20140814 - BeagleBone Black - Getting Started - Demos and Information

Specifications: BBB vs rPI

	BBB model B	BBB model C	rPI rev B	rPI rev B+
SoC	AM3358/9	AM3358/9	Broadcom BCM2835	Broadcom BCM2835
CPU	Cortex-A8 1ghz	Cortex-A8 1ghz	700mhz Arm1176 (Arm11 ARMv6 instruction set)	700mhz Arm1176 (Arm11 ARMv6 instruction set)
GPU	PowerVR SGX530 200mhz	PowerVR SGX530 200mhz	Broadcom VideoCore IV 250mhz OpenGL ES 2.0 MPEG-2 and VC-1 1080p	Broadcom VideoCore IV 250mhz OpenGL ES 2.0 MPEG-2 and VC-1 1080p
Memory	DDR3 512mb	DDR3 512mb	512mb (shared with GPU)	512mb (shared with GPU)
USB 2.0	1x Standard A Host (direct) 1x mini B device port (direct)	1x Standard A Host (direct) 1x mini B device port (direct)	2 via onboard 3 port USB hub	4 via onboard 5 port USB hub
Video output	Micro-HDMI and cape add ons	Micro-HDMI and cape add ons	Composite RCA, HDMI (full size), raw LCD Panels via DSI	Composite RCA (on 3.5mm jack), HDMI (full size), raw LCD Panels via DSI
Video input			15-pin MIPI camera interface connector	15-pin MIPI camera interface connector
Audio output	Micro-HDMI and cape add	Micro-HDMI and cape add	3.5mm jack, HDMI, I2S	3.5mm jack, HDMI, I2S

	ons	ons	audio	audio
Onboard Storage	8-bit eMMC 2gb (Angstrom pre-installed) microSD card	8-bit eMMC 4gb (Debian pre-installed), microSD card	SD card slot	microSD card slot
Onboard Network	Fast Ethernet MII based	Fast Ethernet MII based	10/100 Mbits Ethernet	10/100 Mbits Ethernet
Low-Level Peripherals	4x UART, 8x PWM, LCD, GPMC, MMC1, 2x SPI, 2x I2C, A/D converter, 2x CAN Bus, 4 Timers	4x UART, 8x PWM, LCD, GPMC, MMC1, 2x SPI, 2x I2C, A/D converter, 2x CAN Bus, 4 Timers	8x GPIO, UART, I2C bus, SPI bus w/ 2 chip selects, I2S audio	17x GPIO, UART, I2C bus, SPI bus w/ 2 chip selects, I2S audio
power ratings	210-460mA @5v	210-460mA @5v	700mA (3.5W) @5v	600mA (3.0W) @5v
Power Source	mini USB or 2.1mm x 5.5mm 5v Jack	mini USB or 2.1mm x 5.5mm 5v Jack	5v via MicroUSB or GPIO header	5v via MicroUSB or GPIO header
Size	86.4 mm x 53.3 mm (3.4 in x 2.1 in apx)	86.4 mm x 53.3mm (3.4 in x 2.1 in apx)	85.6 mm x 56mm (3.37 in x 2.2 in apx)	85.6 mm x 56mm (3.37in x 2.2in apx)
Weight	39.68 g (1.4oz)	39.68g (1.4oz)	45g (1.6oz)	45g (1.6oz)
Optional Accessories	BeagleBoard Zippy/Zippy 2, BeagleTouch Display, Beagle LCD2 Expansion board, BeagleJuice (battery pack), WLAN (wireless), BeadaFrame, 4DLCD Cape	BeagleBoard Zippy/Zippy 2, BeagleTouch Display, Beagle LCD2 Expansion board, BeagleJuice (battery pack), WLAN (wireless), BeadaFrame, 4DLCD Cape	Camera, Gertboard, Infrared Camera, HAT (Hardware Attached on Top) Expansion boards	Camera, Gertboard, Infrared Camera, HAT (Hardware Attached on Top) Expansion boards

There are a number of expansion boards for both the BBB and the rPI.

Was looking for some hard numbers on the community/users of both boards, and couldn't come up with anything.

If G+ communities are any indication then rPI has BBB beat by a long shot. With 169,000+ members vs the 2600+ members of BBB or the 1800 member of a different BBB communitie (thou you have to figure at least some of those are cross-overs)

There are Beaglebone Clones the IGEPv2 has slightly more ram, built-in Bluetooth and Wi-FI, a USB host, ethernet, microSD

http://en.wikipedia.org/wiki/IGEPv2

BeagleBoard.org Getting Started Tutorial: (This is where we are going to start!)

http://beagleboard.org/getting-started

Inspire BeagleBone Black Resources:

http://inspire.logicsupply.com/

Visual of BeagleBone Black GPIO (Java needed):

http://eskimon.fr/beaglebone-black-gpio-interactive-map

Tinker Now - Things to tinker with has many BBB projects:

http://tinkernow.com/