SparkFun AzureWave Thing Plus (AW-CU488)

DEV-19957

**Hands-on Guide**

**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.

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**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 XC6222 regulator (3.3V/700mA)
- **GPIO logic levels**: 3.3V

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**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
- Bluetooth® Low Energy 5.0
- Built-in Antenna w/ Internal Shielding Antenna
- 2-Channel Audio CODEC
  
**Interfaces**
- 30x GPIO, 30x Interrupts, 7x 12-bit ADC,
- 11x PWM, 2x UART, 2x SPI, 1x I2C

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

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

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**Jumpers (Back of Board)**

- RST Button
- BOOT Button
- USB-C Connector

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**Legend**

- Name
- Port
- PWM
- Power
- UART
- Audio
- GND
- I2C
- Interrupt
- Control
- SPI
- Misc
- Arduino
- ADC

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![Jumpers schematic](image-url)