

FAQs

General questions:

Q: What is LEGO® MINDSTORMS®?

A: LEGO MINDSTORMS is a programmable robotics construction set that gives you the power to build and program your own LEGO robots. The new LEGO MINDSTORMS EV3 set includes everything you need – motors, sensors, programmable intelligent brick, cables, remote control, and TECHNIC elements – to create robots that walk, talk, move and do whatever you want them to.

Build your own robot and program it through the intuitive software program, the programmable brick or your smart device.

If you can think it, LEGO MINDSTORMS lets you create and command it!

Q: What does EV3 stand for?

A: This is the third generation of LEGO MINDSTORMS platform and the “EV” stands for evolution, hence EV3.

Q: What comes with the LEGO® MINDSTORMS® EV3 set?

A: 1 EV3 P-brick, 2 Large Motors, 1 Medium Motor, 1 Touch Sensor, 1 Color Sensor, 1 Infrared Sensor, 1 Remote Control, cables, USB cable and 500+ TECHNIC elements

Q: What is a P-brick?

A: P-Brick means Programmable Brick. The P-Brick is the intelligent programmable microcomputer that controls motors and sensors, as well as providing wireless communication through Wi-Fi and Bluetooth.

Q: When and where can I buy the LEGO MINDSTORMS EV3 set?

A: The LEGO MINDSTORMS EV3 set will be available in various stores and through online re-sellers in Fall 2013 – more details will come later.

Q: In which languages is the LEGO® MINDSTORMS® EV3 software available?

A: US English, Danish, German, French, Spanish (ESSA), Dutch, Korean, Japanese, Chinese (Simplified), Russian

Q: How is the EV3 differentiated from the NXT?

A: See overview below:

	<u>EV3</u>	<u>NXT</u>
• New play experience with apps	Yes	No
• Connect to Apple devices	Yes	No
• Voice control via apps	Yes	No
• Connect your robot to Internet (via USB host)	Yes	No
• Online building instructions – models in total	17	None
• 3D building instructions (the 5 main models)	Yes	No
• Fewer building steps, less time	Yes	No
• Social web site for the user	Yes	Yes for adults
• Non-verbal paper instruction	Yes	No
• Button backlight (3 colors)	Yes	No
• Loudspeaker	Premium	Basic
• Motor ports	4	3
• Memory	16 MB	256 KB
• Screen resolution	178x128 pixels	100x64 pixels
• USB Host port	Yes	No

• Master/slave robot control(Bluetooth)	1 master/7 slaves	1 master/3 slaves
• Infrared Sensor	Yes	No
• Infrared Beacon	Yes	No
• SD card reader	Yes	No
• Linux on intelligent brick	Yes	No
• Processor	ARM 9	ARM 7

Q: How do the EV3 sensors compare with the NXT sensors?

A: A lot of improvements have been made. Some of the more notable are:

- The EV3 Color Sensor can detect 7 colors (and no colors) as opposed to the NXT Color Sensor which can detect 6 colors
- With the EV3 Color Sensor you have Reflected Light mode which removes background light.
- The EV3 sensors can return new values 1000 times/sec where the NXT sensors only return new values 333 times/sec.

Q: Is EV3 backwards compatible with NXT hardware?

A: Yes. You can program your NXT brick using the new EV3 software. However not all software features are supported by the NXT P-Brick. You cannot program your EV3 P-Brick with the NXT Software.

Q: Will EV3 sensors and motors work with the NXT P-brick?

A: All EV3 sensors are digital and therefore they will not work with the NXT P-brick, but the EV3 motors will work with the NXT P-Brick.

Q: I have a LEGO® MINDSTORMS® NXT set already - will a conversion kit from the LEGO® MINDSTORMS® NXT set to the LEGO® MINDSTORMS® EV3 set be made available?

A: No, a conversion set will not be made available.

Q: What are my battery options?

A: Recommended use is either AA (LR6) Alkaline batteries or the LEGO EV3 Rechargeable Battery (available through Shop@Home –LEGO.com/shop)

Q: Can NXT sensors and motors be used together with EV3 sensors and motors?

A: Yes. LEGO® MINDSTORMS® EV3 uses the same RJ12 connector cables as the LEGO MINDSTORMS NXT.

Q: Can NXT sensors and motors be used with the EV3 P-brick?

A: Yes. LEGO® MINDSTORMS® EV3 uses the same LEGO® TECHNIC elements and RJ12 connector cables as the MINDSTORMS® NXT, so all your existing sensors, motors and building elements will work with the new platform, and the software will recognize them as NXT sensors/motors when they are plugged in.

Q: Can you use Power Functions motors with the EV3 P-brick?

A: No, the connector does not match.

Q: Why is there a USB cable in the set?

A: The USB cable can be used for connecting your computer with the EV3 P-brick for communication, for example, transferring programs. Using the USB cable is faster than using the Wi-Fi connection, and it saves battery power on the EV3 (as Wi-Fi requires a fair amount of power).

Q: How does Wi-Fi work with the EV3 P-Brick?

A: The EV3 P-Brick can control a Wi-Fi dongle via the USB host port, if a Wi-Fi dongle is connected. (A Wi-Fi dongle is not included in the product).