



Dui and Didui boards

Arduino Pro Mini revamped

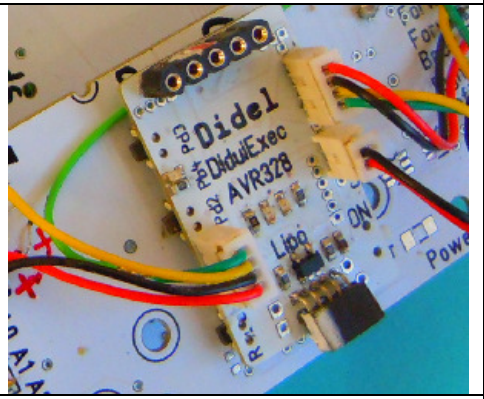
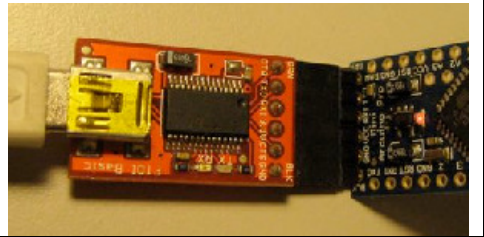
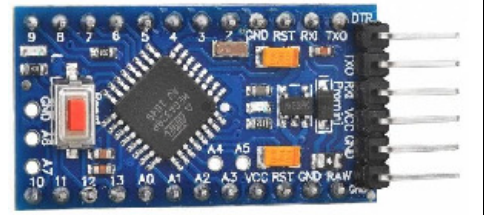
The Arduino Pro Mini is a successful product. It provides all the AVR328 signals on a small board, compatible with your breadboard. A programming module is required, this save space when the application is autonomous.

There are cases when you need something more compact, but still easy to connect. You may have to connect one or two motors, you may wish to add an Oled, a RGB led strip. Think to the final wiring in the application. How to make it clean, hidden in a small enclosure, not visible in a wearable?

We replace the 2.54mm strips with Molex Picoblade connectors and their wire harness. Gnd and Vcc is available on every connector, boards are small, but easy to solder, test, assemble. Do you refuse to buy a drone or a tablet because of too smalls connectors?

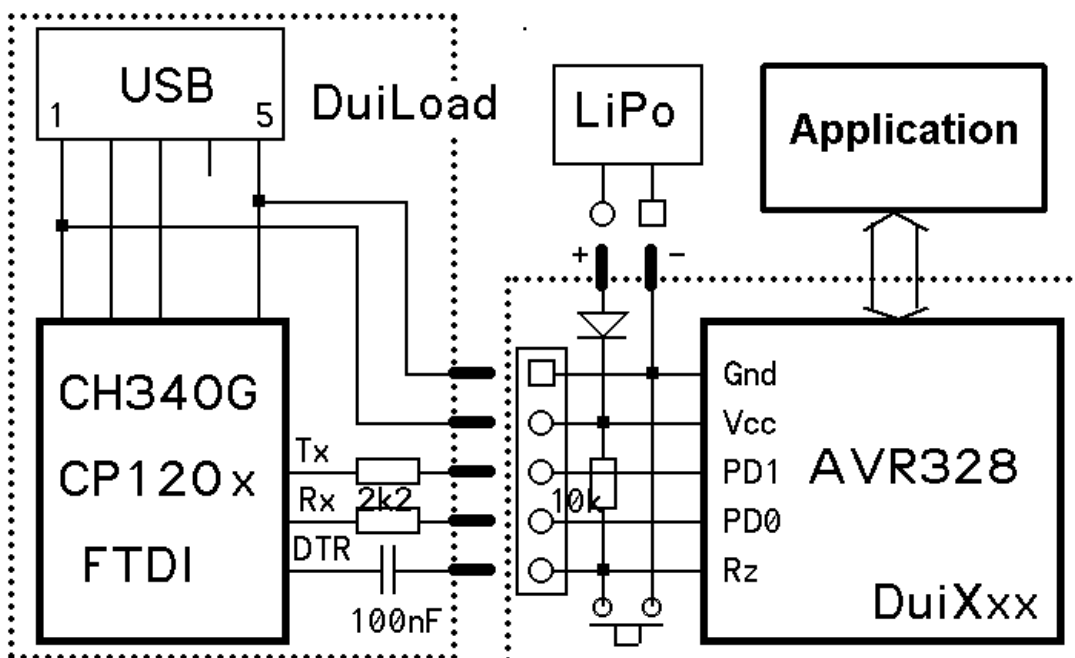
We assume that only few of the 20 signals of the Arduino board will be soldered. A choice of boards with "built-in shields" makes also the result compact and reliable.

The AtTiny is frequently used for small applications, but you have to use different ways of programming and downloading your programs. See the Minos and other "Dui" boards. If you are keen with Arduino, you have several boards. Use one for the development, using the free pins to help debugging and transfer the soft in the small board when it's ready for the application. Compatibility always save time.



System block diagram.

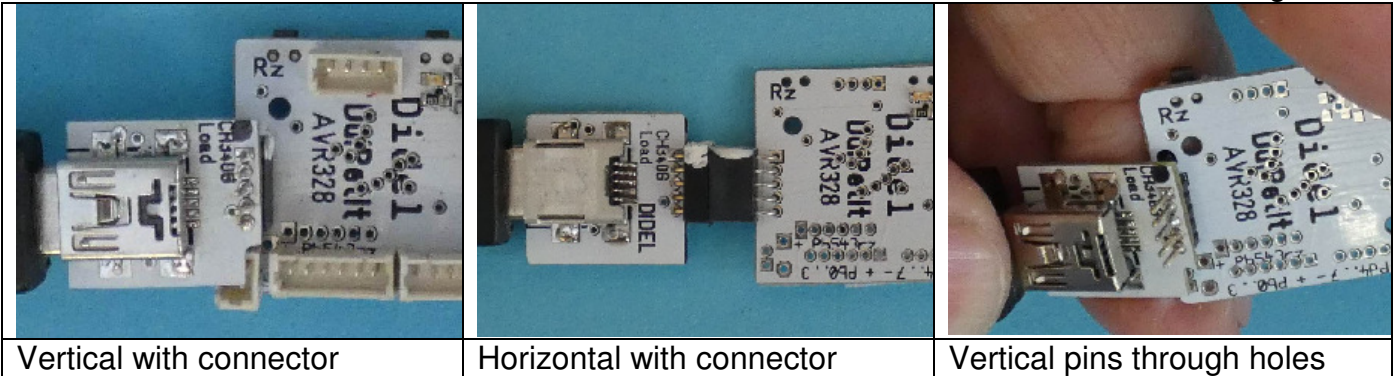
At the difference from Arduino Pro Mini programmer, the few components you need between the USB-UART converter and the AVR328 are on the DuiLoad board. This means you can connect a BT module on the serial connector used for programming, or use the pins PD0 and PD1 as I/O signals.



Gaia (DuiLoad) 13x16mm

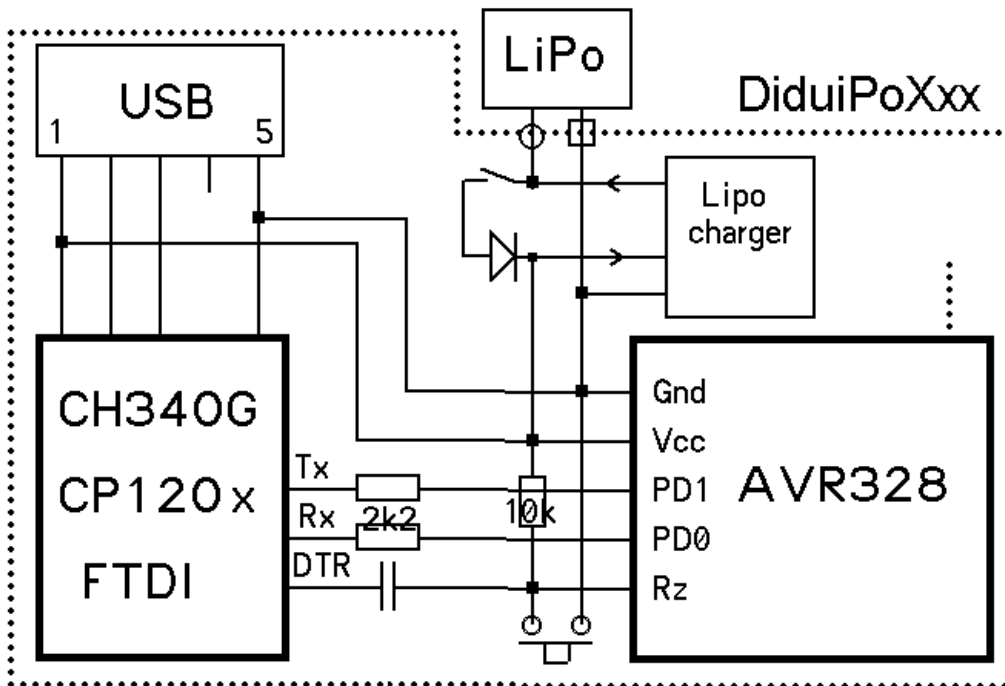
While programming, you need an USB adapter, easy to connect. FTDI is obsolete, we like the CH340G. There are 5 signals to transmit, we decided to drop the 2.54mm connector that takes useless space most of the time. We use a 1.27mm strip, with 6 male pins. The "DuiXxx" board have hence a female connector or just holes. If you do not plan frequent downloads, you just hold the pins in the hole during transfer.

Gaia is the "artist" name of the DuiLoad module and the name of the connector and its signals.



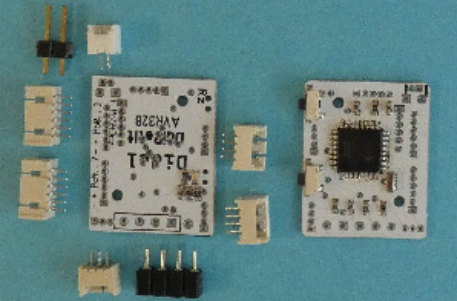
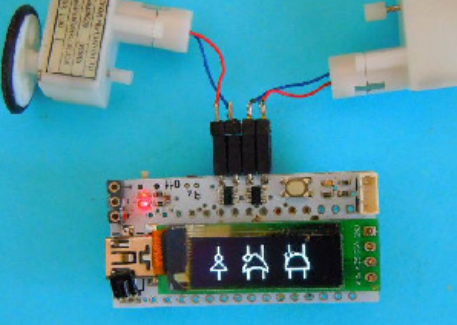
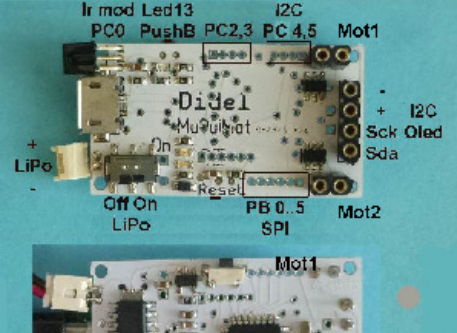
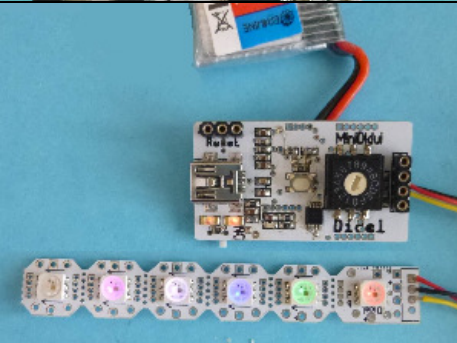
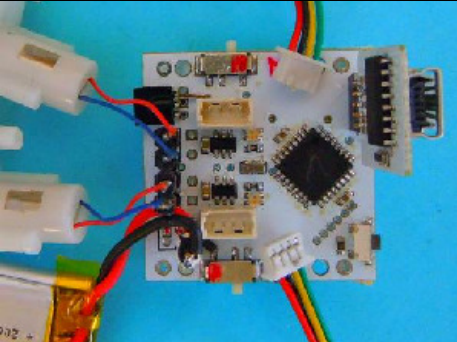
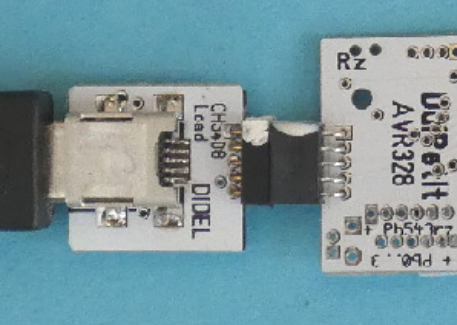
Dui and Didui boards

Dui and Didui boards are precharged with a Duemila loader on the AVR328 at 16 MHz. The difference between DuiXxx and DiduiXxx is the DuiLoad/Gaia logic is included on the DiduiXxx boards, making them slightly longer. The Didui boards have usually the generic name DiduiPo when they include the recharge logic for a LiPo. Recharge occurs when the USB connector is powered (trickle charge if fully charged. Notice the diode that allows to keep the Lipo connected. On the Dui modules, the Lipo must be removed for recharging and when reprogramming with Gaia. In addition to the generic name, we choose name from mythology, easier to remember when you are interested in a single board.



The Dui and Didui boards squeeze the IO pins on 6 and 4 pin connectors. Gnd and Vcc is always available on pin 1 and 2. Unhappily, Molex cables we get have a wrong color on wires 1 and 2. Molex cables makes it easy to connext your extensions, and having a connector is always great for building and debugging? Also, a board for a given application needs only few signals. Solder the connectors you need.

Type www.didel.com/Didui.html for an easy-to-click access to our **Xxx.pdf** files. Understand that that doc will change a lot till December 2018 and is just now at its beginning. We may change details to the PCB before full production. Ask for prototypes if you have an application and provide feedback so we can provide the most useful cards..

<p>Minos DuiPetit (20x25mm) Minos.pdf</p> <p>Minos is really a small board, but all AVR328 signals are available on 5 connectors. Plus one connector for an Oled SSD1306, one for RGB strips, and one for I2C sensors. Program with a Gaia/DuiLoad module.</p>	
<p>Plutos DuiPoNano (23x48mm) Plutos.pdf</p> <p>Plutos is pin compatible with Arduino Nano, but it is interesting for many applications because it includes two motor drivers 400mA, one IR receiver circuit, a push button on pin 13 and 3 connectors (Oled SSD1306, USB and Tell display). A LiPo can be soldered; the on/off switch and the charger is included.</p>	
<p>Leto DiduiPoMot (25x45mm) Leto.pdf</p> <p>Leto is a card with two motor amplifier, one pushbutton and led on pin 13, a LiPo connector and charger. Of course the Oled SSD1306 connector.</p>	
<p>Boree DiduiPoRot (22x40mm) Boree.pdf</p> <p>Borée includes a 16-position switch, convenient to choose a demo program at power-up and select parameters. It has one pushbutton and led on pin 13, a LiPo connector and charger. Also the Oled SSD1306 connector.</p>	
<p>Pegase DuiMot (32x32mm) Pegase.pdf</p> <p>Pegase is optimised for differend kinds of robots and will be better documented to do build these robots. A new PCB is being designed. Wait for the surprise.</p>	
<p>Gaia DuiLoad (13x16mm)</p> <p>Gaia is the compact USB to serial adapter you need to program the DuiXxx boards.</p>	

Other boards under development.