# Witty - a funny balancing robot

The Witty is a 2-wheel stable robot. But with 2 stable positions, not so stable, that's its interest. It can be IR controlled, and the difficulty is to make stable normal or upside down figures. Rotational inertia and moving inertia compete! If programmed to move around, it will never be blocked against a wall.
Add the gyro/accelero sensor, and you will have the smallest pole-balancing robot. Play light effect on the RGB strip while moving.
Initially programmed with a set of 6 Demos, see www.didel.com/WittyDemo.pdf
Play with the libs and a set of 10 simple programs you can find on https://git.boxtec.ch/didel/Witty
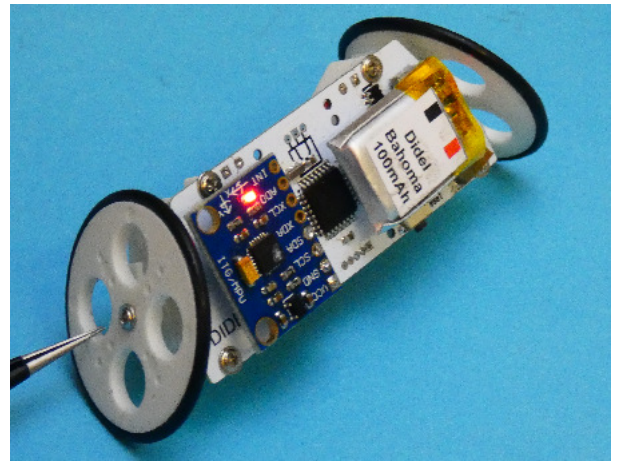
All **.pdf** links easy to click on www.didel.com/Witty.html

The card is indeed an Arduino compatible board, but for programming, a small Gaia module is connected on a 1.27mm connector (CH340G driver, Duemilanove mode).
See https://www.didel.com/WittySpecs.pdf for details.
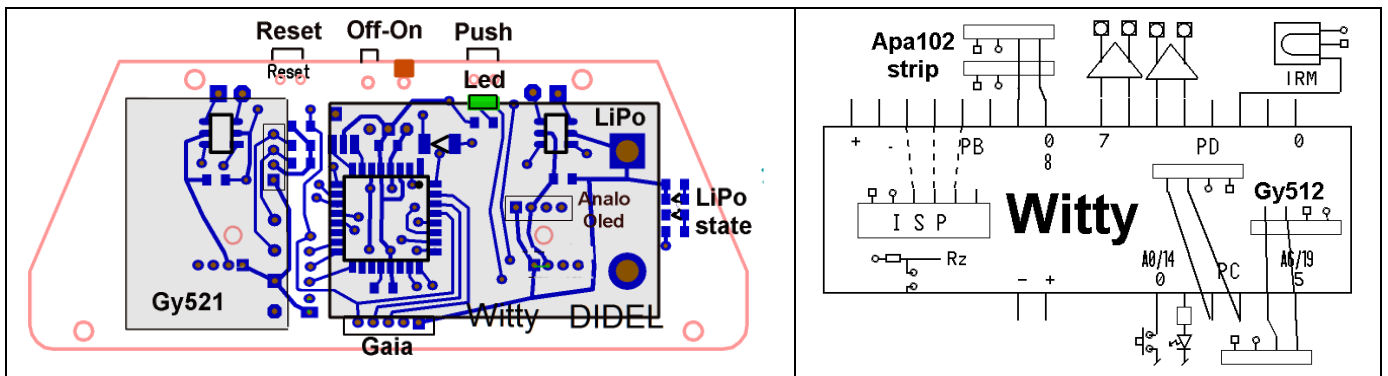
Software – see https://www.didel.com/WittySoft.pdf
Didel software is based on optimized C libraries and definition files.
Witty.h   Defines pins and basic actions (e.g on/off motors)
Apa102.h Control of the RGB strip
Telec.h   Simple control with any TV remote
Inter2.h   Interrupt required for PFM
Pfm.h   Speed control
I2Ctwi.h Transfer with the Gy521
Gy521.h Gyro/Accelero sensor
TerSer.h Replace Serial.print() function
These libs are demonstrated on the Demo2.ino and Testxx programs.
https://git.boxtec.ch/didel/

Arduino compatibility
WittySpecs.pdf documents how to program the Witty the Arduino way. In place of our libs, you can use analogWrite for PWM, Gy521 well documented software, any Apa102 library, Serial.print for debugging.

Enjoy developing your own software

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