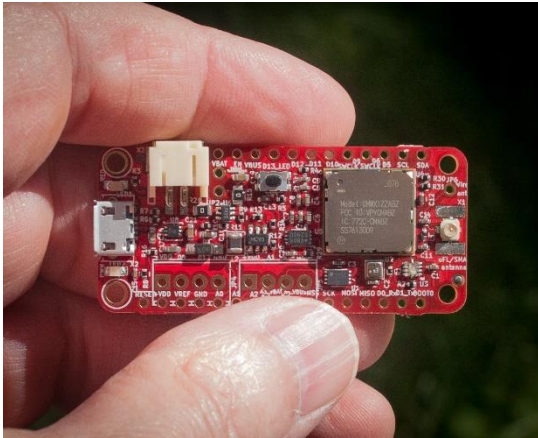




# Catena 4612 Integrated IoT Node



The MCCI Catena® 4612 is a complete single-board IoT device for LoRaWAN™ technology projects.

Based on the Murata [CMWX1ZZABZ-078](#), and designed to be compatible with the [Adafruit Feather](#) family of development boards and accessories, the Catena 4612 is a great platform for LoRaWAN investigation and deployment.

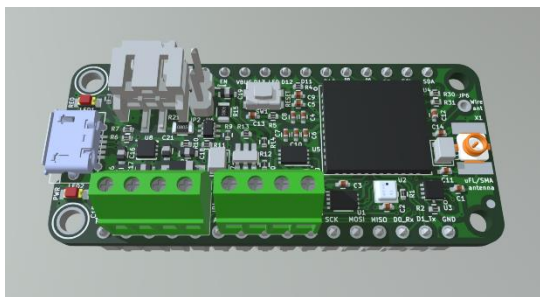
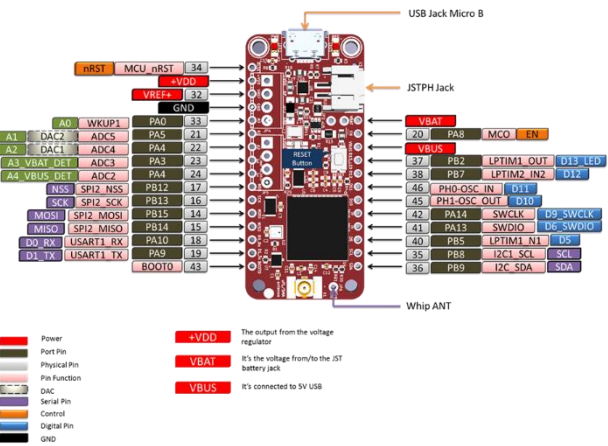
Lightweight and small, the 4612 needs no external components to measure and send temperature, pressure, humidity, and lux, powered from USB or two AAA cells.

The Murata LoRaWAN module has the following features:

- STM32L082 CPU (Cortex M0+, 24 MHz, 192K flash, 20K RAM)
- Semtech SX1276 LoRa radio
- High quality RF engineering
- Certified for US and EU
- Compatible with IN866, AS923, AU915

The Catena 4612 design adds:

- Integrated sensors (Pressure, Temperature, Humidity, Lux)
- 8K bytes FRAM for LoRaWAN provisioning info and frame counters
- 1M byte SPI Flash for bulk data storage, future FoTA firmware storage, etc.
- Boost converter for powering from disposable batteries (such as 2x AAA cells) or from USB
- USB or SWD for download and debug
- Provisions for screw terminals for pulse, analog or digital I/O
- Dual high-side power switch isolates power for screw terminals from internal power.
- Support for whip, u.FL, or SMA antennas



The Catena 4612 is pin-compatible with the Adafruit Feather M0 family of boards (with some limitations because of functional differences between the STM32L082 CPU and the Atmel SAMD21 CPU used in the Feather M0).

MCCI provides a full Arduino board-support package and libraries to allow rapid prototyping and experimenting, including an open-source LoRaWAN stack. STM tools may also be used.

The Catena 4612 works well with and is tested with [The Things Network](#) (an open-source, user-owned IoT network based on LoRaWAN); but can be used with any LoRaWAN-compatible network.

Both hardware and software are open source and available on [GitHub](#).

**Price and  
Availability**

The Catena 4612 starts at \$35 qty 1, and varies based on options and quantity order. First deliveries of the Catena 4612 are expected in October 2017. For more information, please contact MCCI at [sales@mcci.com](mailto:sales@mcci.com), Twitter [@MCCI](https://twitter.com/MCCI), <http://www.mcci.com>.