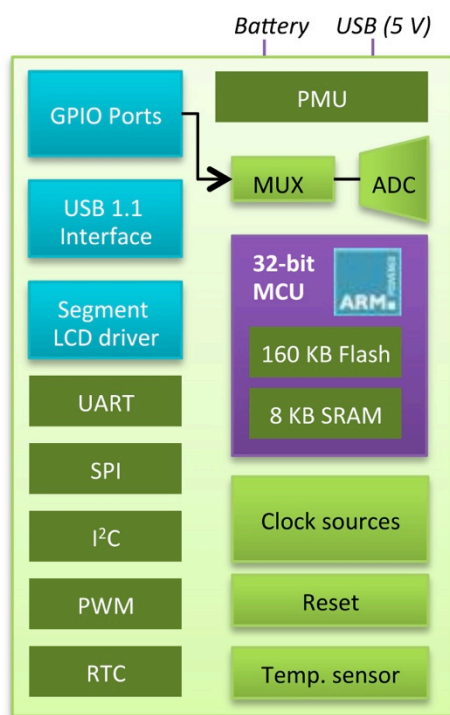## Brody Features

- ARM M0 32-Bit MCU
- 160kB Flash RAM
- 8kB SRAM
- USB 1.1 Interface
- 4 x 30 LCD segment display
- Integrated Power management
- 18 GPIO control pins
- RTC with Date/Time/Alarm
- 12MHz RC Oscillator
- Buffered 32.768 kHz Clock
- 10kHz Auxiliary Clock
- UART, I^{2}C, SPI, and PWM interfaces
- 3V Battery or USB Powered

Recommended Applications

- IoT and wearables
- Embedded mobile
- Consumer products

iND81205 - "Brody"
General Purpose ARM M0 uC with LCD Driver and USB

Device Description

Brody is a member of the general purpose microcontroller family of products from indie. It is a highly integrated 32-bit general purpose ARM M0-based microcontroller which clocks at up to 20MHz. This line of products is low-cost enough to compete with the 8-bit microcontroller market segment and provides a path for partners to begin transition to 32-bit wide applications.

Brody features a high performance 32-bit wide ARM M0 implementation with 160kB of flash RAM and 8kB of SRAM. A real time clock (RTC), 12MHz RC oscillator, 32kHz sleep mode clock, 10kHz auxiliary clock, and watchdog timer are all fully integrated on die for high performance, low power design.

Brody includes integrated power management and is capable of running entirely off either a 3V battery or the integrated USB port. An integrated charge pump is capable of generating 4.5V from the battery and supplies power to the LCD. No other components are required for power regulation of the IC, creating an efficient, low cost design.

Brody also integrates multiple interface options. It can drive up to 120 display elements in a 4 x 30 LCD segment display for feature-rich meaurement readouts. Brody includes a USB 1.1 (USB 2.0 compatible) serial interface supporting control, bulk, and interrupt transfers so that data can be stored and downloaded at a later time.

Brody also easily interfaces to other discrete SoCs through standardized UART, I^{2}C, SPI, and PWM interfaces and provides 18 GPIO controls to interface with other on-board components.

Brody is packaged in a low cost 8x8mm BGA with 120 pins and can be operated from -40C to +85C.

Ordering Information

Device Ordering Name	Platform	Temp Range	Package	Pins
iND81205 Brody	General purpose uC applications requiring USB interfacing and LCD driver capability	-40C to +85C	8x8 mm BGA	120 Pins @ 0.65 mm Pitch