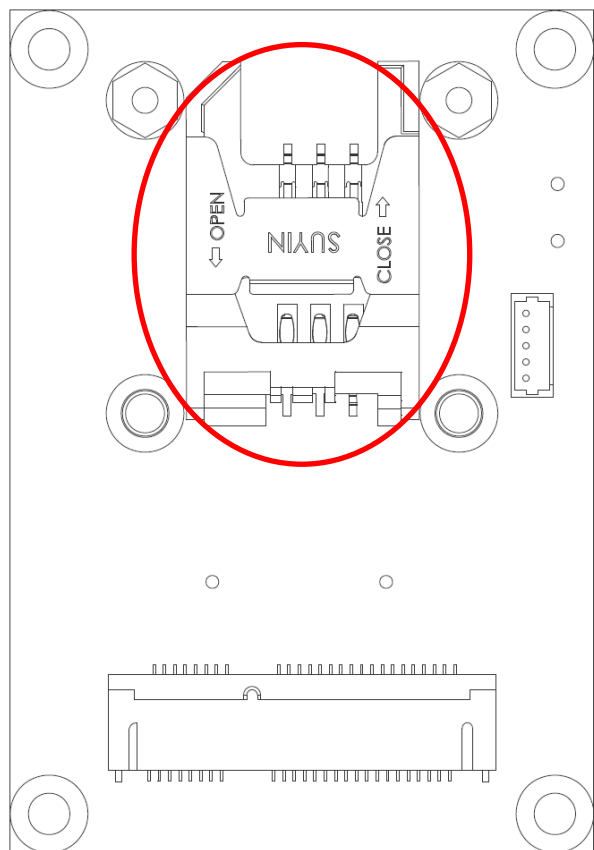
Signal	PIN	PIN	Signal
GND	56	54	
NC	1	2	M +3.3V
NC	3	4	GND
NC	5	6	M +1.5V
NC	7	8	MSIM_VCC
GND	9	10	MSIM_DATA
NC	11	12	MSIM_CLK
NC	13	14	MSIM_RESET
GND	15	16	MSIM_VPP
MSIM_SCC8	17	18	GND
MSIM_SCC4	19	20	M +3.3V
GND	21	22	NC
NC	23	24	M +3.3V
NC	25	26	GND
GND	27	28	M +1.5V
GND	29	30	NC
NC	31	32	NC
NC	33	34	NC
GND	35	36	MUSBDN
GND	37	38	MUSBDP
M +3.3V	39	40	GND
M +3.3V	41	42	NC
GND	43	44	NC
NC	45	46	NC
NC	47	48	M +1.5V
NC	49	50	GND
NC	51	52	M +3.3V
GND	55	53	

2.2.2 USB power inverter (MCN2)



Signal	PIN
MUSB5V_IN	1
MUSBDN	2
MUSBDP	3
GND	4
GND	5

2.2.3 SIM CARD slot (MCN3)



Signal	PIN	PIN	Signal
MSIM_CLK	3	6	MSIM_DATA
MSIM_RESET	2	5	MSIM_VPP
MSIM_VCC	1	4	GND

