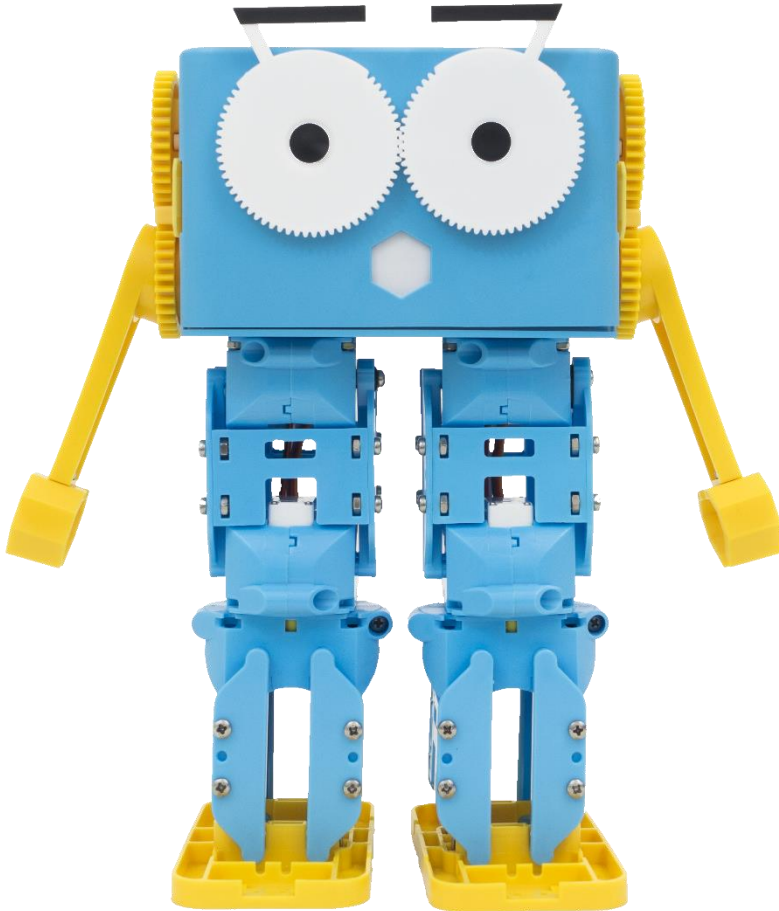




MARTY THE ROBOT

robotical.io

hello@robotical.io



Programming Languages & Software	<ul style="list-style-type: none">• Scratch (NC Key stage 1).• Python (NC Key stage 2).• JavaScript (NC Key stage 2 -3).• Raspberry Pi (NC Key stage 2-3).• ROS (Robotic Operating System) / C++ (Higher Education).• Extensible roll-your-own integration with open documentation.
Customisability	<ul style="list-style-type: none">• Extra sensors/motors/etc can easily be added. Robot can be customised with add-on packs, or even with custom 3D printed parts.• All parts are 3D printable, and the CAD designs are available as a base.• Extend and enable autonomy Marty with a powerful onboard computer e.g. a Raspberry Pi, Micro:bit or Arduino.• Easy integration with space for Raspberry Pi and camera inside Marty's head, with power direct from Marty.• Fun sticker sheet for personalisation.
Expandability	<ul style="list-style-type: none">• Supports and holds an optional Raspberry Pi – Zero, 2 or 3.• 8 Expansion ports for sensors/motors/flashy lights/etc.• I2c + Serial connectivity for other connections.• ROS (Robot Operating System) for real world robotics experience.• Various add ons and upgrades available.

Plastic components	<ul style="list-style-type: none"> • Fully compliant and rugged injection-moulded nylon plastic parts, or customise and 3D print your own.
Sensors	<ul style="list-style-type: none"> • 3 Axis accelerometer – including Tilt Sensing. • Motor current sensing – can tell how hard the joints are working, and detect interactions like you touching his arm. • Bump sensors – supplied with two, more can be added. Can detect floor contact, feet hitting obstacles, or be used as inputs. • 2 bump switches - detect ground contact and/or object collision. • Fall detection. • 8 GPIO ports for digital input/output. • Optional infrared distance sensor (1cm-1m range). • PiCamera for applications such as ball, face and computer vision (e.g. AprilTag detection). • Microphone for e.g. Google Assistant. • Optional sensors: <ul style="list-style-type: none"> ○ - Light sensors ○ - Temperature ○ - Etc...
Connectivity	<ul style="list-style-type: none"> • WiFi. • Serial. • I2c.
Assembly	<ul style="list-style-type: none"> • Takes 2-3 hours. • Requires a screwdriver (included) and no further tools or complicated tasks like soldering. • Using metal nuts rather than screws into plastic, Marty is designed to be taken apart and reassembled many times.
Multiple robots?	<ul style="list-style-type: none"> • Get as many Martys as you want on the same WiFi network. • Good for classes, football, and synchronised Dances.
Battery Life	<ul style="list-style-type: none"> • 1.5-2 hours on a full charge. • On board battery recharging from special supplied USB cable.
Compatibility	<ul style="list-style-type: none"> • Raspberry Pi. • Arduino. • BBC MicroBit.
Compliance	<ul style="list-style-type: none"> • Toy safety. • RoHS. • FCC ID: 2AC7Z-ESP8266EX. • CE.
Support	<ul style="list-style-type: none"> • Extensive support from dedicated team and through the Martyverse community. • Online resources for fun, learning and support at all stages, including video guides, tutorials, coding materials and extensive documentation).

Support & Contact us

For further information on Robotical's Educational products or advice on how you can integrate Marty into your classroom please contact finlay@robotical.io.

For enquiries into the distribution or sales of Marty please contact Myles@robotical.io.