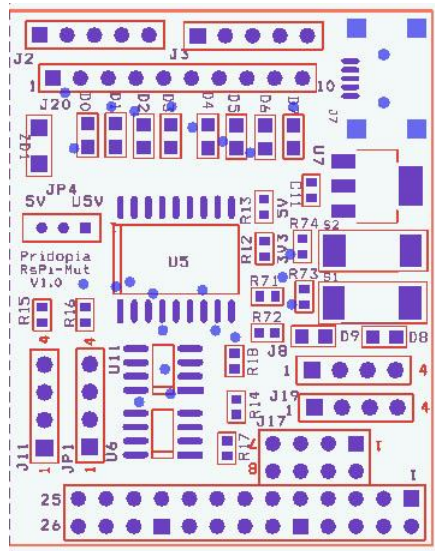
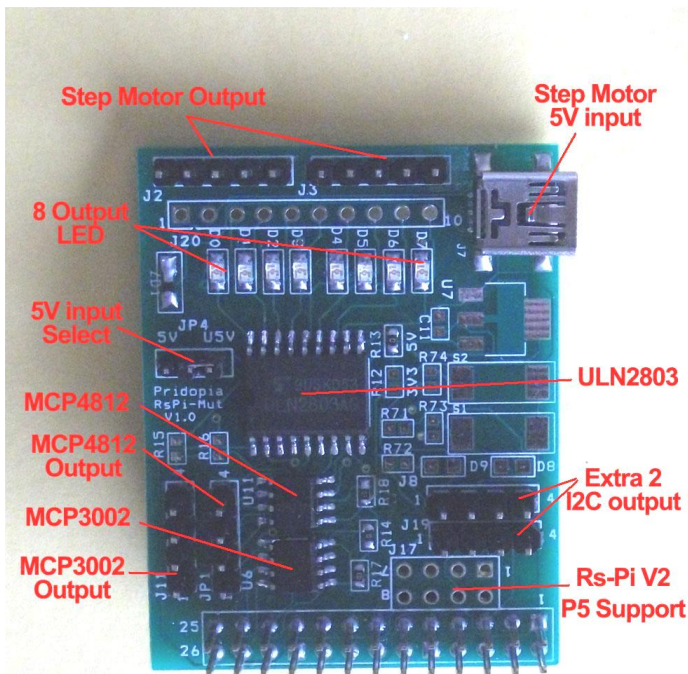


RsPi-ULN2803 & SPI AD/DA User Manual



CON1		CON26A	
VCC3v3	1	2	5V
SDA	3	4	GND
SCL	5	6	Tx
GPIO7	7	8	Rx
GPIO0	9	10	GPIO1
GPIO2	11	12	GPIO4
GPIO3	13	14	GPIO5
MOSI	15	16	GPIO6
MISO	17	18	CE0 n
SCLK	19	20	CE1 n
	21	22	
	23	24	
	25	26	

- J2 J3 Step motor connector J2 (5V,D0,D1,D2,D3) J3(5V,D4,D5,D6,D7) can use Step motor (28BYJ-48 5VDC)
- J20 pin1 – pin10 +5V,GND, D0, D1,D2,D3,D4,D5,D6,D7 OUTPUT
- U5 **ULN2803** 8 darlington transistor array
- J17 RS-Pi-V2 GPIO output S1, S2 D8,D9 output from V2 GPIO
- J8 i2c output pin1 – pin4 (GND, 3V3, SDA,SCL)
- J19 i2c output pin1 - pin4 (GND,5V,SDA,SCL)
- JP4 choose 5V input from Mini USB Port J7 or RS-Pi 5V
- J7 Mini USB 5V input
- U6 **MCP3002** SPI Interface 10 bit Analog-to-Digital Converter output J11 pin1 – pin4 (Vcc, AD0, GND, AD1)
- U11 **MCP4812** SPI Interface 10 bit Digital-to-Analog Converter output JP1 pin1 – pin4 (DA0,GND,DA1,GND)

U5 **ULN2803** use RS-Pi pin 11,12,13,15,16,18,22,7 as GPIO 0 to GPIO 7 input

MCP3002 DEMO

```
COM22 - PuTTY
root@raspberrypi:/home/pi/adc# dir
atod  atod.o      gb_common.h  gb_spi.c  gb_spi.o
atod.c  gb_common.c  gb_common.o  gb_spi.h  makefile
root@raspberrypi:/home/pi/adc# ./atod
Which MCP3002 channel do you want to test? Type 0 or 1.
0

These are the connections for the MCP3002 analogue to digital test:
GP11 to SCLK
GP10 to MOSI
GP9 to MISO
GP8 to CSnA
Trippot connections:
(call 1 and 3 the ends of the resistor and 2 the wiper)
connect 3 to 3V3
connect 2 to ADO
connect 1 to GND
When ready hit enter.

0797 #####
```

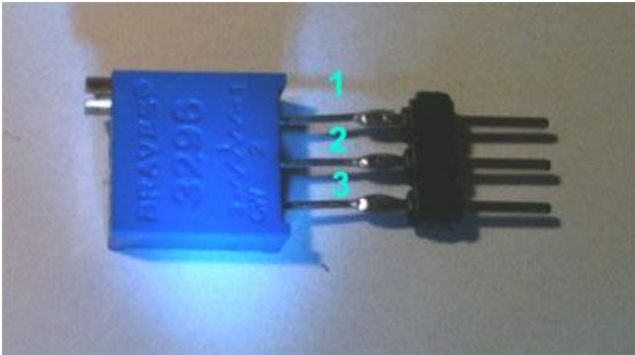
MCP3002 TEST

USE J11 OUTPUT PIN 1 VCC PIN2 AD0 PIN3 GND

Control by CE0 Rs-Pi pin 24

CONNECT TO 10K Trimpot

Pin1 GND , PIN 2 AD0 PIN3 VCC



You also can use gertboard program atod & dtoa & leds in this board

You can download test program from our web site

<http://www.pridopia.co.uk/pi-2803-sm-ad-da-lp.html>

<http://www.pridopia.co.uk/pi-2803-fu-ad-da-lp.html>

Package Content

1x Rs-Pi ULN2803 & SPI AD/DA board

1x Manual

MCP4812 TEST

USE JP1 pin1 – pin4 (DA0,GND,DA1,GND)

Control by CE1 Rs-pi pin 26

PIN1 DA0 CONNECT TO Multimeter RED

PIN2 GND CONNECT TO Multimeter BLACK

MCP4812 demo

```
COM22 - PuTTY
root@raspberrypi:/home/pi/gertboard# ./dtoa
Which channel do you want to test? Type 0 or 1.
0
These are the connections for the digital to analogue test:
jumper connecting GP11 to SCLK
jumper connecting GP10 to MOSI
jumper connecting GP9 to MISO
jumper connecting GP7 to CSnB
Multimeter connections (set your meter to read V DC):
  connect black probe to GND
  connect red probe to DA0 on J29
When ready hit enter.

Your meter should read about 0V
When ready hit enter.

Your meter should read about 0.5V
When ready hit enter.

Your meter should read about 1.02V
When ready hit enter.
```