beagleboard.org

Open hardware computing for makers, educators and professionals

BeagleBoard.org released the first BeagleBoard, an affordable, open hardware computer in 2008. The original BeagleBoard continues to be available today, along with the extra performance BeagleBoard-xM introduced in 2010 and the more maker-focused, bare-bone credit-card-sized BeagleBone introduced in 2011. The latest, most affordable and highly flexible design is BeagleBone Black, introduced in May of 2013.

The **BeagleBoard.org Foundation** is a US-based 501(c) non-profit corporation existing to:
- Provide education around the design and use of open-source software and hardware
- Foster communication between individuals interested in open-source software and hardware.

BeagleBone Black

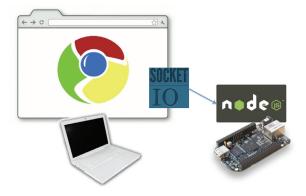High-performance (1 GHz, super-scalar) credit-card-sized ARM® Linux™ computer has a low-cost design, on-board 4GB Flash storage, integrated microcontrollers and the ability to run on USB power making it the most affordable open-source development board around.

Specifications:
- 1-GHz ARM CPU
- 2× 200-MHz PRUs
- 512-MB RAM
- 4-GB eMMC with Debian
- uSD card slot
- USB host and client
- Ethernet
- 2× 46-pin headers
- Board size: 3.4" × 2.1"

See BeagleBoard.org for details and to buy (~$50)

Built-in web-based tutorial and editor enables programming sensors, lights, motors and more within minutes of opening the box.

BeagleBone Capes

Capes are add-on boards that extend the functionality of BeagleBone Black to simplify the development of many common applications, such as 3D printing, industrial robotics, autonomous robots and flying drones, dedicated tablets, thin clients, home automation, automotive computing, gaming, digital signage and more.

Visit BeagleBoneCapes.com to learn more about available cape add-on boards (these are third-party products that add value)

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What to see at Maker Faire Bay Area 2014

Learn from the experts about what you can create with a BeagleBone Black

Presentation	Day	Start	Location
Programming BeagleBone Black in BoneScript Demonstration project to illustrate control of GPIO pins	**Saturday**	11:00 AM	Make: Electronics Stage
Rapid Prototyping with Modular, Open Source Hardware: Taking Your Ideas From Concept to Reality Panel on using modular hardware for rapid prototyping	**Saturday**	5:00 PM	Maker Pro Stage
Networked Mobile Robots with Python or JavaScript Rapid-fire tour of building robots today on BeagleBone	Sunday	12:30 PM	Make: Electronics Stage
Web Interfaces to Control Hardware on the BeagleBone Black Creating interfaces to control electronics, display sensor readings	Sunday	2:30 PM	Make: Electronics Stage
Cylon.js: The JavaScript Evolution of Open Source Robotics Framework for open-source robotics and the Internet of Things	Sunday	4:45 PM	Make: Electronics Stage
Getting Started with BeagleBone Black Learn a bit about the BeagleBone Black and find out if it is right for your next project	**Saturday** **Saturday** Sunday Sunday	2:45 PM 6:15 PM 12:15 PM 1:15 PM	Make: Electronics Stage

See what other makers have created with BeagleBone Black

Exhibitor	Location
Texas Instruments Featuring BeagleBone Black projects including BeagleMIP and the Gaming Cape	Booth 220
Wearable Dog Gear Demonstrations of makers leveraging advances in wearable projects and mobile electronics	Booth 25216
PersonaLED Wearable, interactive LED display panels	Tesla Hall 26404
Got Robots? Several robots including a six-legged robot with the ability to both skate and walk	Booth WL2-11
The Sense of Things Track temperature, light and gases present in your home	Booth 21315
OpenROV Community of DIY ocean explorers, designers and makers of low-cost underwater robots	
Bay-Net – 21st Century Amateur Radio Hobbyist community brought together by a common interest in amateur radio	
Four Cable Sand Plotter High-speed stepper motors, high-strength string, aluminum and some clever CNC software	
TOBY: Telepresent Object Beyond Yourself Remotely controlled via smartphone with Skype video conferencing on the robot's "head"	
Solrmatic – Automatic Solar Cooking Put the temperature probes in the oven and food, select your presets and go	
BotFactory Inc. Electronic circuit board printing and assembly, from your desktop and in minutes	
Laser Shooting Gallery! A place to put your skills to the test against autonomous laser turrets	

Explore more projects at **http://beagleboard.org/project**
Join the community at **http://beagleboard.org/discuss** and **http://beagleboard.org/chat**
Get the latest news at **http://beagleboard.org/blog**