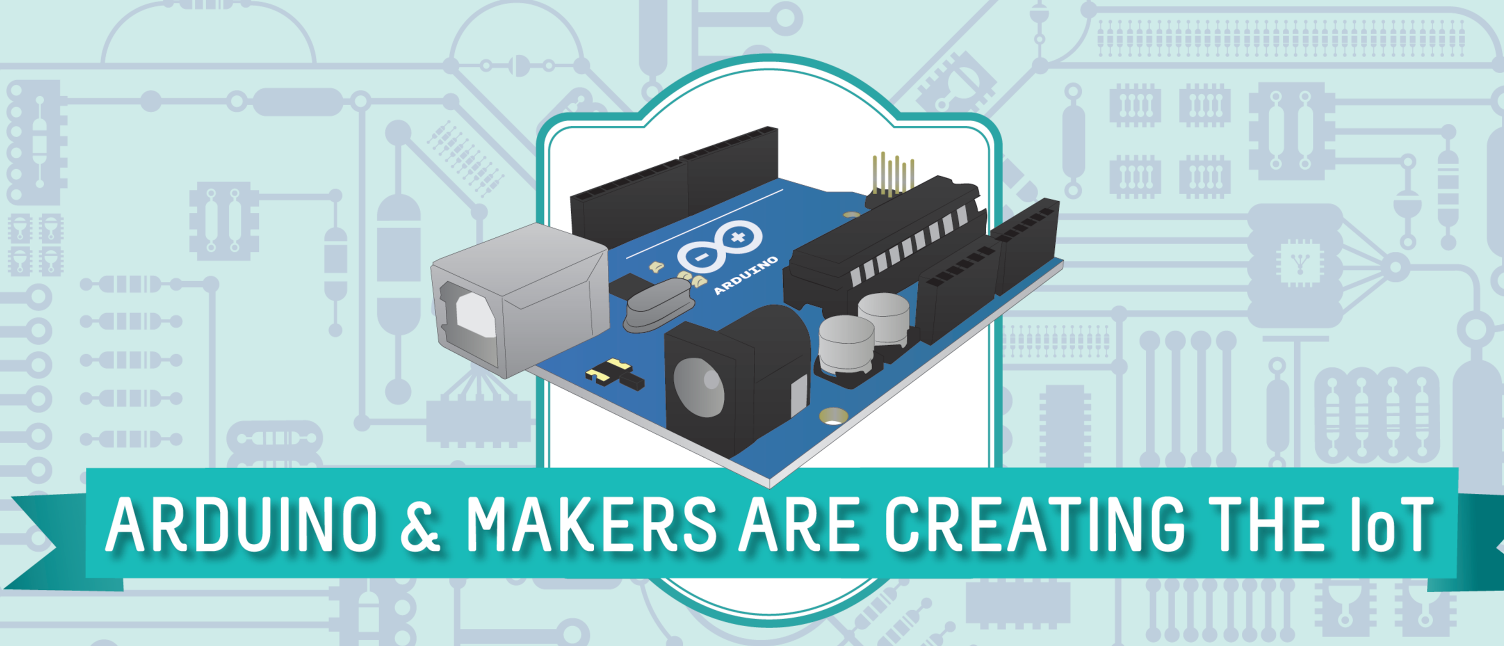


ARDUINO & MAKERS ARE CREATING THE IoT

OSHW + Sensors + Connectivity + Crowdsourcing =
new ideas, new products, new categories, new companies

Evolution of Arduino and the Maker Movement

Arduino is an open-source hardware platform for anyone interested in building interactive electronics, from hobbyists to inventors to engineers. It was the first electronics board intended to be affordable to everyone, making it a total game changer. In less than 10 years, this small, programmable microcontroller board has been the source of thousands of new products and even sparked new industries that change the face of electronics.

2006
- First Arduino is released.

2007
- Arduino XBee module from Libelium & Arduino team enables wireless sensor connectivity.
- RepRap project: first open-source 3D printer.

2008
- Launch of IndieGogo, the first crowdfunding platform.

2009
- Waspmote, professional wireless sensor device based on Arduino.
- Launch of Kickstarter, the biggest crowdfunding platform so far.

2010
- Lilypad Arduino: start of the wearable fever.
- ~10K Arduinos sold per month.

2011
- After Fukushima, Japanese citizens monitor radiation levels with radiation shield + Arduino.

2012
- e-Health Sensor Platform: open source hardware democratizes technology.
- MaKey MaKey: interacting with everything.
- Raspberry Pi, the smallest, cheapest Linux computer for Makers on sale.

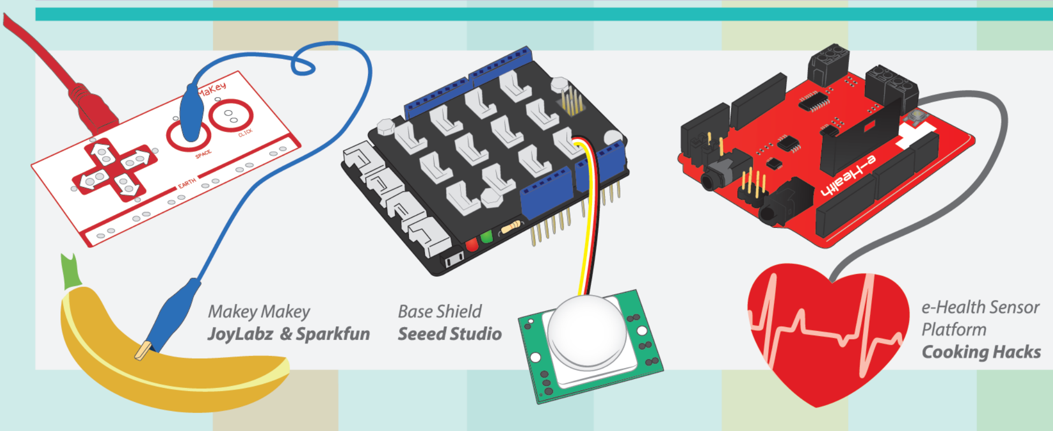
2013
- 700,000+ Arduino boards registered.
- ArduSat reaches International Space Station.
- Intel Galileo board supports Linux & Arduino programming language.
- 2,000,000 Raspberry Pi boards sold.

2014
- 1,000,000+ people can program Arduino.
- 489 Arduino distributors worldwide.
- Arduino team up with Beagleboard to design Arduino Tre.
- Wearables star CES.

2016
- Wearable technology = $10B USD market, according to Gartner.

New products, new categories

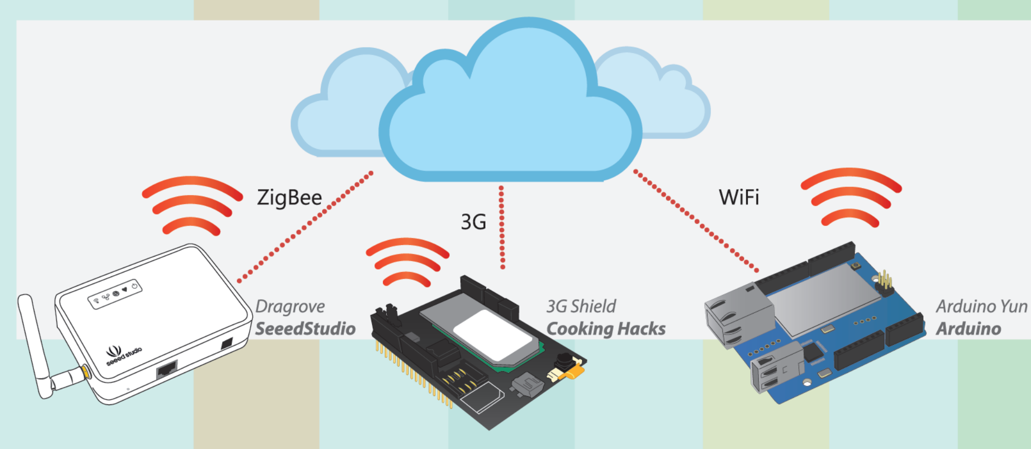
Sensors



Sensors

In prototypes or in commercial medical devices and security appliances, new Arduino-based devices integrate sensors that interact with the environment, other objects or our own bodies. Biometric sensors, gas sensors, light and presence sensors monitor life and movement in real time.

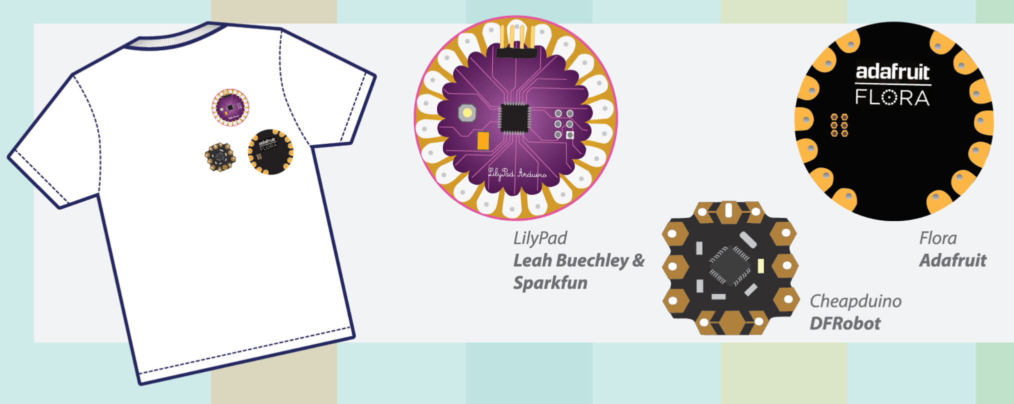
Wireless



Wireless

Developers use wireless protocols such as 3G, GPRS, Bluetooth, Wi-Fi and ZigBee to connect devices and create mesh networks. The Internet of Things era will see many smart devices based on Open Source hardware from easy-to-program platforms like Arduino.

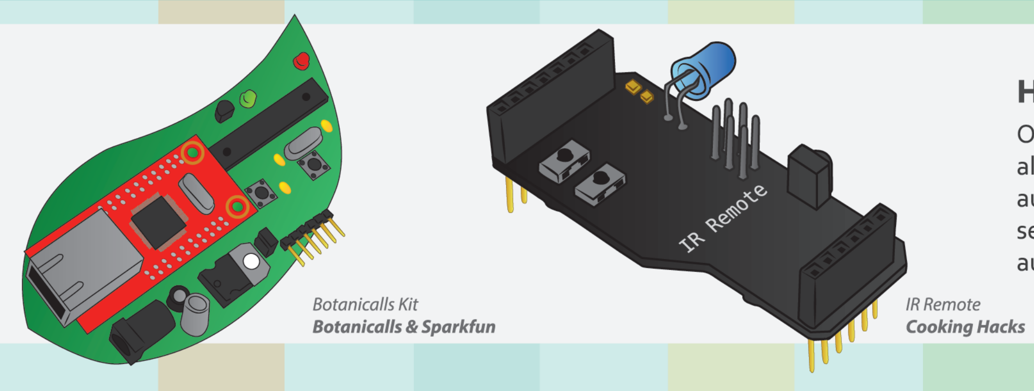
Wearables



Wearables

Wearable technology can track athletic performance and health parameters or create a fashion statement when incorporated into interactive clothing and jewelry with sensors that monitor proximity, heartbeat, light, movement.

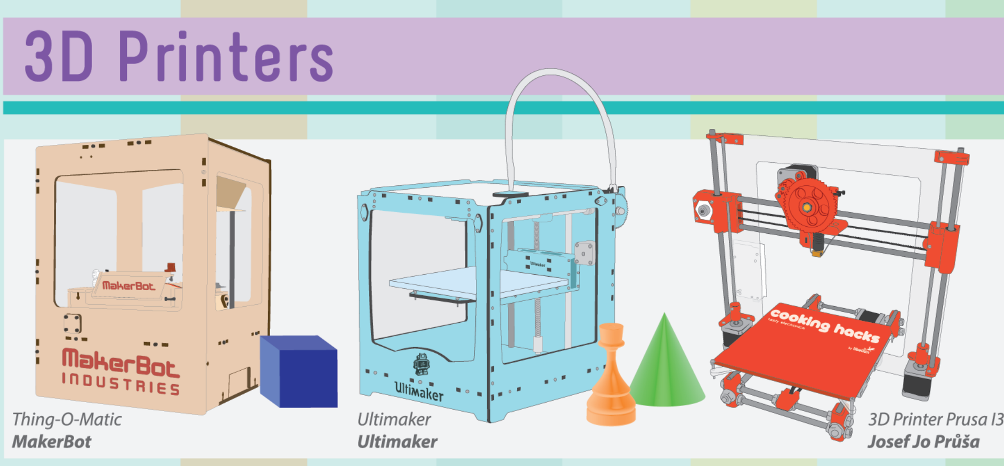
Home Automation



Home Automation

Open Source hardware is an inexpensive alternative to commercial home automation to remotely control lighting, security, heating, smoke detection and audio/video in the home.

3D Printers



3D Printers

The earliest use of additive manufacturing was on the shop floor. Rapid prototyping with 3D printing reduces cost and lead time – it is as cheap to create single items as to make thousands. As it moves into production, 3D printing will disrupt classical industries from healthcare to construction to robotics and even art.

Ecosystem: startups born from Makers

Commercial	3D Printing	Enabling the Makers	Maker Communities	Consumer end
3D Robotics	3D SYSTEMS	adafruit	Hack a Day	Good Night Lamp™
buglabs	MakerBot INDUSTRIES	ARDUINO	instructables	Oculus
libelium	printrbot	cooking hacks	Make:	pebble
NanoSatisfi	Solidoodle	DFROBOT	makerflux	Square
Parrot	Stratasys	fritzing	RepRap	
	Type A Machines	seeedstudio	TechShop	
		sparkfun ELECTRONICS		

Did we miss anyone? Contribute your comments to:

www.cooking-hacks.com/maker_movement