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BeagleBoard.org > bone



# **BeagleBone**<sup>®</sup>

Explore the high-performance, low-power world with the tiny, affordable, open-source Beagles. Putting Android, Ubuntu and other Linux flavors at your fingertips, the Beagle family revs as high as 1GHz with flexible peripheral interfaces and a proven ecosystem of feature-rich "Cape" plug-in boards.

# **BeagleBone AI**

Multitude of powerful processing cores for diverse embedded computing needs in the familiar BeagleBone form-factor with more performance, memory and networking.

### Learn more »



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## What can these boards do?

- The Beagles are tiny open-hardware (you could make one yourself), open-software computers that plug into whatever you have around the house.
- Beagles mean big functionality in small packages because these little PCs can be used for all kinds of applications you've been tinkering with... and can handle many of the same tasks as your desktop PC.
- The Beagle family is happiest when helping students to learn programming, hobbyists to push the bounderies of DIY and developers move to production quickly without excess noise, expense or bulk.

# **BeagleBone Black**



The benchmark for open hardware Linux computers.

Learn more »

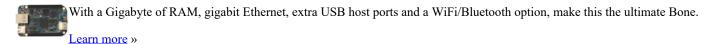
# SeeedStudio BeagleBone Green



Seeed's Grove connectors make IoT developers life simpler large family of Grove sensors and drivers.

Learn more »

# SanCloud BeagleBone Enhanced



# **Product Comparison Table**

	BeagleBoard.org BeagleBone Black	SeeedStudio BeagleBone Green	SanCloud BeagleBone Enhanced	BeagleBoard.org BeagleBone AI
Processor	AM3358	AM3358	AM3358	AM5729

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		ARM Cortex-A8	ARM Cortex-A8	ARM Cortex-A8	2x ARM Cortex- A15
	Maximum Processor Speed	1GHz	1GHz	1GHz	1.5GHz
	Co- processors	2x200-MHz PRUs, ARM Cortex-M3, SGX PowerVR	2x200-MHz PRUs, ARM Cortex-M3, SGX PowerVR	2x200-MHz PRUs, ARM Cortex-M3, SGX PowerVR	4x200-MHz PRUs, 2x ARM Cortex- M4, 2x SGX PowerVR, 2x HD video
	Analog Pins	7 (1.8V)	7 (1.8V)	7 (1.8V)	7 (3.3V)
	Digital Pins	65 (3.3V)	65 (3.3V)	65 (3.3V)	72 (3.3V) (7 shared with analog)
	Memory	512MB DDR3 (800MHz x 16), 2GB (4GB on Rev C) on-board storage using eMMC, microSD card slot	512MB DDR3 (800MHz x 16), 4GB on-board storage using eMMC, microSD card slot	1GB DDR3 (800MHz x 16), 4GB on-board storage using eMMC, microSD card slot	1GB DDR3 (2x 512Mx16, dual- channel), 16GB on-board storage using eMMC, microSD card slot
	USB	mini-AB USB 2.0 client port, Type-A USB 2.0 host port	micro-AB USB 2.0 client port, Type-A USB 2.0 host port	mini-AB USB 2.0 client port, 2x Type-A USB 2.0 host ports, 2x pin header USB 2.0 host ports	Type-C USB 3.0 5Gbps Host/Client port, Type-A USB 2.0 host port
	Network	10/100 Ethernet	10/100 Ethernet	Gigabit Ethernet, 2.4GHz WiFi, Bluetooth, BLE	Gigabit Ethernet, 2.4/5GHz WiFi, Bluetooth, BLE
	Video	microHDMI, cape add-ons	cape add-ons	microHDMI, cape add-ons	microHDMI, cape add-ons
	Audio	microHDMI, cape add-ons	cape add-ons	microHDMI, Bluetooth, cape add-ons	microHDMI, Bluetooth, cape add-ons
	Supported Interfaces	4x UART, 12x PWM/Timers, LCD, GPMC, MMC1, 2x SPI, 2x I2C, A/D Converter, 2x CAN Bus (w/o PHY)	4x UART, 12x PWM/Timers, LCD, GPMC, MMC1, 2x SPI, 2x I2C, A/D Converter, 2x CAN Bus (w/o PHY) 2 Grove (I2C, UART)	4x UART, 12x PWM/Timers, LCD, GPMC, MMC1, 2x SPI, 2x I2C, A/D Converter, 2x CAN Bus (w/o PHY)	4x UART, 12x PWM/Timers, 2x SPI, 2x I2C, 7x A/D converter, CAN bus (w/o PHY), LCD, 3x quadrature encoder, SD/MMC
	On-board Sensors	n/a	n/a	Barometer, Accelerometer, Gyro, Temperature	on-die temperature
	MSRP	\$49	\$39	\$69	\$99

# **Cool Projects**

### **OpenROV Underwater Robot**

Learn how to create an open source telerobotic submarine for use in exploring underwater environments

#### Ninja Blocks

Explore the internet of things by using these tiny, cloud-enabled computers to control and build apps that talk to connected devices

## **BeagleStache: OpenCV face detection**

Build on an OpenCV face detection sample to add a black mustache on the faces detected and upload the image to social media

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#### 3D vision for Beagle

Deploy gesture recognition and full body tracking quickly and efficiently with the Omek Interactive Beckon<sup>TM</sup> Development Suite, a fullfeatured set of middleware and tools

### **Replicage 3D Printer Cape**

Convert your BeagleBone or BeagleBone Black into a 3D printer by creating this cape add-on board

#### **Autonomous Solar Car**

Use Beagle to make the world greener today and for generations to come by creating a solar-energy-powered autonomous car

## **Haptic Belt for the Blind**

Help those without sight move around obstacles using Beagle + Kinect, vibrating motors and audio alerts for relaying more complex signals

More Projects »

# **Featured Capes & Accessories**

Explore the world of feature-rich capes and other accessories for super-charged functionality. Plug in and go! Visit the capes page to see all options.



Adafruit BeagleBone Black Case

Adafruit



Beagle Bone Black 4.3" LCD CAPE

### 4.3" LCD Cape for BeagleBone

Element14



### Modulbox for BeagleBone

Hitaltech



PRUDAQ Cape

Google Research

Last updated by default on Thu Mar 19 2020 15:44:28 GMT-0000 (UTC).











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