

Lima has 802.11N 2x2 radio supporting up to 300 Mbps data-rate and comes in two versions: commercial or industrial temperature

Lima is a QCA 4531 chipset based module with a 650 MHz CPU and 802.11N 2x2 (MIMO) radio. Module is available in two temperature ranges: commercial (Lima-C) and industrial (Lima-I).

Lima is a surface mountable, dual-sided, Wi-Fi enabled Linux module for the (IoT) internet of everything applications.

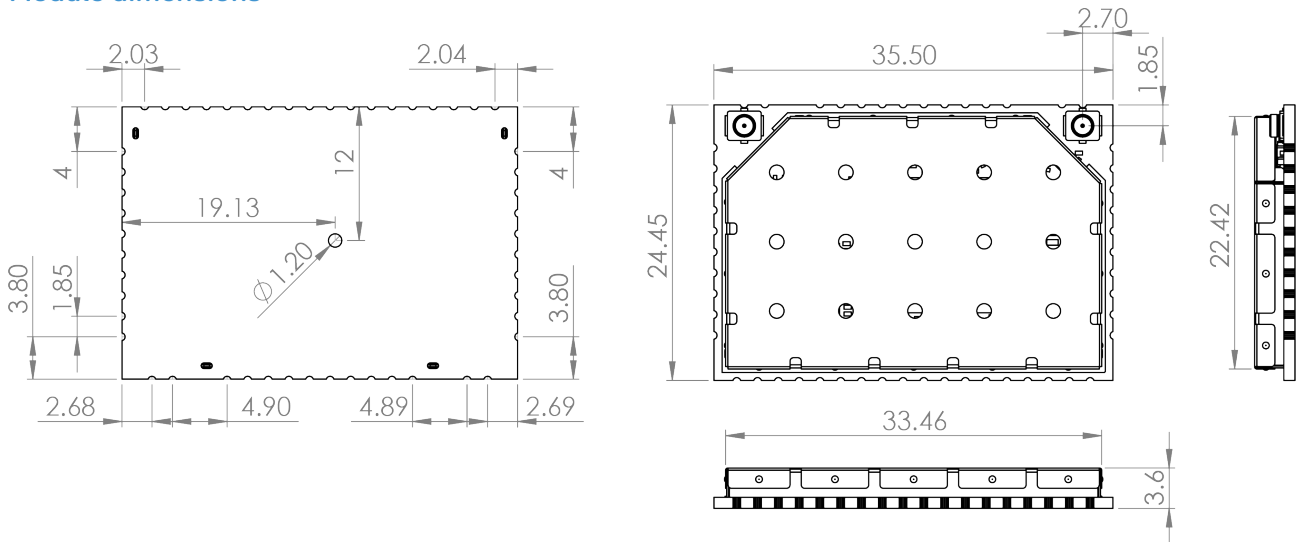
Faster CPU, 300 Mbps data-rate, low power consumption, larger memory options (up to 128 MB RAM and up to 64 MB Flash) and a development kit with more interfaces (e.g. PCIe) are the key differentiators from Carambola 2 module.

OpenWRT linux distribution source code is available on GitHub <https://github.com/8devices> and is supported by our growing community on http://www.8devices.com/community_forum.

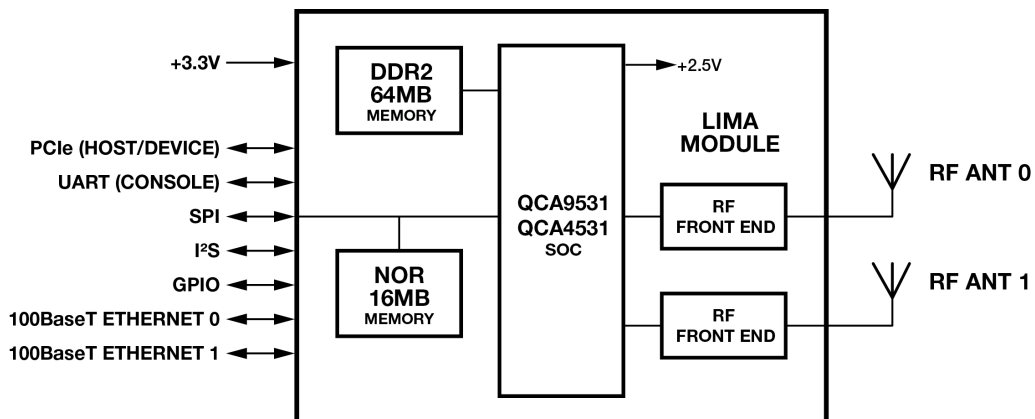
Quick specs

- 802.11 b/g/n, 2.4 GHz, 2x2 MIMO, 300 Mbps data rate.
- U.FL connectors or external pin for external antenna
- 16 MB FLASH, 64 MB DDR2 RAM
- Linux friendly , OpenWRT flash image and source code are available for download on www.8devices.com/wiki_lima
- CPU – QCA 4531, 650 MHz clock speed
- Small form factor (25 by 35 mm)
- Surface mountable, dual-side design
- Industrial and commercial temperature range models
- Available interfaces - USB 2.0 host, serial port, 2 x Ethernet, i2C, UART, PCIe, GPIO

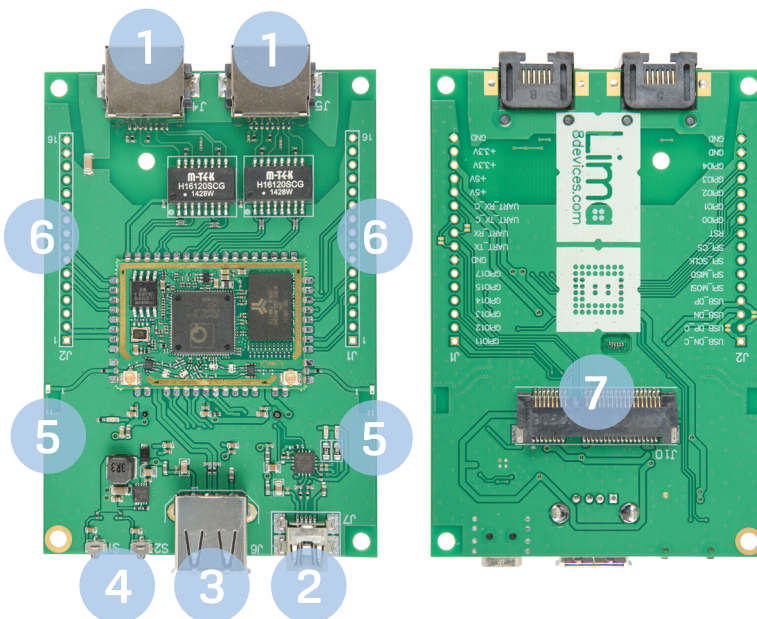
Module dimensions



Block diagram

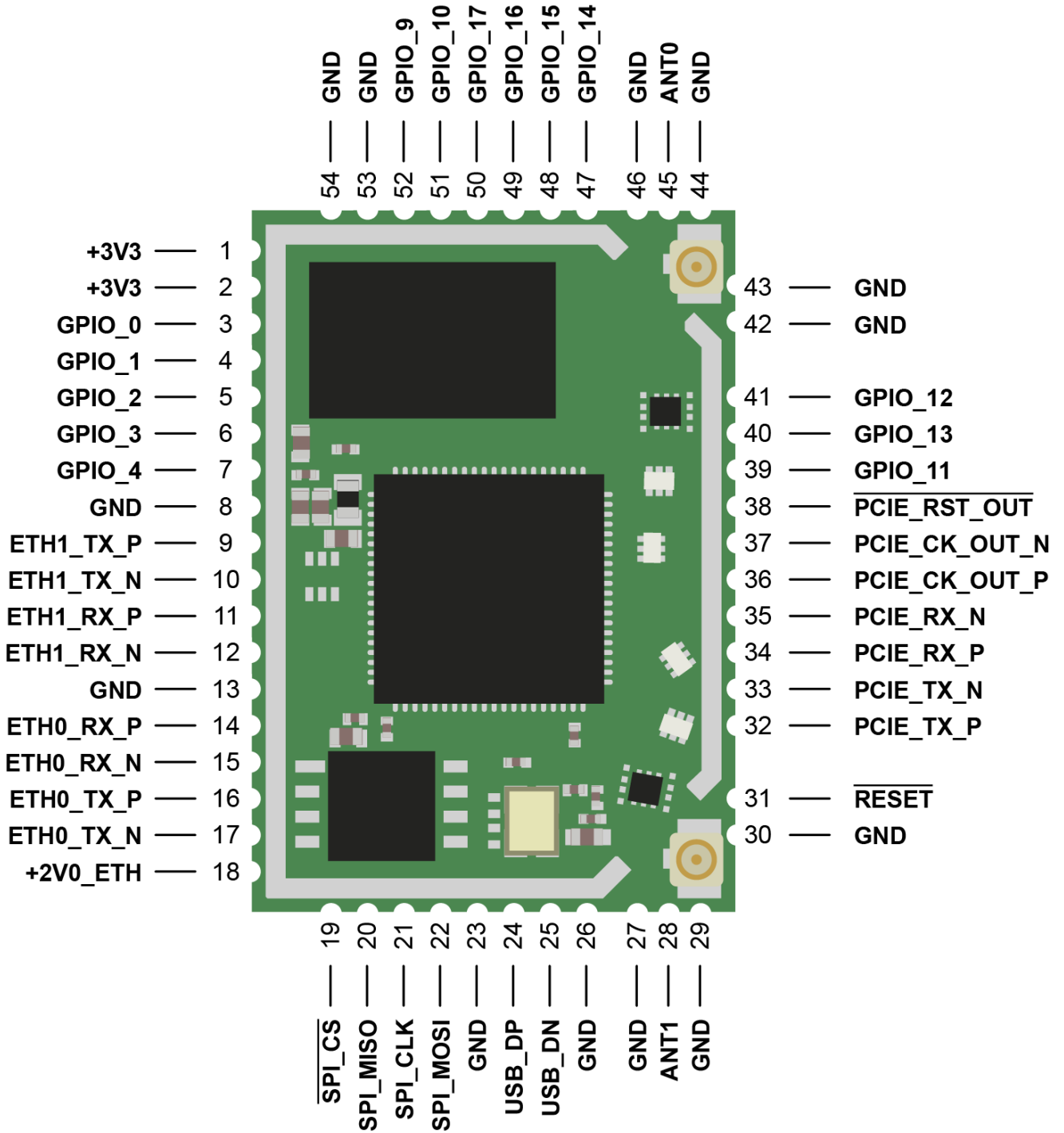


Development kit



- 1 - 2 x 100 Base-T Ethernet ports
- 2 - Mini USB Type-A socket (console + power)
- 3 - USB Type-A socket
- 4 - Buttons (reset and user - GPIO connected)
- 5 - Two integrated antennas
- 6 - 2.45 mm pitch prototyping area holes
- 7 - PCIe socket

Module pinout



Type of antenna

1. Ceramic Antenna

Antenna gain: 3dBi

2. External Antenna

Antenna gain: 10dBi

Model name: QB2400-10D-2N

Manufacturer: Nanhai Microwave Communications Equipment Co.,Ltd

FCC Warning:

If the FCC identification number is not visible when the module is installed inside another device, then the

outside of the device into which the module is installed must also display a label referring to the enclosed

module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID:Z9W-CM4

when the module is installed inside another device, the user manual of this device must contain below

warning statements;

1. 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.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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(2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This modular complies with FCC RF radiation exposure limits for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

NOTE:

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.

IC Warning:

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux CNR exemptes de licence d'Industrie Canada . Son fonctionnement est soumis aux deux conditions suivantes :

- (1) Ce dispositif ne peut causer d'interférences ; et
- (2) Ce dispositif doit accepter toute interférence , y compris les interférences qui peuvent causer un mauvais fonctionnement de l'appareil.

This modular complies with IC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

If the IC number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains IC: 11468A-CM4"

when the module is installed inside another device, the user manual of this device must contain below warning statements;

1. This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

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This modular complies with FCC RF radiation exposure limits for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product