# Adept stick

Firmware design
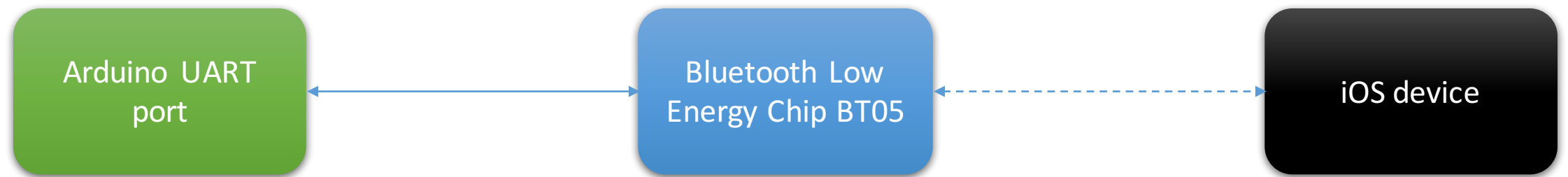
Communication protocol

# Adept stick

- The hardware consist of:
  - Arduino Pro Mini
  - Bluetooth Low energy BT05 device
  - 2 Load Cell Sensors
  - INA125P
  - 2x AA bateries
  - A lot of cables

# Force sensing logical schematic

Load cells in full bridge schematic → INA125P instrument amplifier → Arduino Pro Mini analog pin

# Bluetooth communication diagram

# Bluetooth Communication Protocol

- Arduino send information to the iOS device in format "%d\n", where the %d is the amount of force applied to the stick in Newtons.

- The BLE characteristic used for communication is using UUID : 0000ffe1-0000-1000-8000-00805f9b34fb

# Code Logic Design