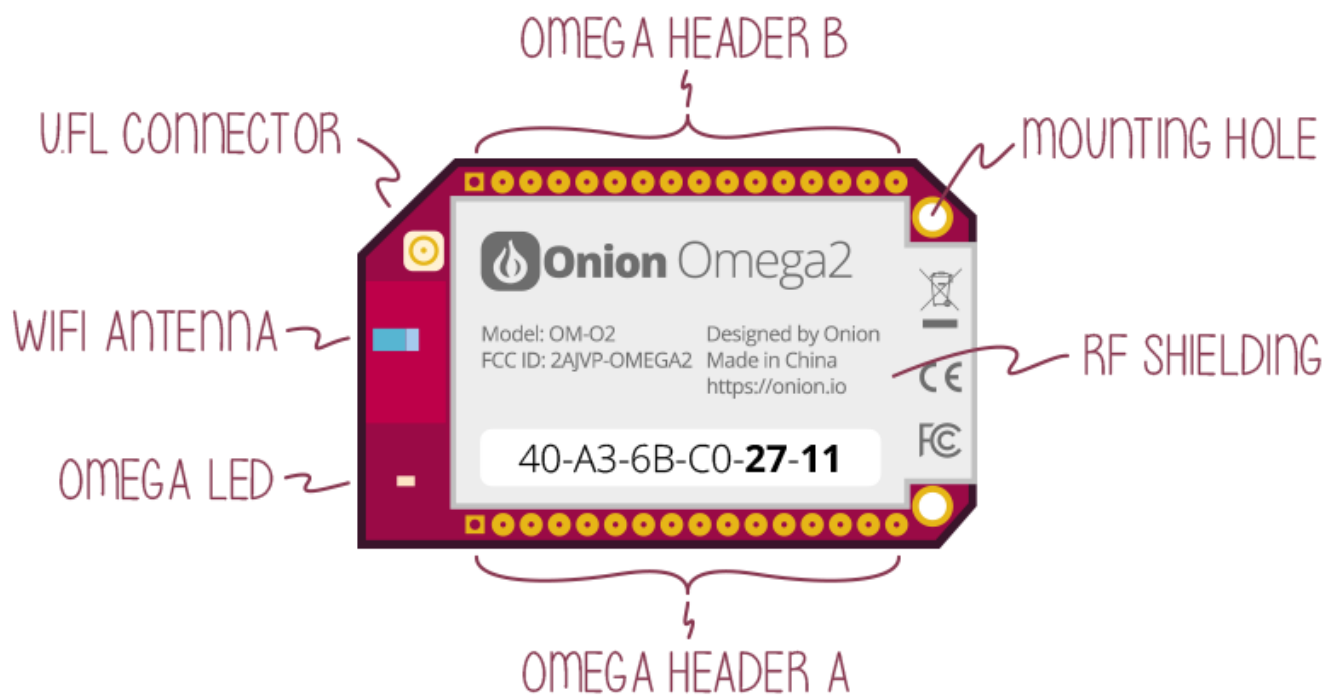


Onion Omega2

The Omega2 is the latest in development boards from Onion. It comes packed with built-in Wi-Fi, a Linux Operating System, flexible GPIOs, and a powerful processor, among other things.

The Omega2 at a Glance



Omega2 Specs	
Processor	580MHz MIPS CPU
Memory	64MB Memory
Storage	16MB Storage
USB	USB 2.0
MicroSD Slot	No
WiFi adapter	b/g/n Wi-Fi
GPIOs	15
PWM	2
UART	2
I2C	1
SPI	1
I2S	1

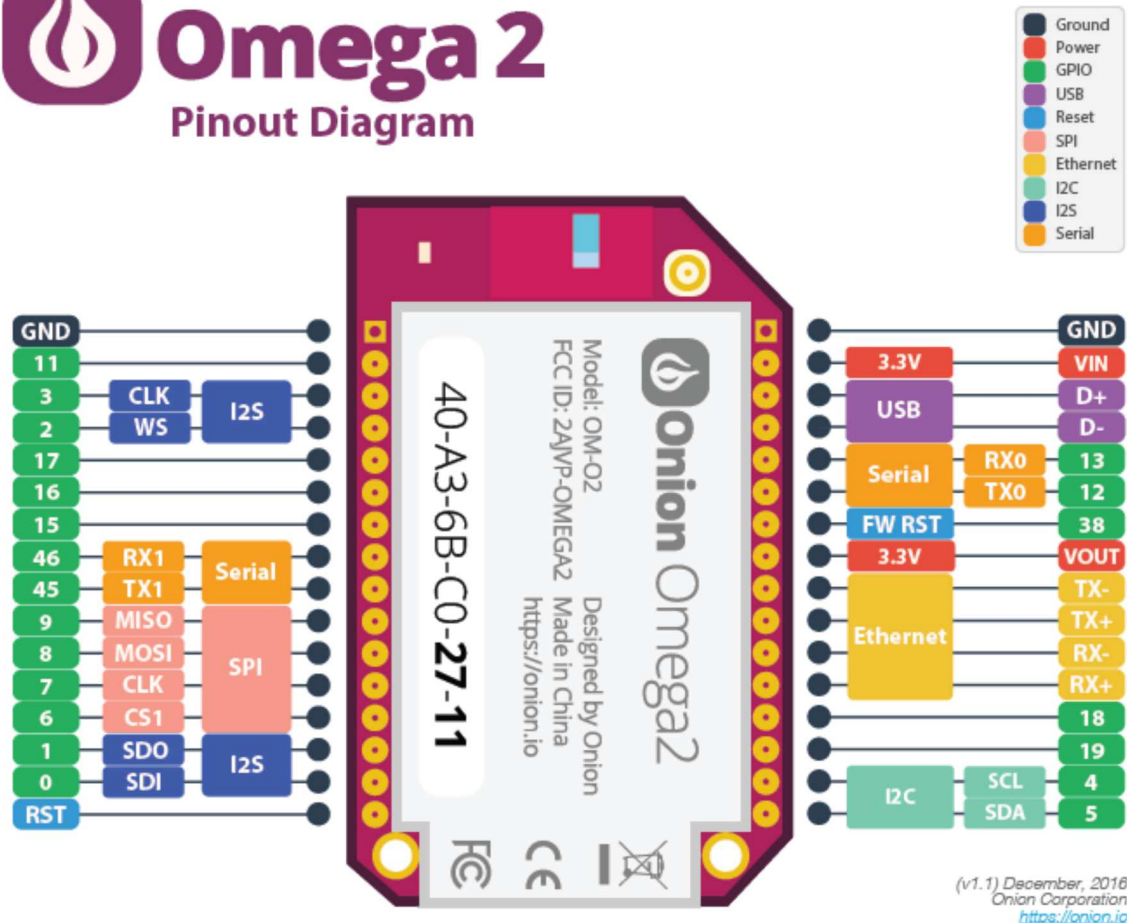
Processor Datasheet

The datasheet for the Omega2's processor can be found here: [Mediatek MT7688 Datasheet](#)

The Pins

Omega 2

Pinout Diagram



The Operating system

The Omega2 runs the Linux Embedded Development Environment (LEDE) operating system, a distribution based on OpenWRT. This distribution gives the Omega2 access to the OPKG functionality, allowing you to download packages to enhance your experience.

The Omega LED

The Omega LED is a great tool for communicating information with a user. It notifies you when your Omega is on, when it's off, and when it's booting.

The Omega LED uses GPIO44, and can be programmed to do a number of cool things. You can learn more about the LED in [the article on how to use the Omega's LED](#)

Reset GPIO

The Omega's can be reset using GPIO38. When plugged into a Dock (e.g. Expansion Dock), this GPIO gives various functionality to the reset button found on docks. For example, a quick button press triggers the reboot command, whereas holding the button for about 10 seconds will trigger a factory reset command.

The WiFi Antenna

The on-board antenna is a ceramic surface-mount chip antenna. It's small but packs a punch, the Omega's WiFi signal is able to travel up to 100m (300ft) line-of-sight outdoors.

The U.FL Connector

Connect an external antenna to the Omega's male surface-mounted U.FL connector. An external antenna can be used to extend the range of WiFi connectivity or provide a very directional signal. If a U.FL antenna is plugged in, it will be used as the default antenna, no setup required.

Mechanical Drawing

We've made available a detailed [diagram](#) of the dimensions and geometry of the Omega2.