**LoPy Evaluation**

**Included in System:**

* LoRa
* 18PWM Pins; 4 PWM 16 bit
* 12mA Absolute max; recommended 6mA
* 36GPIO Total; 4 Used by LoRa; 6 input only [GPIO 34-39]
* Wifi Ext Ant
* Using Updated Firmware boot time = 1s

**Power Specs:**

* Input: 3.3V - 5.5V
* 3v3 output capable of sourcing up to 400mA
* WiFi: 12mA in active mode, 5uA in standby
* Lora: 15mA in active mode, 10uA in standby

**LoRa Specs:**

* LoRaWAN stack
* Class A and C devices
* Node range: Up to 40km
* Nano-Gateway: Up to 22km
* Nano-Gateway Capacity: Up to 100 nodes
* Semtech LoRa transceiver SX1272
* LoRaTM Modem
* 157 dB maximum link budget
* +20 dBm at 100 mW constant RF output vs. V supply
* +14 dBm high efficiency PA
* Programmable bit rate up to 300 kbps
* High sensitivity: down to -137 dBm
* Bullet-proof front end: IIP3 = -12.5 dBm
* 89 dB blocking immunity
* Low RX current of 10 mA, 100 nA register retention
* Fully integrated synthesizer with a resolution of 61 Hz
* FSK, GFSK, MSK, GMSK, LoRaTM and OOK modulation
* Built-in bit synchronizer for clock recovery
* Preamble detection
* 127 dB Dynamic Range RSSI
* Automatic RF Sense and CAD with ultra-fast AFC
* Packet engine up to 256 bytes with CRC
* Built-in temperature sensor and low battery indicator
* LoRaWAN stack
* Class A and C devices
* Node range: Up to 40km
* Nano-Gateway: Up to 22km
* Nano-Gateway Capacity: Up to 100 nodes
* \*Using Updated Firmware boot time = 1s

**Off Board Requirements:**

* IMU
* GPS
* Motor Diver
* Power Converter