

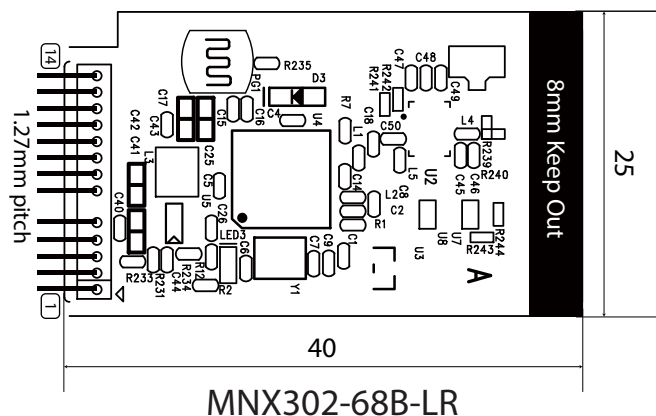
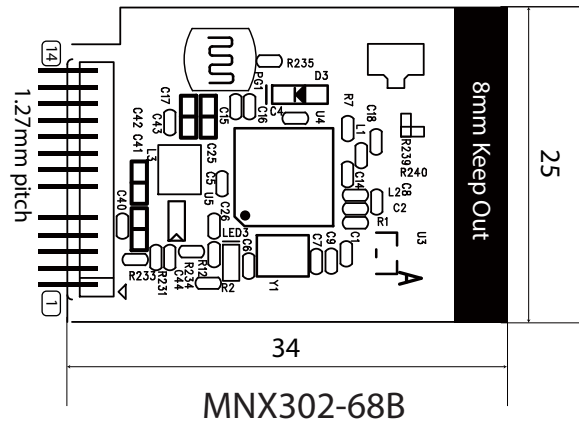
## Applications

- Robust and secure low power wireless applications
- Solar Monitor
- Home and commercial building automation
- Utilities metering (e.g. AMR)
- Location Aware services (e.g. Asset Tracking)
- Toys and gaming peripherals
- Industrial systems
- Telemetry
- Remote Control

## Dimensions

## MNX-302-68B RF

MNX302-68B / LR RF Module is one of the most important components in our ∞MESH™ Network. Just plug it in any devices, then you are free to control and monitor your devices at anytime at anywhere.



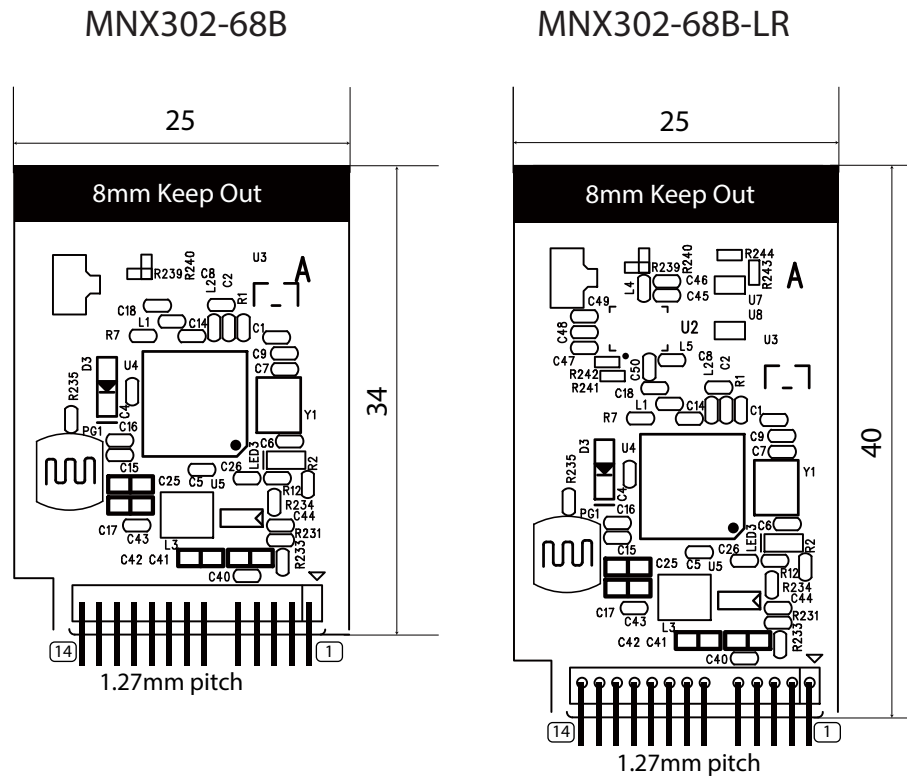
## Specifications

Core MCU		NXP JN5168
MESH Specifications	Default Protocol	∞MESH™
	Range	Max. point to point 500m / 5km LR line of site
	MESH Role	Coordinator / Node
	Max Nodes per PAN	300
	MESH Structure	Tree
	OTA Upgrade	Available
	Other Protocols	802.15.4, 6LoWPAN, JenNet-IP, ZigBee Light Link, ZigBee Smart Energy, RF4CE
Radio	ISM Band of RF	2.4GHz
	Operating Channels	16
	RF Data Rate	256Kbps
	RF Power	5.5dBm / 24dBm LR
	RF Power	80mW / 300mW
	External Antenna (ipex u.FI)	2.5dB (suggested)
	Digital PWM Signal Output	500Hz
PWM	Digital ON/OFF	3.3V Active Low 4mA
	Digital Signal Input	3.3V Active Low 4mA
	Analog Signal Input	Max. Voltage 2.5V
	UART TTL Communication	2
	Input Voltage Range	3.1 VDC ~ 5.5VDC

## Specifications

Power Specifications	Typical Input Voltage (Vdc)	5
	Average Power Consumption	100mW / 500mW LR
	Maximum Power Consumption	Max 500mW
Environmental Conditions	Working Temperature	-40°C ~ +85°C
	Storage Temperature	-40°C ~ +85°C
	Working Humidity	10% ~ 95%
	Storage Humidity	5% ~ 100%
	Vibration Compatibility	10Hz ~ 300Hz
Compliance	FCC PART15 SubPart C	√
	RF : EN 300 328	√
Dimensions/ Footprint	Physical Weight	2.7g
	Size: Length	34mm / 40mm LR
	Size: Width	25mm
	Size: Height (component thickness included)	3.1mm

Pinout



Pin	Function
1	Digital Sensor (D) 3.3V Active Low
2	PWM DIM 3.3V (4mA 500Hz)
3	Led Signal 3.3v
4	GND
5	VCC 5V+
6	Blank No Pin
7	Enable (ON / OFF) Active Low
8	TXD1
9	RXD1
10	GND
11	RXD0
12	TXD0
13	CF Pulse Input
14	Light Sensor (A) 0-2.5v

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## Federal Communications Commission (FCC) Statement

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This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- 1) this device may not cause harmful interference and
- 2) this device must accept any interference received, including interference that may cause undesired operation of the device.

15.21

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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- 1) this device may not cause harmful interference and
- 2) this device must accept any interference received, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. For body worn operation, this device has been tested and meets FCC RF exposure guidelines. When used with an accessory that contains metal may not ensure compliance with FCC RF exposure guidelines.

End Product Labeling:

This module is designed to comply with the FCC & IC statement, FCC ID: 2AOLF-MNX302. The host system using this module, should have label in a visible area indicated the following texts:

"Contains FCC ID: 2AOLF-MNX302".

Manual Information to the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as shown in this manual.

RF Exposure

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and consider removing the no-collocation statement.