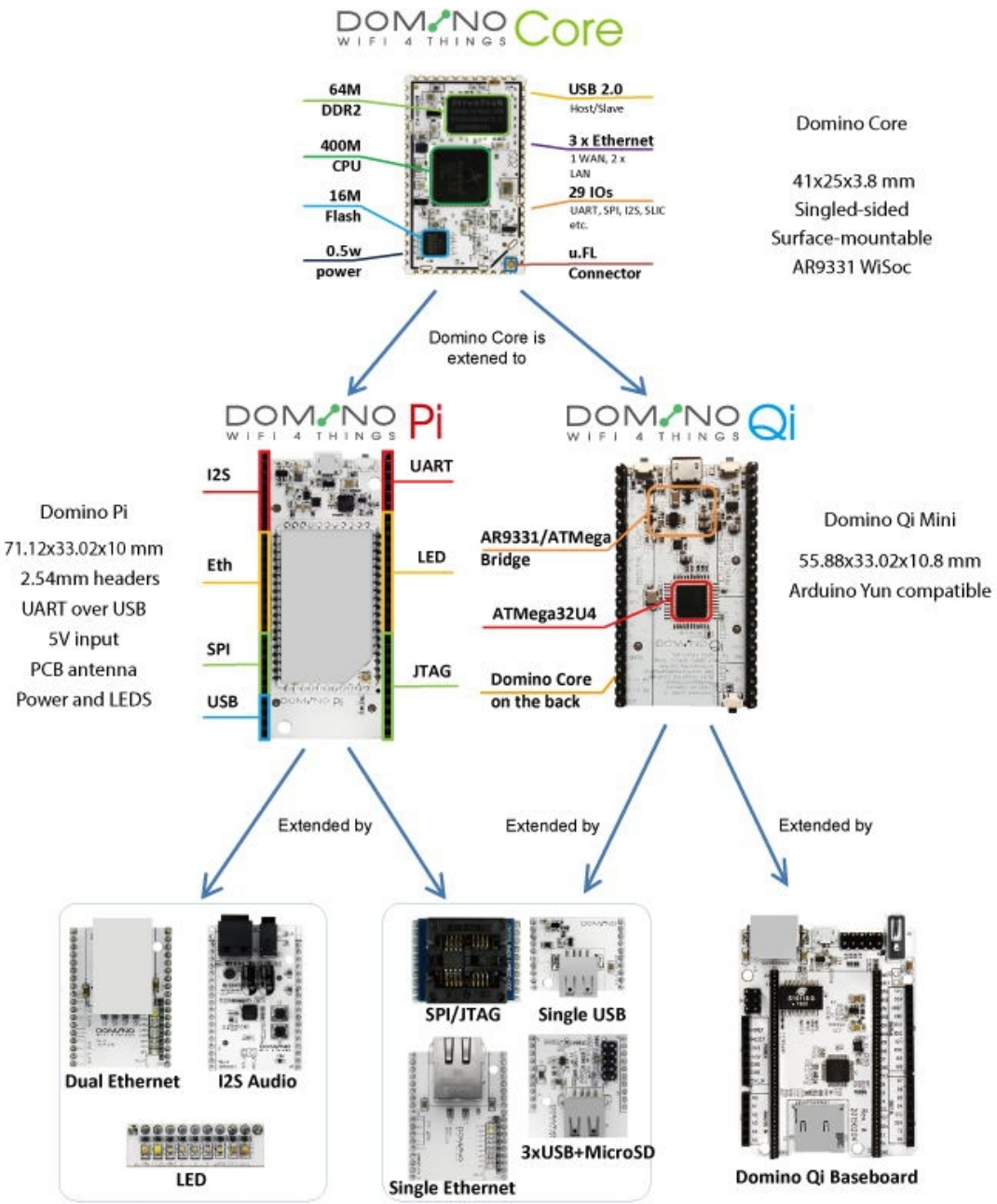
Domino Wi-Fi Dev Kit

Domino.IO is a low-cost, high-performance 802.11 bgn WiFi hardware platform, with a modular design architecture, unlimited extension capabilities and Arduino compatibility.



Features

LinuxTM Inside: Domino is based on OpenWRT™, a Linux™ distribution specialized into Wireless Routers: it is based on a proven and secure full IP stack with all features used in billions of devices, not on a stripped-down custom implementation.

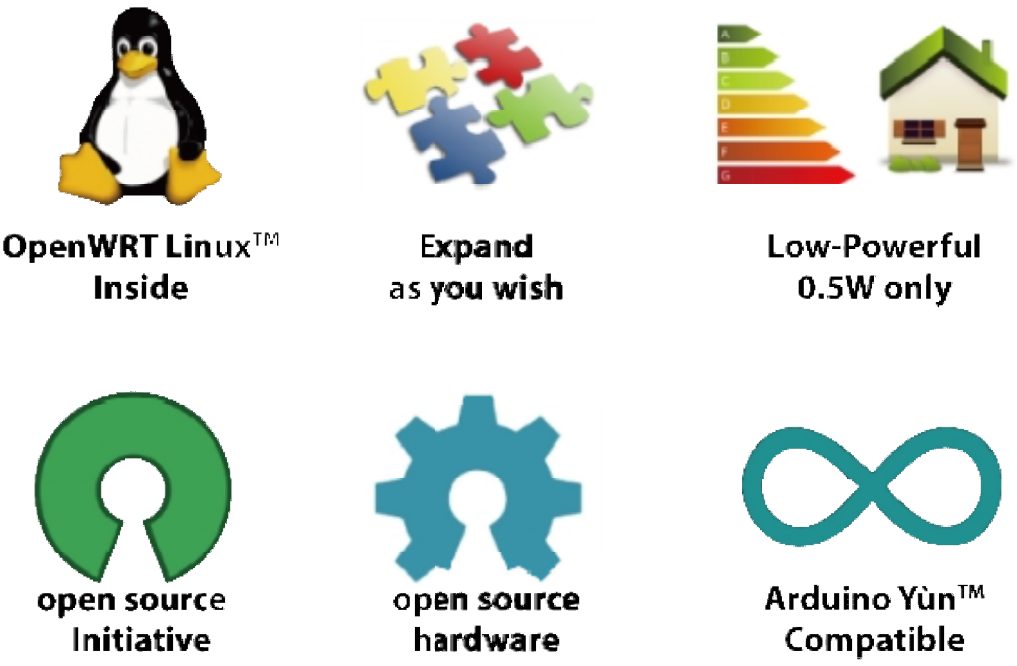
Low-Powerful: Based on a MIPS 24Kc 400 MHz CPU used in conjunction with 64 MB DDR2 DRAM and 16 MB SPI Flash, the Domino has plenty of horsepower. Yet, its power consumption is incredibly low for a WiFi-class device: only 0.5 W while transmitting at full +18 dBm RF power.

Open Source Initiative: Domino firmware is compliant with Open Source Initiative: all released software will have their sources available under their original Open Source-compatible license.

Open Source Hardware: We provide all board schematic, layout and BOM files into the popular EagleCADTM XML-based file format under a permissive Creative Commons CC-BY-SA 4.0 license. You are thus free to copy, revise and improve them.

Expand as you wish: Seven expansion boards for Domino Pi ("Tiles") are readily available. We will add more extension board as you wish! You can also design your own extension board and include it into our database!

Arduino YùnTM Compatible: Domino Qi Mini is a small-sized board that is a fully compatible derivative of the original Arduino YùnTM, crammed into a tiny form factor.



Specifications

Fully integrated WiFi 8201.11 b/g/n (up to 150 Mbps) RF front-end

USB 2.0 Full/High-Speed with Host and Device mode support

Up to 2x IEEE 802.3 Fast Ethernet port with built-in switch and auto-crossover, auto polarity and auto-negotiation in PHYs, with 4 classes of QoS per port

High-speed 115200 bps UART for U-Boot / Linux console support

I2S / SPDIF-out audio interface

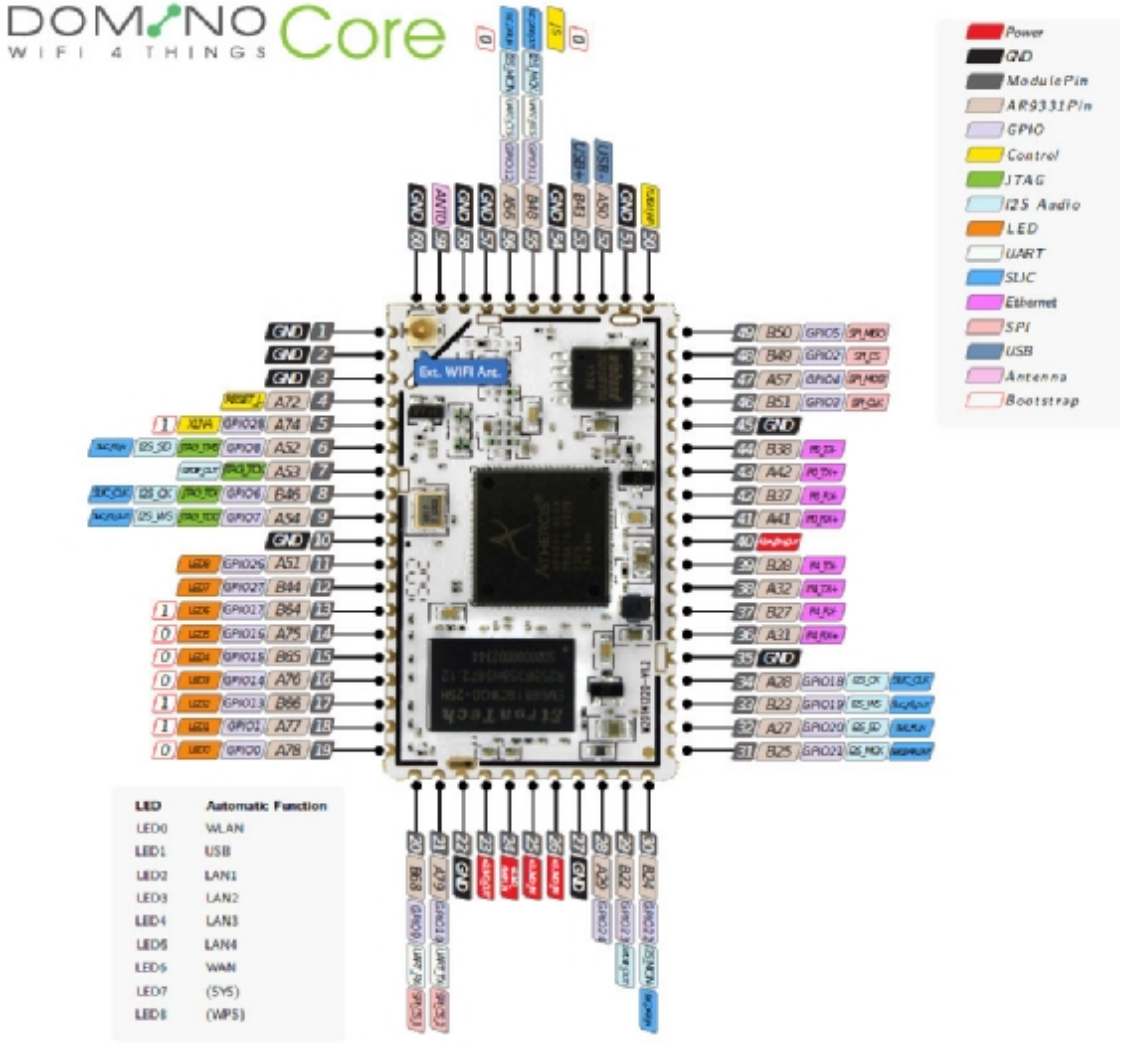
SLIC for interfacing with VoIP/PCM devices

Up to 29 GPIOs / 9 LEDs support (2.5 V level / 24 mA drive)

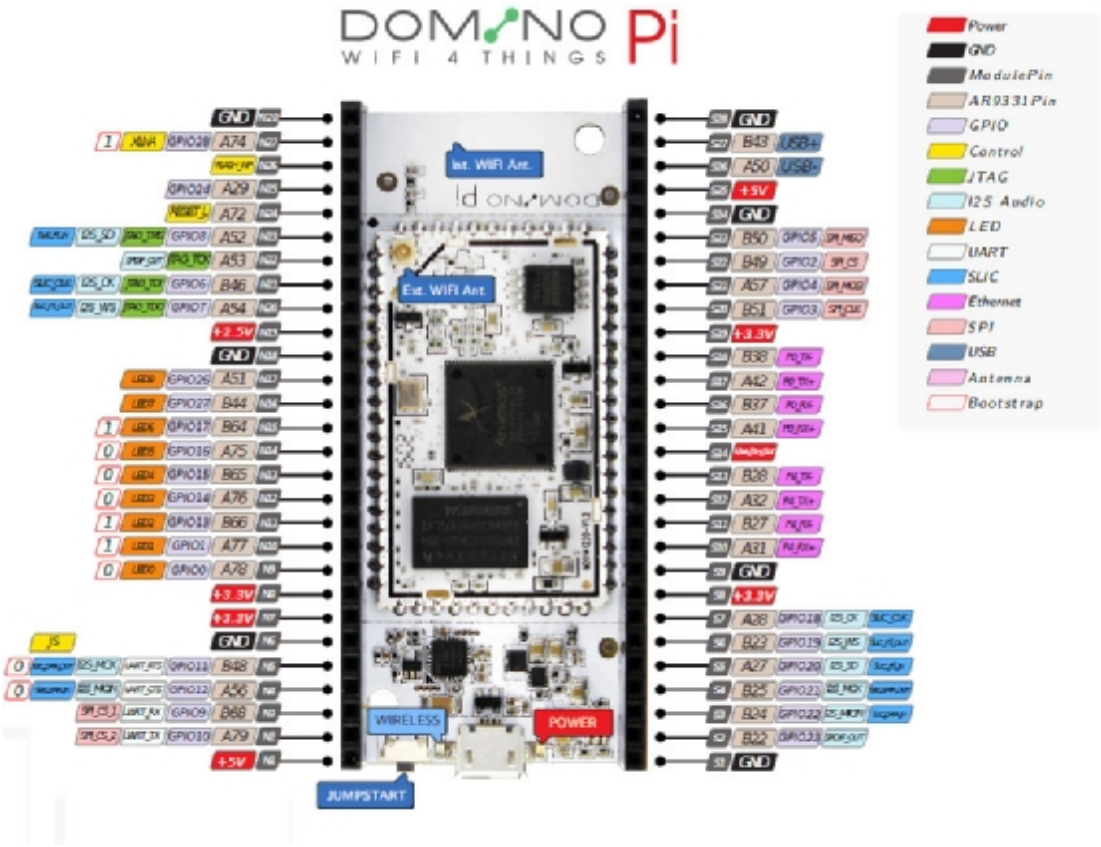
Domino Core specs

Weight	*4 g*
Dimensions	*41 x 25 x 3.8 mm*
CPU	*AR9331, 400 MHz*
Memory	*16 MB SPI Flash and 64 MB DDR2 RAM*
RF Frequency	*2.4 GHz band*
Max Output Power	*+18dBm*
Wireless Standards	*802.11 bgn*
Antenna (port)	*U.FL connector, castellated pad*
Power Supply	*3.3 V, max. power consumption 0.5 W*
Firmware	*U-Boot, OpenWRT*
Available Interfaces	*USB host/slave, serial port, 2 x Ethernet, SPI, I2S, SLIC, SPDIF, JTAG, 9x LEDs, 29 x GPIOs*

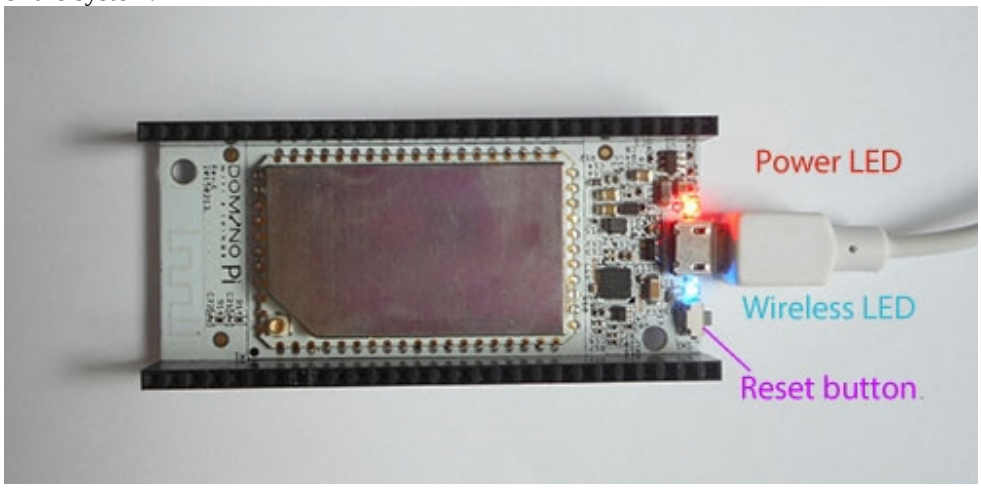
Domino Core Pinout



Domino Pi



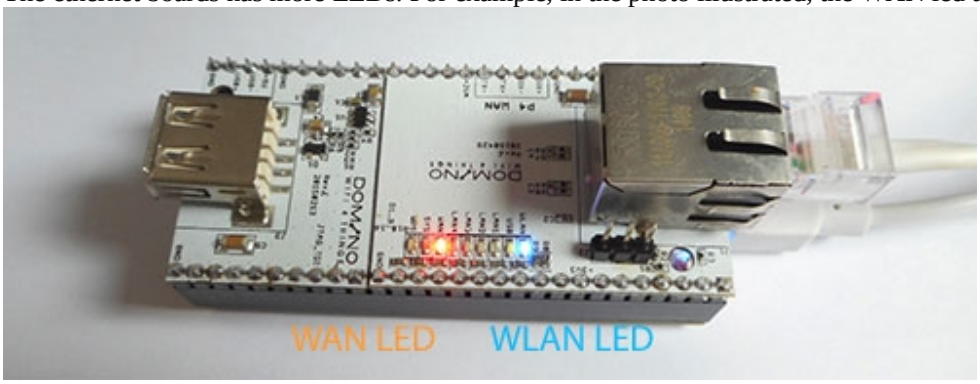
Domino Pi board has two LEDs. The red LED is for Power, which should be always on when powered. The blue LED is for wireless (or WLAN), which will indicate the status of wireless. But it can be configured to indicate any other status of the system.



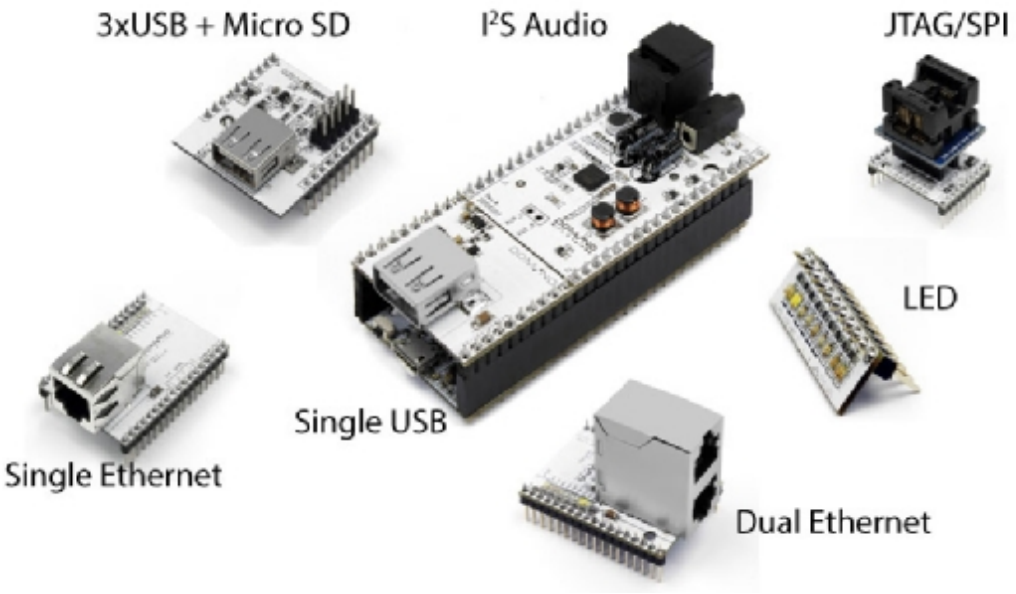
Besides the WLAN LEDs there is a button which connects to `GPIO 11`. The function of this button can be configured by scripts. The default action is:

1. With a short press, it will toggle the status of wifi, i.e. it will turn on/off the wifi;
2. With a long press (10 seconds), it will revert the system to factory status.

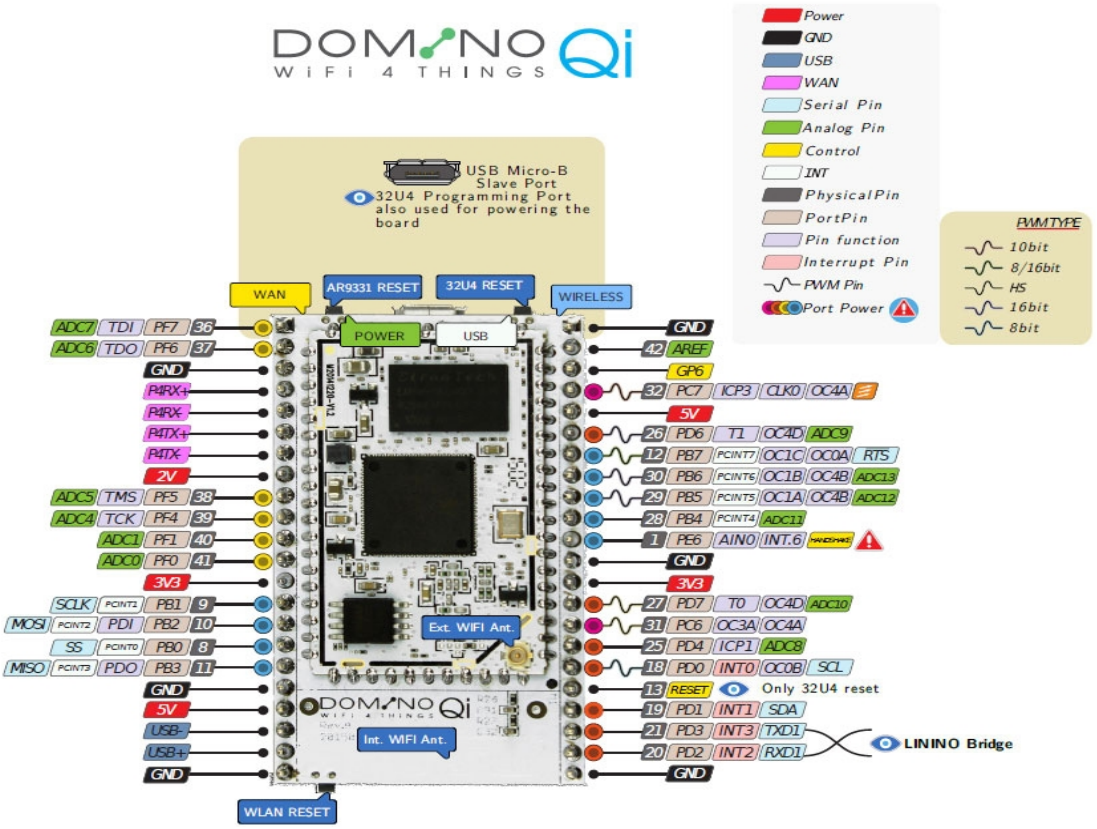
The ethernet boards has more LEDs. For example, in the photo illustrated, the WAN led and WLAN LED is on.

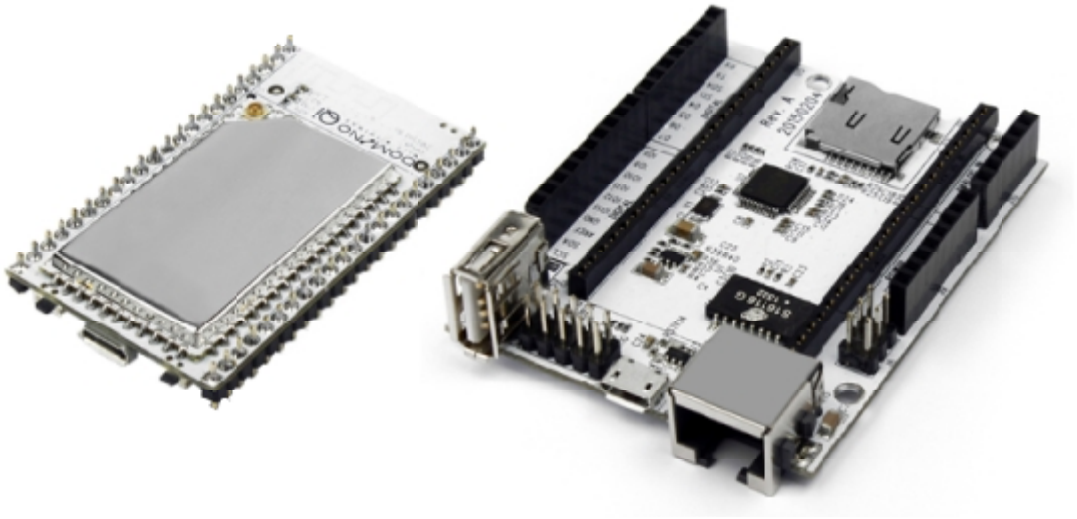


Domino Core extensions



Domino Qi





This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equip ment should be installed and operated with minimum distance 20cm between the radiator and your body.

FCC Caution: Any changes or modifications not expressly
approved by the party responsible for compliance could void the user's
authority to operate this equipment.

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.

This device and its antenna(s) must not be co-located or operating in conjunction
with any other antenna or transmitter.

15.105 Information to the user.

(b) For a Class B digital device or peripheral, the instructions furnished the
user shall include the following or similar statement, placed in a prominent
location in the text of the manual:

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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. T his equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Radiation Exposure Statement:

This equipment complies with FCC 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.

The availability of some specific channels and/or operational frequency bands

are country dependent and are firmware programmed at the factory to match

the intended destination.

The firmware setting is not accessible by the end user.

The final end product must be labelled in a visible area with the following:

“Contains Transmitter Module 2AE94DOMINO-9331”