Rs-Pi-23s17-4 SPI 64 GPIO User Manual





1. J16 Mini USB 5V input for GPIO pin10 V+ 2. J18 Rs-Pi V2 GPIO output 3. JP18 GA0 ~ GA7 U13 Port A JP19 GB0 ~ GB7 U13 Port B

4. JP25 AA0 ~ AA7 U14 Port A JP24 BA0 ~ BA7 U14 Port B 5. JP20 GC0 ~ GC7 U15 Port A JP21 GD0 ~ GD7 U15 Port B 6. JP22 DA0 ~ DA7 U16 Port A JP23 EA0 ~ EA7 U16 Port B 7 R61,R62,R63 (for U13 Address select A0,A1,A2) 8. R64, R65, R66 (for U14 Address select A0, A1, A2) 9 R80, R81, R82 (for U15 Address select A0, A1, A2) 10. R88, R89, R90 (for U16 Address select A0, A1, A2) 11. U13 (000) 23s17 -1 Port A,B U14 (001) 23s17-2 Port A,B 12. U15 (010) 23s17 -3 Port A,B U16 (011) 23s17-4 Port A,B

A0, A1, A2 address * right side GND low - 0 * left side Vcc High - 1







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Always enabling SPI

To always enable the SPI driver: After logging in, edit /etc/modprobe.d/raspi-blacklist.conf

sudo nano etc/modprobe.d/raspi-blacklist.conf

Insert a # at the start of the line containing blacklist spi-bcm2708

#blacklist spi-bcm2708



Download test program from our web site

- 1. n23s17-cs0.py
- 2. 23s17-4port-v2.py

http://www.pridopia.co.uk/pi-23s17-4-lp.html

https://pypi.python.org/pypi/RPi.GPIO GPIO library

GPIO library - RPi.GPIO-0.5.3a.tar.gz

Install python, library and run the test program

sudo apt-get install python-dev

wget http://www.pridopia.co.uk/pi-pgm/RPi.GPIO-0.5.3a.tar.gz

gunzip RPi.GPIO-0.5.3a.tar.gz # tar -xvf RPi.GPIO-0.5.3a.tar # cd RPi.GPIO-0.5.3a # sudo python setup.py install

sudo python xxx.py (xxx.py it's name of test program)

🗗 192.168.0.9 - PuTTY									
root@raspberrypi:~# cd 🔺									
root@raspberrypi:/# cd home									
root@raspberrypi:/home# cd pi									
root@raspberrypi:/home/pi# cd 23s17									
root@raspberrypi:/home/pi/23s17# sudo python n23s17-cs0.py									
GPIO-A 0b1010101 GPIO-B 0b1010101									
GPIO-A 0b10101010 GPIO-B 0b10101010									
GPIO-A 0b1010101 GPIO-B 0b1010101									
GPIO-A 0b10101010 GPIO-B 0b10101010									
GPIO-A Obl GPIO-B Obl									
GPIO-A 0b10 GPIO-B 0b10									
GPIO-A Ob100 GPIO-B Ob100									
GPIO-A 0b1000 GPIO-B 0b1000									
^Z									
<pre>[1]+ Stopped sudo python n23s17-cs0.py</pre>									
root@raspberrypi:/home/pi/23s17#									

n23s17-cs0.py 64 GPIO output demo

1	P	COM4	44 - Putty									
ą	Out	put	Test	t foi	c 23:	317-ʻ	1port	5 I	MCP2:	3517	^	
	A1	8 [0]	7 [0]	6 [1]	5 [0]	4 [0]	3 [0]	2 [0]	1 [1]			
	A2	[1]	[0]	[0]	[0]	[0]	[0]	[0]	[0]			
ê	Б1 В2	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]			
	C1 C2	[O] [1]	[0] [0]	[0] [0]	[0] [0]	[0] [0]	[0] [0]	[0] [0]	[1] [0]			
	D1	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[1]			
	DZ	[1]	[0]	[0]	[0]	[0]	[0]	[0]	[1]			
	Enter the Bank ($A-B$), Port (1-2) and LED number (1-8). Type BFS to Reset											
	Example "A21" or "a21" will Toggle Bank A, Port 2, LED 1.											
											Υ.	

new test program 23s17-4port-s-v103.py demo



new GUI interface output software 23s17-4port-GUI.py demo

Download test program from our web site

http://www.pridopia.co.uk/pi-23s17-4-lp.html

<u>23s17-cs0.py</u> <u>23s17-cs1.py</u>

<u>23s17-4port-v3.py</u> <u>23s17-4port-s-v103.py</u>

23s17-4port-GUI.py red.png green.png download these three files

New Pridopia scratch interface software you can download from our web site

http://www.pridopia.co.uk/rs-pi-set-scratch.html



U1 to U4 spi 23s17 address 40,42,44,46 U5 to U8 spi 23s17 address 48,4a,4c,4e

40 --> 1 42 --> 2 44 --> 3 46 --> 44 48 --> 5 4a --> 6 4c --> 7 4e --> 8

Command "sp"+ "address(1-8)" + "a" +"bit(1 to 8)" for Port A Command "sp"+ "address(1-8)" + "b" +"bit(1 to 8)" for Port B Command "bits"+ "address(1-8)" + "a" +"bit(8 to 1)" for Port A Command "bits"+ "address(1-8)" + "b" +"bit(8 to 1)" for Port B

sp5b7 --> spi address 5 Port B bit 7 ON/OFF sp7b4 --> spi address 7 Port B bit 4 ON/OFF bits2b01010101 --> address 2 port B from bit 8 to 11 output --> 01010101 bits8a01010101 --> address 8 port A from bit 8 to 1 output --> 01010101 bits2aoff --> address 2 Port A all OFF/clear

GPIO input setting slider distance (light sound resistance-A reset time resistance-B timer resistance-C resistance-D × positioi tilt distance loudne: SPI1B-0 broadcast join sp 1bin) SPI1B-1 loud? forever SPI1B-2 broadcast update -SPI1B-3 SPI1B-4 wait 1 secs slider SPI1B-5 sensor SPI1B-6 SPI1B-7 Temp

Command "sp"+ "address(1-8)" + "a" +"in" for Port A Command "sp"+ "address(1-8)" + "b" +"in" for Port B

command "splbin" initial address 40, Port B as input broadcast "Update" in Sensing ---> Slider ,

you will see "SPI1B-0 ~ SPI1B-7" in the list