

## Marty the Robot Datasheet



Marty is a programmable robot:

- Marty is easy to build
- Marty can be programmed using Scratch, Python, and C++ (Allows for progression in programming from 8 years to adult)
- Marty can walk, dance, kick a ball - he is fun for all
- Patent pending leg mechanism uses fewer motors – uses less power and is easy to use
- Expandable with optional Raspberry Pi

Number of motors	<ul style="list-style-type: none"> <li>• 9 – six in the legs, one per arm, and one for the eyebrows</li> <li>• Four metal geared servo motors and five carbon fibre geared ones</li> </ul>
Customisability	<ul style="list-style-type: none"> <li>• Extra sensors/motors/etc can easily be added. Robot can be customised with add-on packs, or even with custom 3D printed parts</li> <li>• All parts are 3D printable, and the CAD designs are available as a base</li> </ul>
Sensors	<ul style="list-style-type: none"> <li>• 3 Axis accelerometer – including Tilt Sensing</li> <li>• Motor current sensing – can tell how hard the joints are working, and detect interactions like you touching his arm</li> <li>• Bump sensors – Can detect floor contact, feet hitting obstacles, or be used as inputs</li> <li>• Distance sensors – supplied with one sonar sensor</li> <li>• Camera (with Raspberry Pi)</li> </ul>
Connectivity	<ul style="list-style-type: none"> <li>• WiFi, Serial, I2c</li> </ul>
Software	<ul style="list-style-type: none"> <li>• Interfaces for Scratch, Python and C++</li> <li>• ROS (Robot Operating System) compatible with Raspberry Pi</li> </ul>
Assembly	<ul style="list-style-type: none"> <li>• Takes 2-3 hours</li> </ul>
Multiple robots	<ul style="list-style-type: none"> <li>• Get as many Martys as you want on the same WiFi network.</li> <li>• Good for classes, football, and synchronised dances</li> </ul>
Sound	<ul style="list-style-type: none"> <li>• Onboard speaker for beeping</li> </ul>
Battery Life	<ul style="list-style-type: none"> <li>• 1.5-2 hours on a charge</li> <li>• On board battery recharging from special supplied USB cable</li> </ul>

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