

jD-IOBoard Guide

What is jD-IOBoard?

jD-IOBoard is a small standalone microcontroller board that has Atmel 328 MCU and ULN2003 darlington array for high power outputs. With jD-IOBoard you can control 6 outputs with max voltage of 42V and 500mA per output. jD-IOBoard has also several TTL-level (+5V) input/output pins that can be used and programmed.

Programming language for jD-IOBoard is C/C++ language inside Arduino IDE programming environment.

Using jD-IOBoard

Powering jD-IOBoard is easiest done by connecting +5V and GND to FTDI port or I2C port. If you use I2C port from your Flight Controller to control jD-IOBoard, you will power jD-IOBoard automatically. You can also use external 5V regulator to power IOBoard.

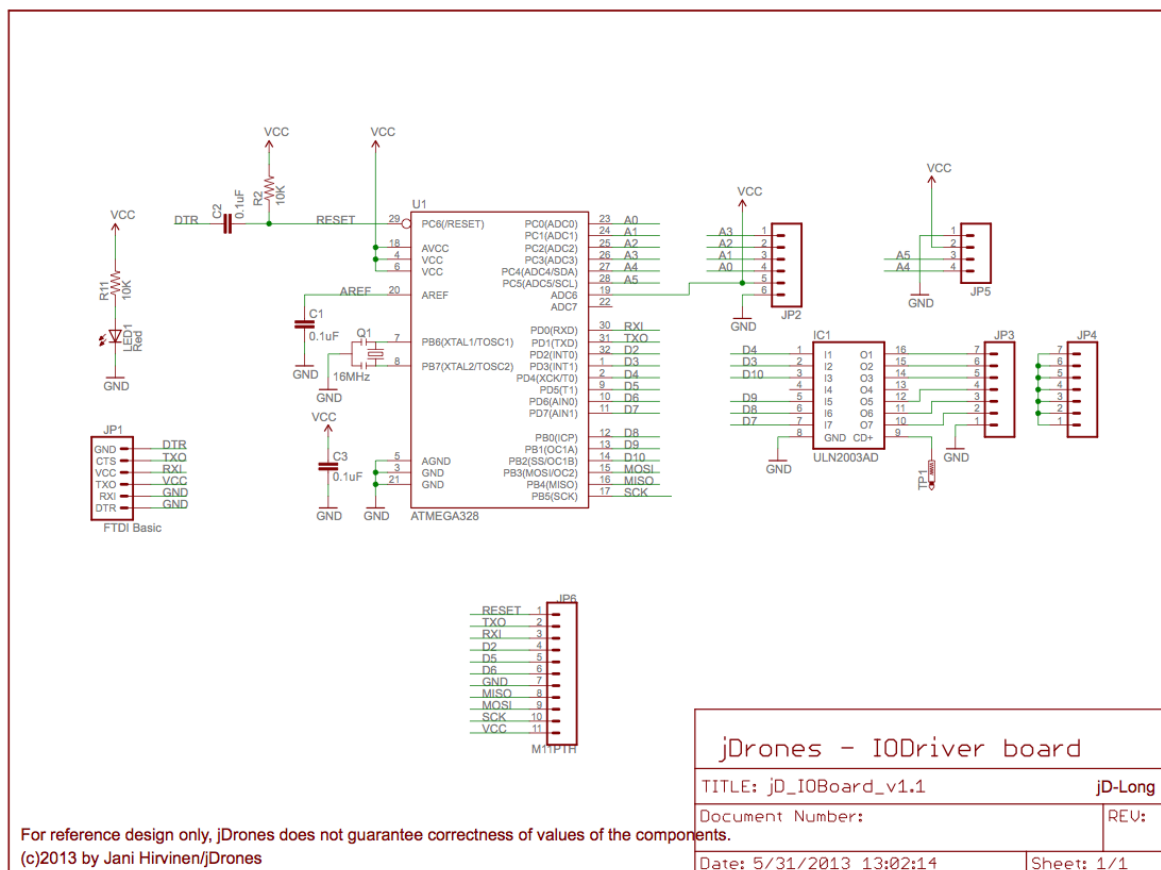
Powering LOAD jD-IOBoard is equipped with High power Darlington diode array, with help of array it controls GND pins of the LOAD. You can input 4-40 Volts to LOAD INPUT pin on Top/Left corner of the board (look pictures). You can control loads up to 500 mAh per output pin.

If you want only drive single LED's, connect +5V to LOAD INPUT pin. If you want to drive LED Strips, connect positive cable from your 3S or 4S battery to LOAD INPUT pin.

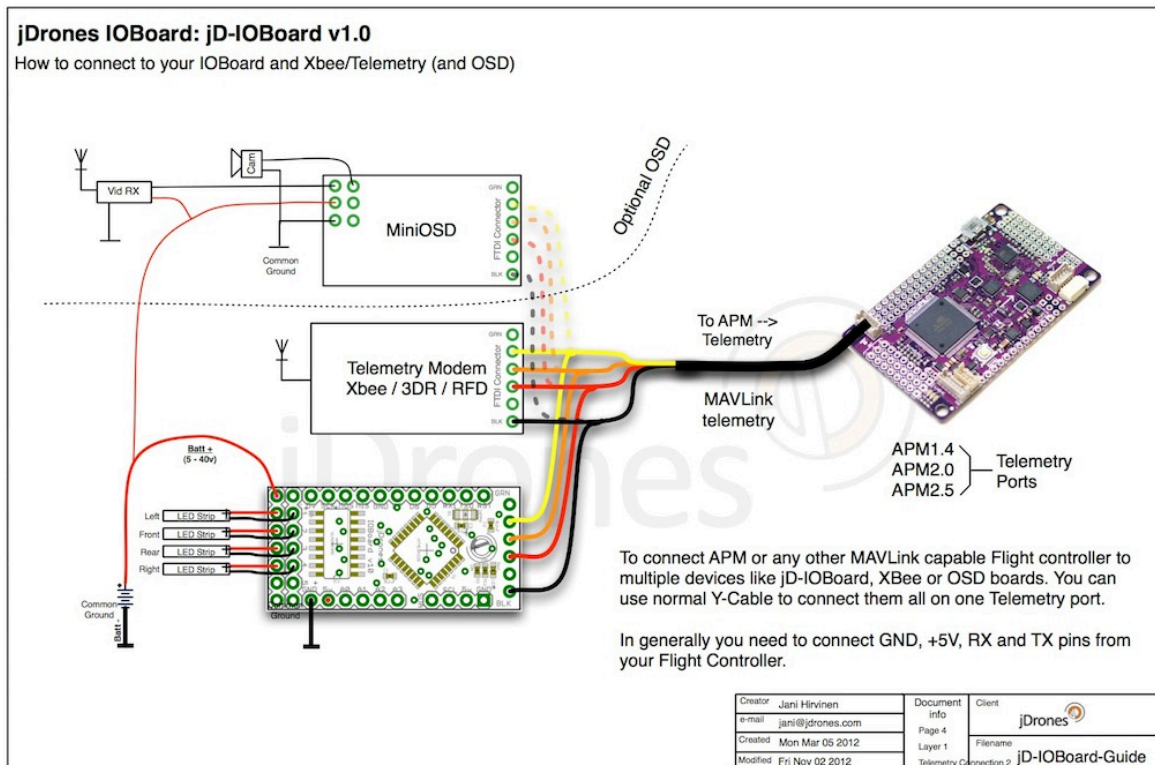
Basic diagram on how to connect your IOBoard to ArduPilot Mega or similar Flight Controller that output MAVLink. Connect one cable from your battery (+) to top left corner where Highload power input is. Then connect LED Strips or other payloads on output pins as shown. Remember + pin is at edge of the board. Connect 4 wires from APM(Flight Controller) to IOBoards FTDI port as shown in diagram (RX, TX, +5V and GND)

NOTE! jD-IOBoard V1.0 and V1.1 has several changes on PCB

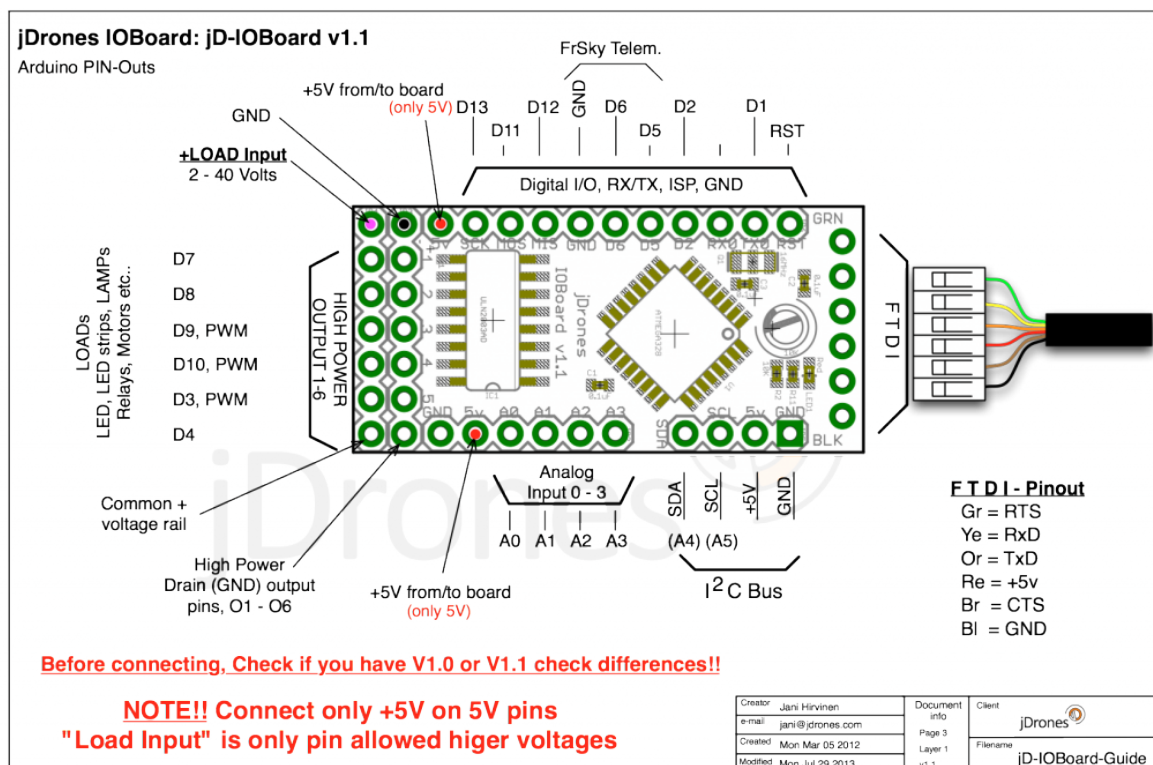
Reference design for jD-IOBoard V1.1



How to connect jD-IOBoard when you also have Telemetry modem and/or OSD



jD-IOBoard V1.1 Pinout map:

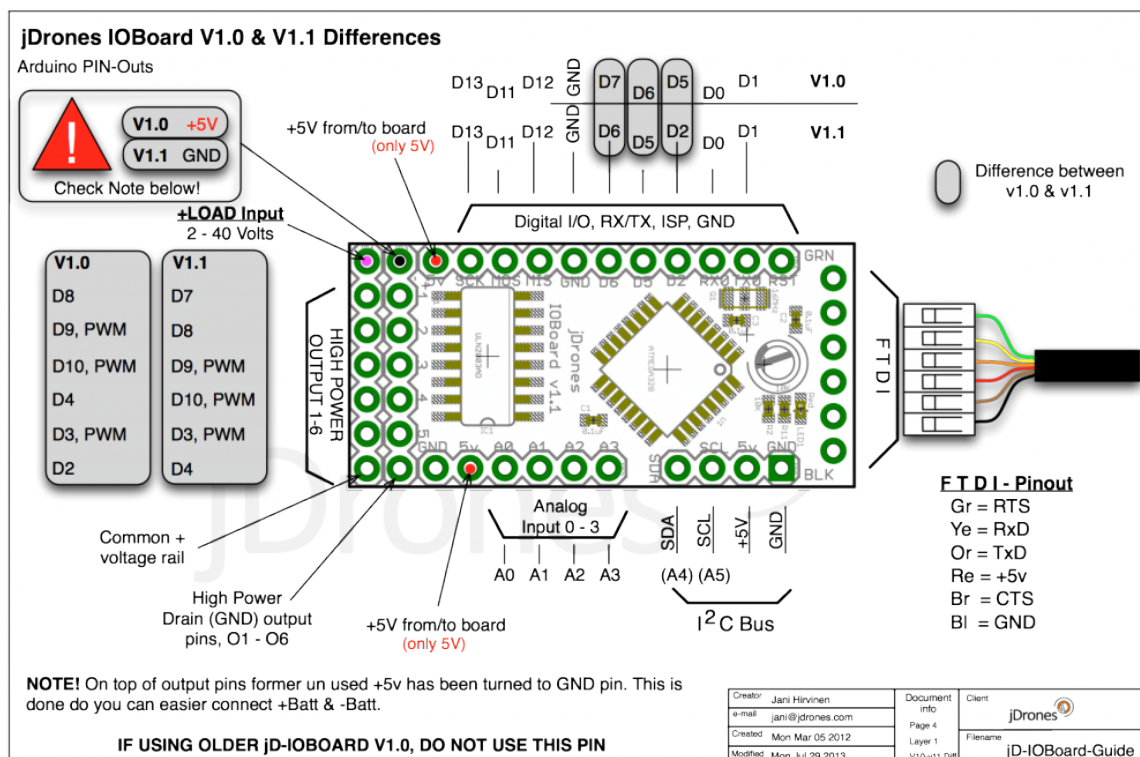


jD IOBoard V1.1 Pinout

V1.0 vs. V1.1

There are several changes between V1.0 and V1.1. Most important change is on TOP LEFT corner. Old +5V has been changed to be as GND, this way it is easier to connect your high voltage battery + and – pins to IOBoard. THIS ONLY WORKS ON V1.1

Other changes are D2 pin has replaced D7 on top edge of the board and D6, D5 has been shifted 1 step to left. FrSky receiver users can now easily connect GND, D6, D5 to their FrSky telemetry receivers.



Differences between jD-IOBoard v1.0 and v1.1

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