Sanguino.cc

so bleeding edge, we had to make it red.

search this wiki [   ] [search]

Main
Home
Get It
Build It
Use It
Hardware
Contact Us

Hardware Information

The Sanguino is based on the atmega644P chip. You can access any of the low-level functionality of this chip.
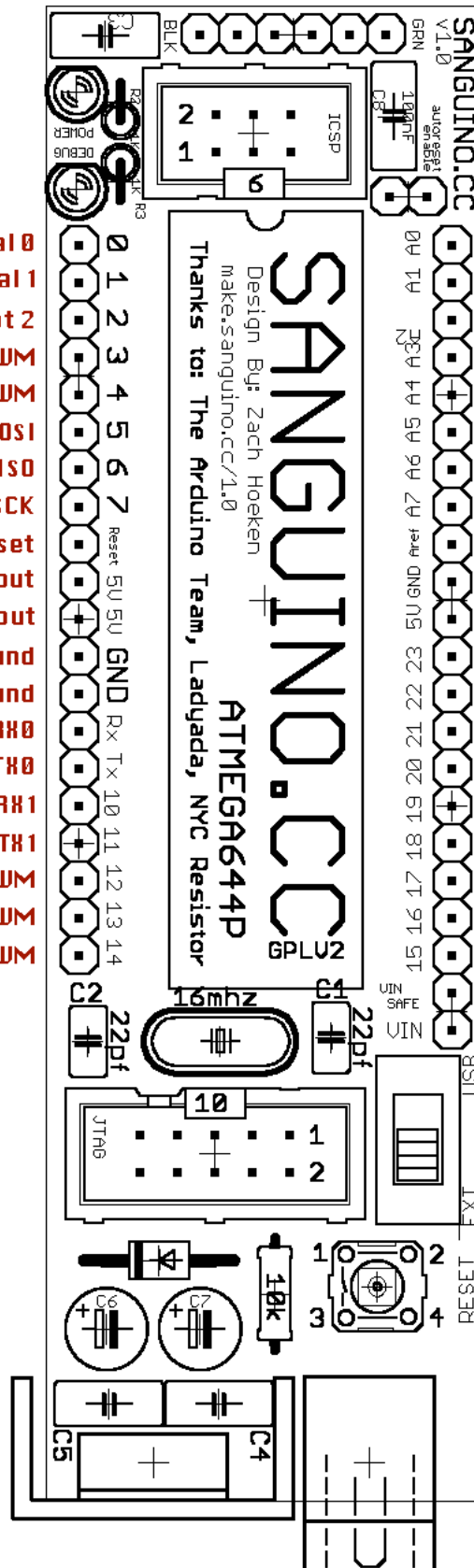
Sanguino Pins

Friends
Arduino
RepRap
NYC Resistor
RRRF
Lady Ada

Designed By:
Zach Hoeken

Left side labels (top to bottom):

- Digital 0
- Digital 1
- Digital 2 / Interrupt 2
- Digital 3 / PWM
- Digital 4 / PWM
- Digital 5 / MOSI
- Digital 6 / MISO
- Digital 7 / SCK
- Reset
- 5V output
- 5V output
- Ground
- Ground
- Digital 8 / RX0
- Digital 9 / TX0
- Digital 10 / RX1
- Digital 11 / TX1
- Digital 12 / PWM
- Digital 13 / PWM
- Digital 14 / PWM

Right side labels (top to bottom):

- Analog 0 / Digital 31
- Analog 1 / Digital 30
- Analog 2 / Digital 29
- Analog 3 / Digital 28
- Analog 4 / Digital 27
- Analog 5 / Digital 26
- Analog 6 / Digital 25
- Analog 7 / Digital 24
- Analog Reference
- Ground
- 5V
- Digital 23
- Digital 22
- Digital 21 / TDI
- Digital 20 / TDO
- Digital 19 / TMS
- Digital 18 / TCK
- Digital 17 / SDA
- Digital 16 / SCL
- Digital 15 / PWM
- Voltage In (5-24) Protected
- Voltage In (5-24) Unprotected

Board text: SANGUINO.CC — ATMEGA644P — GPLV2 — Design By: Zach Hoeken — make.sanguino.cc/1.0 — Thanks to: The Arduino Team, Ladyada, NYC Resistor — ICSP — 16mhz — JTAG — autoreset enable
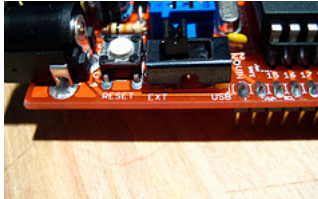
Power Switch

The Arduino has a
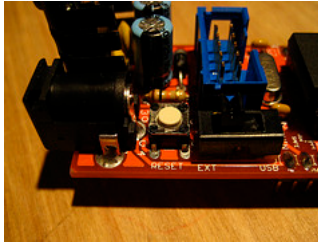switch that selects

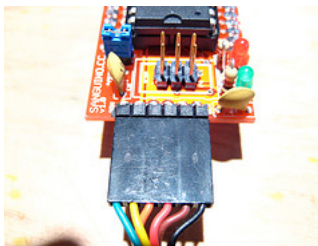between USB and External power. If using one or the other, this also functions as a power switch.

Reset

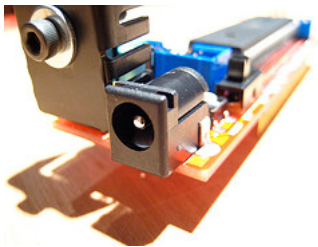Pressing this button will reset your Sanguino board.

Serial Connection

Provided on the far end of the board is a 6-pin connector that is compatible with the common USB <-> TTL Serial connectors. Using this connector you can program your Sanguino, as well as have normal Serial communications with your Sanguino. This is the same cable used by the Boarduino.
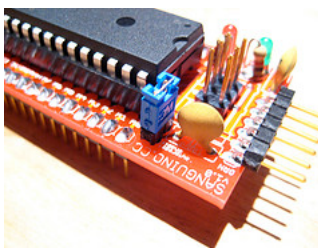
DC Power Jack

The Sanguino comes with a standard 2.1mm DC Power jack. It can run on 6-24v of input voltage. If you use high voltage, make sure to put a heatsink on the power regulator next to the DC jack.
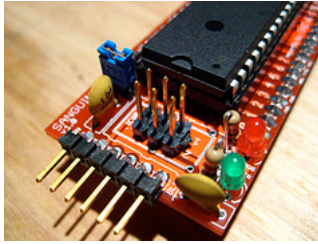
Autoreset Enable

With these two pins jumpered, the Autoreset functionality is enabled. If you remove the jumper, Autoreset functionality is disabled.

Autoreset means that when you open a serial connection to the Sanguino, it resets the board. Having the capacity to disable this can be very useful.
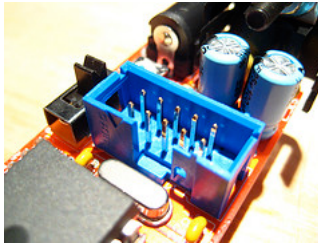
ICSP

There is a standard 6-pin ICSP header for uploading a program directly to the atmega644P chip, bypassing the bootloader. This is how you erase the bootloader, or upload a new one.

JTAG

Included in the board is a standard 10-pin JTAG header. The atmega644P supports JTAG boundary scans, so if you have a compatible JTAG board, you can use this feature. By default, JTAG is disabled in the atmega644P fuses, so you must re-enable those fuses before you can use the JTAG functionality.