BeagleBoard.org BeagleBone Blue preview

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What is demonstrated

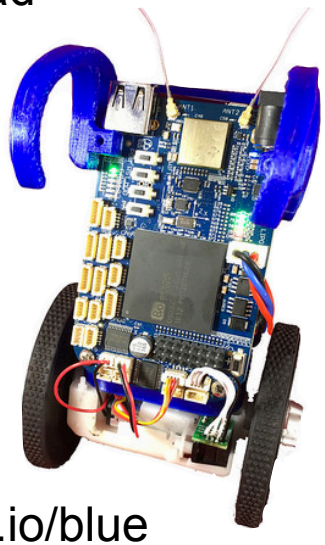
Open hardware Linux computer
➡ Self-hosted web IDE
➡ Debian Linux system

Self-balancing robot run as a userspace task written in C
➡ 5ms inner-loop, <25% load

Connected USB camera
➡ mjpg-streamer over WiFi

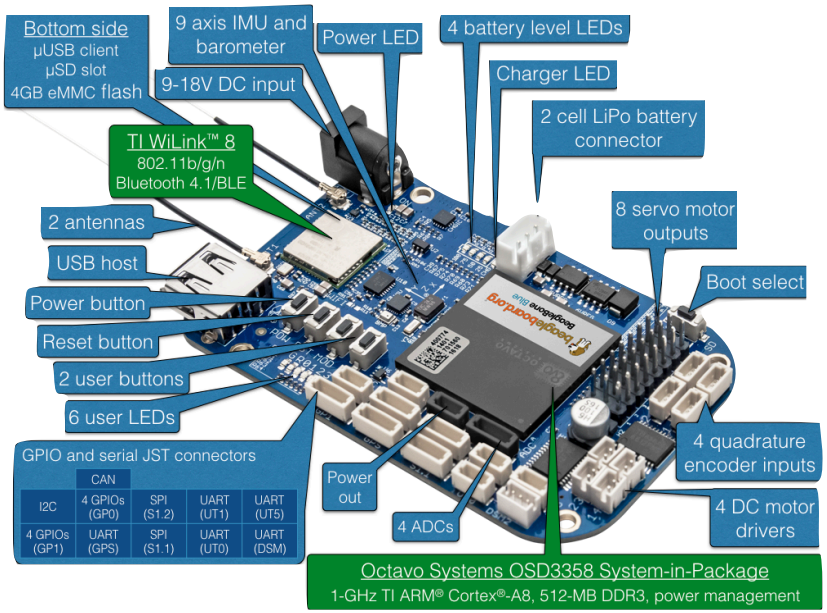
Bluetooth speaker for audio

ROS interface



What was improved

Pre-integrated H/W elements for robotics
➡ pre-integrated software: Ardupilot, …
4-layer PCB design
Quick connections for individual interfaces



Hardware Information

https://bbb.io/blue

1-GHz ARM Cortex-A8, programmable real-time units, 4×DC motor drive, 8×servo motor, WiFi/BT, USB, IMU, 2 cell LiPo battery mgmt, 4×quad enc, barometer, …

Source code or detail technical information availability

https://github.com/jadonk/beaglebone-blue
https://github.com/beagleboard/linux
https://github.com/beagleboard/image-builder
https://github.com/StrawsonDesign/Robotics_Cape_Installer