Toward a DIY smartwatch

The original inspiration for this is Tinkernut's project. (Gerd Lobmeyer, Open Green Energy and others have done similar projects.)

Considerations

- Power
- Size

Components

Display

Old school LCD

I'm thinking of pulls from old mobile phones, esp. Nokia. Power use should be minimal. Availability (used) should be good.

- Nokia 5110 at SparkFun, 84×48, $10
- Nokia 5110 at Adafruit, 84×48, $10

New school LCD

What's available? Again power consumption should be small when backlight isn't used. Looks like finding something suitably sized with workable I/O connections is going to be difficult.

- 128x64 graphic
- 8x2 character
- eBay possibility
- ditto

OLED

What's the power consumption?

- White SPI I2C 0.96" w/breakout

Controller

w/ integrated BLE

- Adafruit Feather 32u4 Bluefruit LE, 2.0“ x 0.9” x 0.28“, 5.7 grams, battery charger, $30. Possibly all FOSS.
- Adafruit Feather M0 Bluefruit LE, 2.0” x 0.9“ x 0.28”, 5.7 grams, battery charger, $30. Possibly all FOSS.
- Bledino, 1.7“ x 0.8”
- RFDuino, 0.6“ x 0.6”, $17.99, $14.99

w/o BLE

- DigiSpark Pro, 1.1“ x 0.72”, $10.
- Femtoduino, $35
- Microduino
- Pro Micro, 1.3×0.7“, $19.95 (official)
- Pro Mini 0.7×1.3”, $3 (clone) to $10 (official)
- Qduino Mini, battery charger, $30.
- Tinyduino, battery support, goofy I/O $20

Other

- Use a Nordic BLE module for everything?

Bluetooth

Classic

- HC-06: $TODO, TODO mA, size is a bit big.
- HC-05: $TODO, TODO mA, size is a bit big.

BLE

- Adafruit Bluefruit LE SPI Friend, 0.9“ x 1”, possibly FOSS, $17.50
- Adafruit Bluefruit LE UART Friend, 0.8“ x 1.26”“, possibly FOSS, $17.50
- Itead HM-11, 0.7” x 0.53, $8.50
- Itead HM-10, 1.1“ x 0.5”, $6.50
- ReadBearBLEmini
- Seeed Bluetooth V4.0 HM-11 BLE Module, 0.5“ x 0.7”, $13.
- Seeed Micro BLE Module, $17.

Battery

- Lipo Charger Module for Arduino
- Details about DD08RCRMA Mini 5V 1A Lithium LiPo Charger Module for Arduino