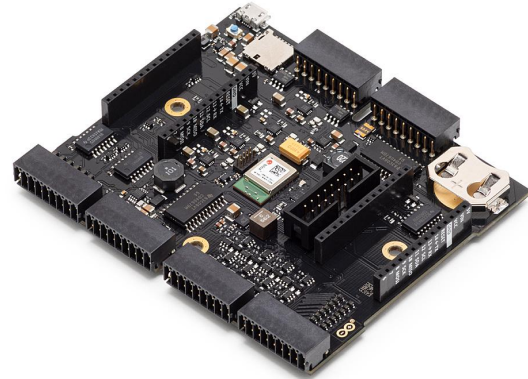## Description

The Arduino Edge Control board is designed to address the needs of precision farming. It provides a low power control system, suitable for irrigation with modular connectivity.

The board is compatible with MKR Boards 2G/3G/CatM1/NBIoT, LoRa, Sigfox and WiFi/BT connectivity.

Target areas:

Agriculture measurements, smart irrigation systems, hydroponics

Features

- **Nina B306 Module**
  - **Processor**
  - 64 MHz Arm® Cortex-M4F (with FPU)
  - 1 MB Flash + 256 KB RAM

  - **Wireless**
  - Bluetooth (BLE 5 via Cordio stack, BLE 4.2 via Arduino Stack)
  - Advertising Extensions
  - +8 dBm TX power
  - 95 dBm sensitivity
  - 4.8 mA in TX (0 dBm)
  - 4.6 mA in RX (1 Mbps)

  - **Peripherals**
  - Full-speed 12 Mbps USB
  - Arm CryptoCell CC310 security subsystem
  - QSPI/SPI/TWI/I²S/PDM/QDEC
  - High speed 32 MHz SPI
  - Quad SPI interface 32 MHz
  - 12-bit 200 ksps ADC

  - 128 bit AES/ECB/CCM/AAR co-processor

- **Memory**
  - 1 MB internal Flash memory
  - 2MB onboard QSPI
  - SD Card slot

- **Power**
  - Low Power
  - 200uA Sleep current
  - Can operate for up to 34 months on a 12V/5Ah battery

  - **12 V Acid/lead SLA Battery Supply** (Recharged via solar panels)

  - **RTC CR2032 Lithium Battery back up**

- **Battery**
  - **LT3652 Solar Panel Battery Charger**

- Input Supply Voltage Regulation Loop for Peak Power Tracking in (MPPT) Solar applications

- **I/O**
  - 6x edge sensitive wake up pins
  - 16x hydrostatic watermark sensor input
  - 8x 0-5V analog inputs
  - 4x 4-20mA inputs
  - 8x latching relay command outputs with drivers
  - 8x latching relay command outputs without drivers

- 4x 60V/2.5A galvanically isolated solid state relays
- 6x 18 pin plug in terminal block connectors

- **Dual MKR Socket**
  - Individual power control
  - Individual Serial Port
  - Individual I2C ports

- **Safety information**
  - Class A