

## Dual SDcard I/O Board Configuration

### “Setting and Soldering the P3 and P4 Jumper Blocks”

The PC board contains more pin pads for surface mounting an SD card socket than there are pins on any one socket. There is no standard for the placement of the WP (write protect) and CD (card detect) switch outputs. As a result, 4 pads are present to connect to the card detect signal, and 2 pads are present to connect to the write protect signal.

For each card socket, there is a jumper block used to select which pad is to be use for each signal. These jumper blocks, P3 and P4 do not require pin array headers. Since the SD card socket is soldered in place, the jumper block also should be soldered with short jumpers. It is not as if anyone is ever going to change the sockets!

Here are jumper settings for a number of SD sockets, several of which are available from Digikey or Mouser:

3M	p/n SD-RSMT-2-MQ-WF	pads CD1 & WP1	1-2 & 11-12
Adam Tech	p/n SDM-09-A-SG-0	pads CD1 & WP1	1-2 & 11-12
Amphenol / Shouhmin (SD & MMC)	p/n 101-00313	pads CD2 & WP1	3-4 & 11-12
	p/n 101-00405	pads CD3 & WP1	5-6 & 11-12
	p/n 101-00708	pads CD1 & WP1	1-2 & 11-12
	p/n 101-00565	pads CD1 & WP1	not recommended
ATOM	p/n SD01-AP20330	pads CD2 & WP1	3-4 & 11-12
	p/n (others)	pads CD1 & WP1 ??	needs testing
AVX	second source for Kyocera (below)		
FCI	p/n 10067847	pads CD2 & WP1	3-4 & 11-12
Hirose	p/n DM1AA-SF-PEJ(21)	pads CD4 & WP2	7-8 & 9-10
	p/n DM2 series	incompatible	do not use
ITT Cannon	p/n CCM05-5770 )	pads CD1 & WP1	1-2 & 11-12
	p/n CCM05-5775 ) all -->		
	p/n CCM05-5777 )		
JAE Electronics	SC1 series	incompatible	do not use
Kyocera	5638 series	pads CD2 & WP1	3-4 & 11-12
	5738 series	pads WP1 & WP2	* & 9-10
* CD pin is above WP1 pad - adjust soldering of connector to compensate			
MDFLY (supplier) (PROCONN mfr)	p/n SOK-MS0005	pads CD1 & WP1	needs testing
	p/n SOK-MS0001	pads CD1 & WP1	“
	p/n SOK-MS1000	pads CD1 & WP1	“

Molex	p/n 67600-8001	incompatible	do not use
	p/n 67600-8002	incompatible	do not use
	p/n 500998-0900	incompatible	do not use
	p/n 503500-0991	incompatible	do not use
Panasonic	p/n AXA2R73021	pads CD4 & WP2	7-8 & 9-10
	p/n AXA2R73061	pads CD4 & WP2	7-8 & 9-10
	p/n AXA2R73321	pads CD4 & WP2	7-8 & 9-10
	p/n AXA2R73361	pads CD4 & WP2	7-8 & 9-10
TE Connectivity	p/n 2041021	pads CD1 & WP1	1-2 & 11-12
	p/n 440297	pads CD1 & WP1	1-2 & 11-12
	p/n 1734472	pads CD2 & WP1	3-4 & 11-12
	p/n 2057184	pads CD2 & WP1	3-4 & 11-12
	p/n 1903572	unknown	
Würth Elektronik	p/n 693061010911	pads CD2 & WP1	3-4 & 11-12

Easiest to solder would be one of the sockets using the CD2/WP1 combination, with one using the CD1/WP1 combination a close second.

Pads are numbered (from the top of the connector) counterclockwise: 9, 1, 2, ... 7, 8. Pins 9..7 are spaced 2.5mm apart, EXCEPT when pad CD2 is used. When this happens, pins 2 and 4 are 5mm apart, but pin 3 is displaced toward 4 to make room for pin/pad CD2 between pins 2 and 3. If your socket has pins at regular spacing, then you will have to bend pin 3 toward pin 4 to make a connection to the correct pad. Pin 3 is one of two Vss (ground) signals, so getting it correct is important.

There is an alternate soldering approach for jumper blocks P3 and P4, not entirely recommended, but it will work if your soldering technique is perfect. Jumper all the connections: 1-2, 3-4, 5-6, 7-8; then the signal use for Card Detect depends upon the correct pin from the socket being connected to the correct pad. Likewise for the Write Protect; solder both jumpers: 9-10 & 11-12. Then if the WP pin from the socket is correctly soldered, the correct signal will be input. Again, this approach is not really recommended.

Please report the positions of CD and WP pins on other sockets, so the list above may be updated.

(end)

John Coffman  
25-Feb-2013