



Beetle Shield

SKU:DFR0285

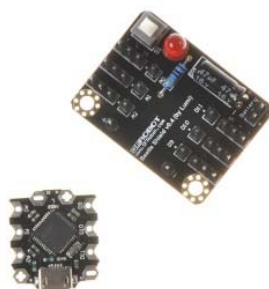


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Introduction

The Beetle shield is designed to attach a [Beetle controller](#) for easy connecting servos and sensors.



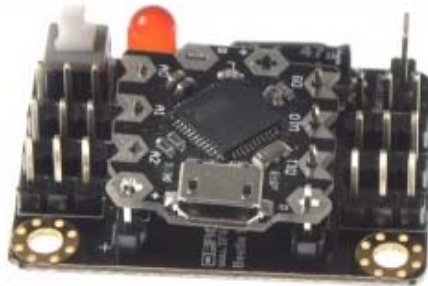
Specification

- Operating voltage: 3 - 5V
- Compatible with DFRobot Beetle

Attaching the Beetle controller to the Beetle shield

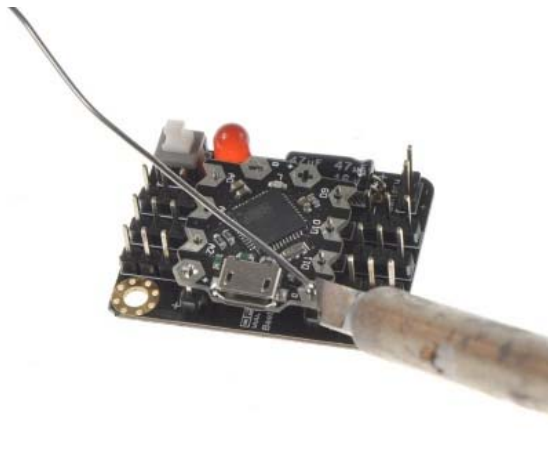
Note: For Beetle shield versions lower than v1.1 the label for D9 and D11 is switched. The pin labeled with D9 on the shield goes to D11 on the Beetle and D11 on the shield is going to D9 on the Beetle. Please take the labels on the Beetle controller as the right ones. We have fixed this error in v1.1

To attach the Beetle to the shield it requires some soldering work. Align the holes of the Beetle with the pins on the shield. Make sure the Beetle controller is showing the microcontroller chip and the USB socket facing up to ensure the correct polarity and pin assignment after soldering it to the shield.



Beetle controller on Beetle shield (click to enlarge)

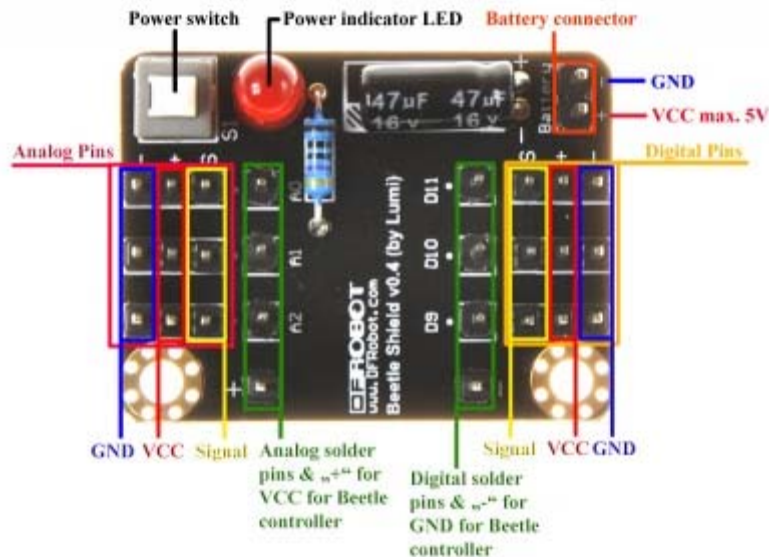
Push the Beetle down onto the pins and let the pins looking out for ca. 1mm. Solder the eight pins at the pads of the Beetle using a soldering iron or soldering gun.



Soldering the Beetle controller on the Beetle shield

Pinout

The shield is a breakout of the six pins D9, D10, D11 and A0, A1, A2 as well the two power pins + and - besides the USB socket. The other two power pads on the other side of the Beetle are not connected with the shield but you still can use them as a power source since they are routed to the power lines on the Beetle itself.



Beetle shield pinout (click to enlarge)

After soldering the Beetle on the shield you may power it up by connecting a power source from 3V to 5V with the power pins labeled with + and - on the Beetle shield. With switching the power on by pressing the button the LED should light up to confirm the power is switched on. At the same time the LED on the Beetle should light up too. That is the proof that you successfully finished the soldering task.

Now you might program your Beetle controller by connecting a Micro USB cable with the USB socket of the Beetle.

The pins on the Beetle shield are arranged to connect with standard servo and sensor connectors. The order is as follows:

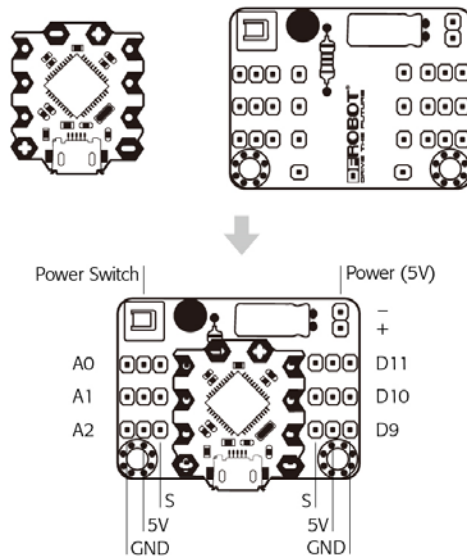
Signal VCC GND

Note: If you want to use the additional pins (RX, TX, SCL and SDA) broken out to the Pads on the backside of the Beetle controller you might need to solder them before you solder the Beetle to the shield.

getting connected

You can directly stack the Beetle onto the Beetle Shield in this kit when using. Some soldering will be needed for reinforcement.

Tip: Check carefully when stacking the Beetle and the Beetle Shield together, turn to corresponding pins between two boards, then press from upon till no room left.



The Beetle can also be wired up individually. Thread the cables through holes according to IO port mapping. Some soldering will be needed for connection.

