

ELECTRON

The Electron is a tiny cellular development kit based around U-Blox's SARA U-series (3G) or G series (2G) cellular modem module and a STM32F205 ARM Cortex M3 microcontroller.



The Electron has a footprint, which is a drop-in compatible with the Particle Photon or Core.

Pin Descriptions:

- **VIN:** This is the power supply pin to the Electron with a voltage range of 3.6 to 5.5VDC (internally regulated down to 3.3VDC). When the Electron is powered via its USB port, this pin will *output* a voltage of approximately 4.7VDC. Why 4.7 and not 5? Well, the actual voltage will be the USB voltage, which is normally 5, minus the forward voltage drop (0.3V) of the protection diode.
- **RST:** This is an active-low reset pin for the Electron.
- **VBAT:** Supply to the internal RTC, backup registers and SRAM (1.8 to 3.3VDC).



- **3V3:** This pin is the output of the on-board regulator. When powering the Photon via VIN or the USB port, this pin will *output* a voltage of 3.3VDC.
- **WKP:** This is an active-high input that allows you to wakeup the module from sleep/deep sleep modes. When not used as a WAKEUP, this pin can also be used as a digital GPIO, ADC input or PWM.
- **A0 - A5:** These can be used as digital GPIOs, ADC inputs. Alternate functions include: SPI, PWM and DAC.
- **B0 - B5:** These can be used as digital GPIOs, partial ADC inputs, partial PWM outputs.
- **C0 - C5:** These can be used as digital GPIOs.
- **D0 - D7:** These can be used as digital GPIOs. Alternate functions include: UART, SPI, I2C, PWM and CAN.
- **DAC:** This pin can be used as a digital GPIO, ADC input or as a DAC output.
- **RX:** Primarily used as UART RX, but can also be used as a digital GPIO, ADC input or PWM.
- **TX:** Primarily used as UART TX, but can also be used as a digital GPIO, ADC input or PWM.