Jio Platforms Limited

SMART METERING NIC (JNM2550)

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Revision History

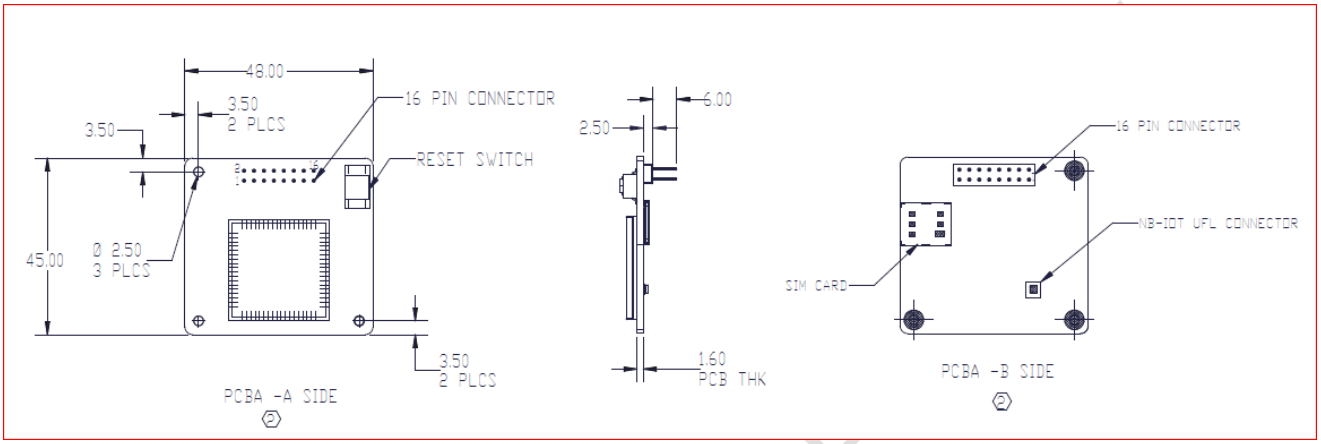
Rev. No.	Date	Prepared by	Reviewed by	Approved by	Details of Amendments / Revisions
0.1	15th February 2021	Devices Team	PM		First version
1.0	01st June 2021	Devices Team	PM		Updated Package Details

1. NIC PCBA Dimensions

Tolerance of mounting holes are ±0.1mm

Tolerance of 16-PIN connector & SIM connector are ±0.5mm

X, Y dimension is ±0.5mm.



2. NIC Overview

Smart Meter NIC is a plugin module which can be fitted into energy meter and provides wireless connectivity for smart metering applications supporting NB-IoT

2.1 Technical Specifications

#	Parameters	Description
1	SoC	MTK2625DA
2	OS Support	FreeRTOS
3	Network	NB-LTE: Band3/Band5
4	Memory	32Mb PSRAM
5	Storage	32Mb flash
6	SIM	Physical SIM (1.8V / 3V)
7	Interface	UART – 1, GPIO – 4, Control Signals – 2
8	Connections	16-PIN connector, SIM card slot, RF connector (U.FL)
9	Dimensions	48mm X 45mm
10	Weight	15.7 g
11	Operating Temperature	-40°C to +85°C

2.2 Pin mapping of 16 pin connector

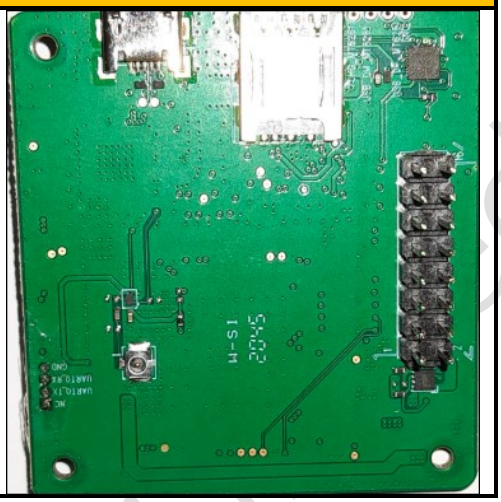
Pin	Purpose	Input / Output to NIC	Remarks
1	VCC	Power Input	3.7V to 4.1V
2	GND		
3	Wakeup	Input	Active High Digital input signal
4	Hard reset	Input	Active Low Signal
5	UART RTS	Output	Request to Send
6	UART Tx	Output	Transmit signal of NIC
7	NC		
8	UART Rx	Input	Receive signal of NIC
9	UART CTS	Input	Clear to Send
10	Digital Output	Output	Active High Digital Output Signal
11	Digital Input	Input	Active High Digital Input Signal
12	NIC Ready Indication	Output	Active High Digital Output signal
13	Power failure Indication	Input	Active High Digital Input Signal
14	Push Indication	Input	Active High Digital Input Signal
15	GND		
16	NC		

All the signals should be 3.3V compatible

All Input signals (EM → NIC) I_{IH}/I_{IL} are < 0.1mA

All Output signals (NIC → EM) I_{OH}/I_{OL} are 4mA

2.3 Product Image

FRONT	BACK
	

3. Device RSN Identification

The serial numbers shall have assigned by manufacturer. The length shall be 8 digits, excluding the identifiers.

E.g.

R	RJIL Identifier
PR	Device Vendor Identifier
NC	Device Type Identifier
G	Month of Manufacturing (July-refer below table)
A	Year of Manufacturing (2014-refer below table)
12345678	Serial Number

The RSN will look like "**RPRNCGA12345678**".

The month and year format shall as per following:

Month	Identifier
January	A
February	B
March	C
April	D
May	E
June	F
July	G
August	H
September	I
October	J
November	K
December	L

Year	Identifier
2014	A
2015	B
2016	C
2017	D
2018	E
2019	F
2020	G
2021	H
2022	I
2023	J
2024	K
2025	L

4. Package Details

The following are the electronic component package details:

4.1 Package Material

ESD Bag → Bubble Wrap Bag

4.2 ESD Sensitive

Yes

4.3 MSL Level

MSL1 - Unlimited

4.4 Shelf Life

12 months

4.5 Certifications

ROHS3