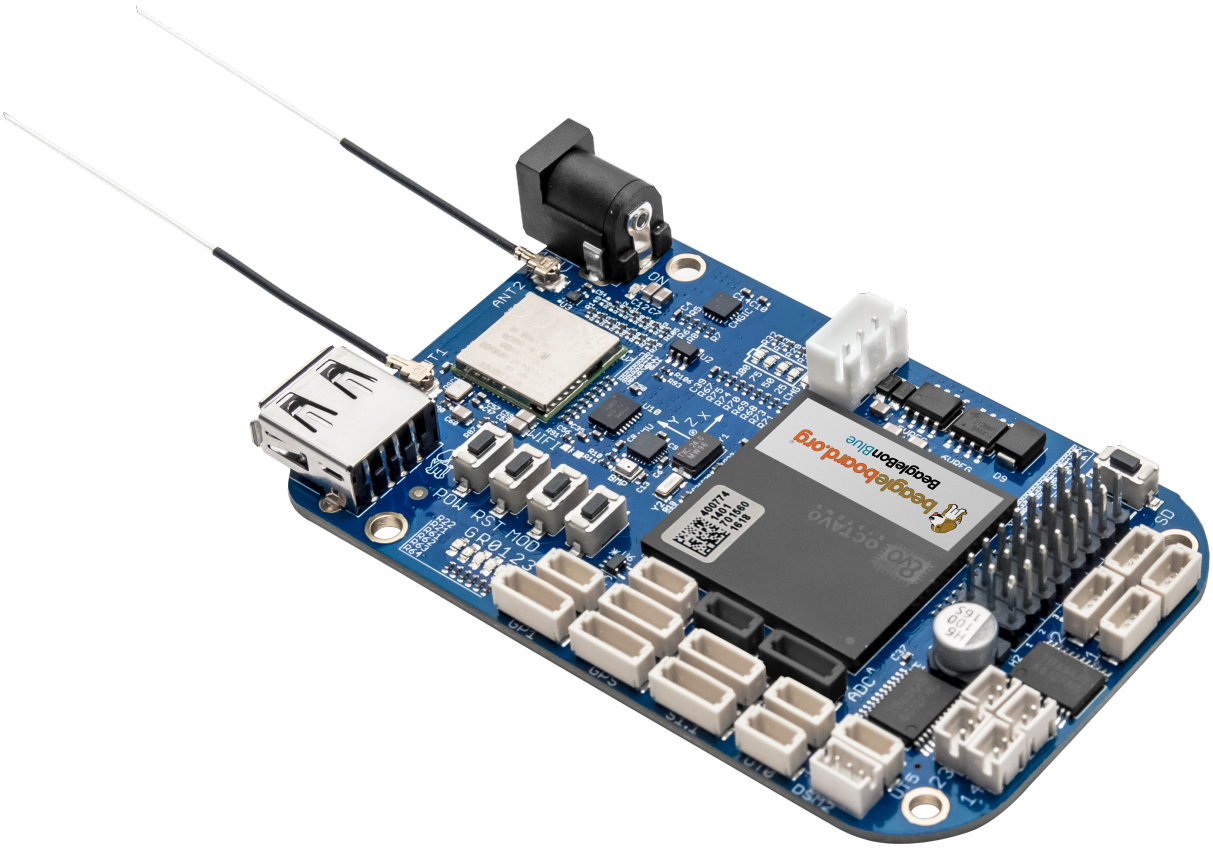
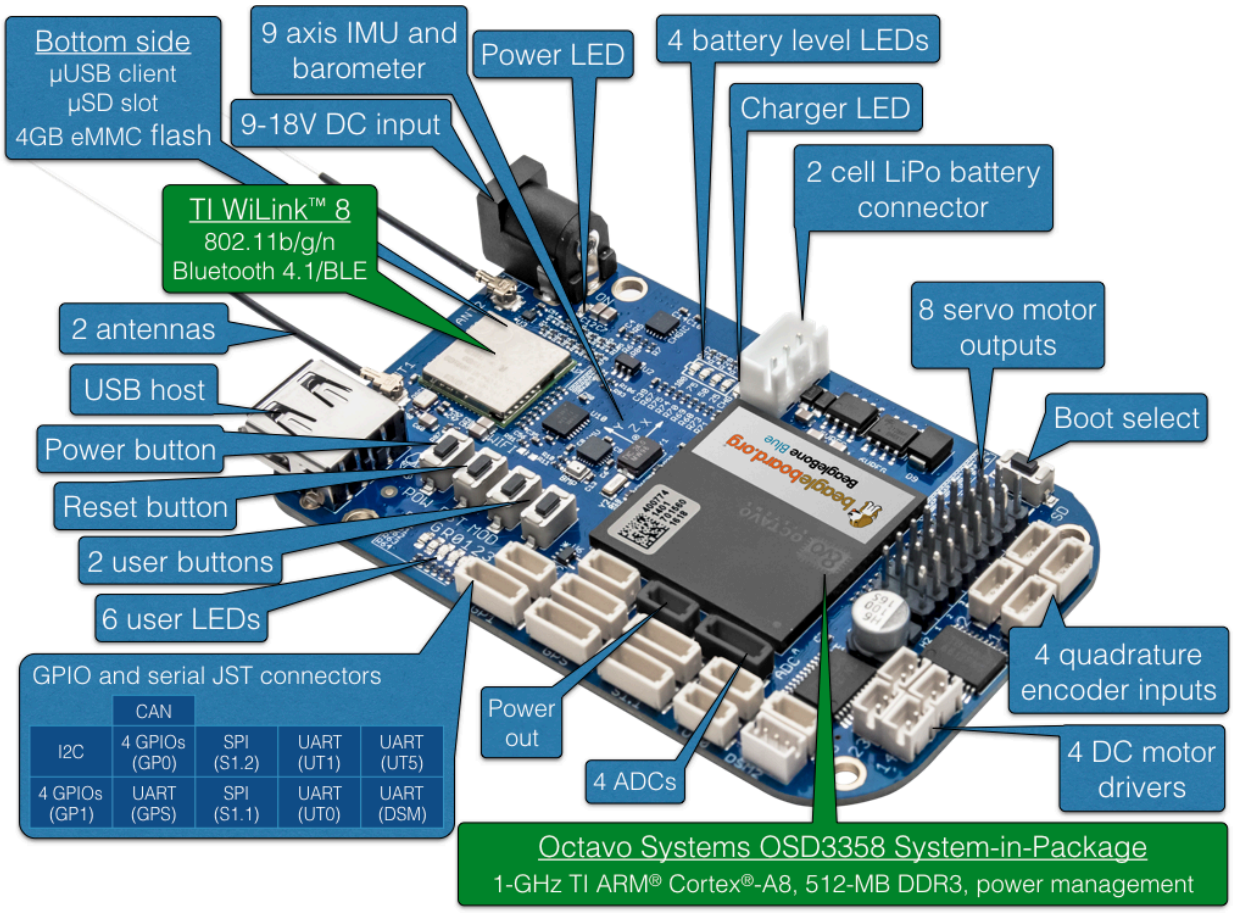


BeagleBone™ Blue is a complete Linux-enabled, community-supported, open-source hardware robotics computer. High-performance, flexible networking capabilities are coupled with a real-time capable Linux system and a compelling set of peripherals for building mobile robots quickly and affordably. BeagleBone™ Blue has onboard 2 cell (2S) LiPo battery management with charger and battery level LEDs, 8 servo motor outputs, 4 DC motor drivers, 4 quadrature encoder inputs, a wide array of GPIO and serial protocol connectors including CAN, a 9 axis IMU and barometer, 4 ADC inputs, a PC USB interface, an USB 2.0 host port, a reset button, a power button, two user configurable buttons and eleven indicating LEDs. Built on Octavo Systems' System-In-Package that integrates a high-performance TI AM3358 processor and 512MB of DDR3, BeagleBone™ Blue boots Linux in seconds and gets you started developing through your web browser in less than 5 minutes with just a single USB cable—or, utilize the pre-configured WiFi access point and battery support to begin development without any cables at all.



Specifications:

a. Processor (Integrated in the OSD3358):
    i. AM335x 1GHz ARM® Cortex-A8
    ii. SGX530 graphics accelerator
    iii. NEON floating-point accelerator
    iv. 2x PRU 32-bit 200MHz microcontrollers

b. Memory:
    i. 512MB DDR3 800MHZ RAM (Integrated in the OSD3358)
    ii. 4GB 8-bit eMMC on-board flash storage
    iii. SD/MMC Connector for microSD

c. Software Compatibility
    i. Debian
    ii. Android

iii. Ubuntu

iv. Cloud9 IDE on Node.js w/ BoneScript library

d. Connectivity

i. High speed USB 2.0 Client port: Access to USB0, Client mode via microUSB

ii. High speed USB 2.0 Host port: Access to USB1, Type A Socket, 500mA LS/FS/HS

iii. WiLink 1835 WiFi 802.11 b/g/n 2.4GHz. Supports the following modes

1. 2x2 MIMO
2. AP
3. SmartConfig
4. STA
5. Wi-Fi Direct
6. Mesh over Wi-Fi based on 802.11s

iv. WiLink 1835 Bluetooth 4.1 with BLE

v. Serial port:

1. UART0, UART1, UART5 available via 4 pin JST-SH connectors
2. UART2 available via 6 pin JST-SH connector (EM-506 GPS style connector)
3. UART4 RX available via 3 pin DSM2 (JST-ZH) connector

vi. I2C1 available via 4 pin JST-SH connector

vii. SPI1 CS0 (S1.1) and SPI1 CS1 (S1.2) available via 6 pin JST-SH connectors

viii. CAN available via 4 pin JST-SH connector (includes TCAN1051 CAN transceiver)

ix. 8 GPIOs (GP0 and GPI1) available via 6 pin JST-SH connectors

x. ADC inputs 0 to 3 available via 6 pin JST-SH connector

xi. 3.3VDC and 5VDC power output via 4 pin JST-SH connector

e. Power management:

i. TPS65217C PMIC is used along with a separate LDO to provide power to the system (Integrated in the OSD3358)

ii. 2 cell (2S) LiPo battery charger (powered by 9 – 18VDC DC Jack)

iii. 6VDC 4A regulator to drive servo motor outputs

f. Debug Support: JTAG test points

g. Power Source

i. microUSB USB

ii. 2 cell (2S) LiPo battery JST-XH connector

iii. 9 - 18VDC DC Jack

h. User Input / Output

i. Power Button

ii. Reset Button

iii. Boot Button

iv. 2 user configurable buttons (MOD, PAU)

v. 11 user configurable LEDs (USR0-3, Red, Green, WIFI, Battery 0-3); Charger LED; Power LED

i. Motor Control (requires power from either DC Jack or 2S battery):

i. 4 DC motor drivers

ii. 4 Quadrature encoder inputs

iii. 8 Servo motor outputs

j. Sensors

i. 9 axis IMU

ii. Barometer