

**ShopBot MCU and Control Card Pinouts**

[RED = changes from V201 to V204]

(J1)		On Board type + rec handling		-----Silab C8051F120-----		Comments
<b>37 Pin Connex</b>		Name		V201	V204	Type
19				---	---	
37				---	---	
18				---	---	
36				---	---	
17	Xdir	buf	P4.0	P4.0	O	6-Axis Direction Bus
35	Ydir	buf	P4.1	P4.1	O	
16	Zdir	buf	P4.2	P4.2	O	
34	Adir	buf	P4.3	P4.3	O	
15	Bdir	buf	P4.4	P4.4	O	
	Cdir	buf		(P4.5)	O	{adding 6th axis to connector}
33	xStep	buf	P5.0	P5.0	O	6-Axis Step Bus
14	yStep	buf	P5.1	P5.1	O	
32	zStep	buf	P5.2	P5.2	O	
13	aStep	buf	P5.3	P5.3	O	
31	bStep	buf	P5.4	P5.4	O	
	cStep	buf		(P5.5)	O	{adding 6th axis to connector}
12	Speed-X	buf	P3.0	P3.0	O	
30	ENABLE	buf	P3.1	P3.1	O	
11	Input 5	r/c + iso int board	P6.0	P6.0	I	
29	Input 6	r/c + iso int board	P6.1	P6.1	I	
10	Input 7	r/c + iso int board	P6.2	P6.2	I	
28	Input 8	r/c + iso int board	P6.3	P6.3	I	
9	Input 1	r/c + iso int board	P6.4	P6.4	I	
27	Input 2	r/c + iso int board	P6.5	P6.5	I	
8	Input 3	r/c + iso int board	P6.6	P6.6	I	
26	Input 4	r/c + iso int board	P6.7	P6.7	I	
7	ALARM	r/c	P3.2	P3.2	I	
25	test		----	P3.3	I	{test input moved to main connector from header}
6	Cdir	buf	----	P4.5	O	{pin location for 6th axis dir; from above}
24	cStep	buf	----	P5.5	O	{pin location for 6th axis step; from above}
5			----			
23			----			
4	power	bypass cap	Vcc +5	Vcc +5		
22	power	bypass cap	Vcc +5	Vcc +5		
3	power	bypass cap	Vcc +5	Vcc +5		
21			G	G		
2			G	G		
20			G	G		
1			G	G		
(J2)						{header contains all standard OUTPUT lines}
<b>Header 1</b>						
1			----	----		
2	power		Vcc +5	Vcc +5		
3	Output 9	buf	P3.6	P3.4	O	{4x additional outputs}
4	Output 10	buf	P3.3	P3.5	O	{...will become designated spindle and ATC controls}
5	Output 11	buf	P3.4	P3.6	O	
6	Output 12	buf	P3.5	P3.7	O	
7	Output 1	buf	P7.0	P7.0	O	
8	Output 2	buf	P7.1	P7.1	O	
9	Output 3	buf	P7.2	P7.2	O	
10	Output 4	buf	P7.3	P7.3	O	
11	Output 5	buf	P7.4	P7.4	O	
12	Output 6	buf	P7.5	P7.5	O	
13	Output 7	buf	P7.6	P7.6	O	
14	Output 8	buf	P7.8	P7.8	O	
15	G		G	G		
16	G		G	G		
(J6)						
<b>Header 2</b>						
1	power			Vcc +5		
2	Input 9	r/c + iso int board		P2.0	I	{4x additional inputs}
3	Input 10	r/c + iso int board		P2.1	I	{...will become designated e-stop and prox lines}
4	Input 11	r/c + iso int board		P2.2	I	
5	Input 12	r/c + iso int board		P2.3	I	
6	AlarmCLR	buf		P2.7	O	{4x additional outputs}
7	Indexer 1	buf		P2.6	O	
8	Indexer 2	buf		P2.5	O	
9	Indexer 3	buf		P2.4	O	
10	G			G		
11	PWM0	buf		PWM0/P0.6	O	{laser}
12	PWM1	buf		PWM1/P0.7	O	
13,15,17,19	G					
14	ANIN1	r/c		ANIN0.0	AnalogIN	
16	ANIN2	r/c		ANIN0.1	AnalogIN	
18	AOUT1	drv		DAC.0	AnalogOUT	
20	AOUT2	drv		DAC.1	AnalogOUT	