SparkFun AzureWave Thing Plus (AW-CU488)

**AzureWave AW-CU488 Module**
- Realtek RTL8721DM Dual Processor Core
- Real-M300 CPU (Armv8-M, Cortex-M33)
- Real-M200 CPU (Armv8-M, Cortex-M23)
- up to 200MHz operating frequency
- 512kB SRAM and 4MB PSRAM
- 32Mbit SPI Flash
- 2.4GHz/5GHz WiFi 802.11a/b/g/n 1T1R WLAN
- Built-in Antenna w/ Internal Shielding Antenna
- 2-Channel Audio CODEC (8/12/16/24/32/48/.../176.4 KHz)

**Leaderboard**
- **Name**
- **Port**
- **PWM**
- **Power**
- **UART**
- **Audio**
- **GND**
- **I2C**
- **Interrupt**
- **Control**
- **SPI**
- **Misc**

**User Interfaces**
- **RST Button**
- **BOOT Button**

**LEDs**
- User LED: Blue (13)
- Power LED: Red
- Charge LED: Orange

**Notes**
- The GPIO can be muxed. Pins labeled with the (a) or (b) are alternative locations.
- If pin 27 is connected to GND when AW-CU488 boots up, the Arduino bootloader will not boot up properly and enter "test/debug" mode. Make sure that this pin is left HIGH at bootup so that it can run your code and enter "normal" mode.

**Power and Logic Levels**
- **VUSB**: direct to USB (5V)
- **VBAT**: direct to LiPo battery (and Microchip MCP73831 charger, 500mA default charge rate)
- **3V3**: Output of XG6222 regulator (3.3V/700mA)

**GPIO logic levels**: 3.3V