

FPGA Pin	Function	Target Pin
1	USB D13	1
2	USB D14	2
3	VccO	
4	USB D15	3
5	USB SLRD-	8
6	USB SLWR-	9
7	USB D12	56
8	USB D11	55
9	GND	
10	USB D10	54
11	USB D9	53
12	USB D8	52
13	USB CS-	47
14	USB PKTEND-	46
15	USB A1	45
16	GND	
17	USB A0	44
18	USB A2	43
19	VccO	
20	USB SLOE-	42
21	USB INT-	41
22	GND	
23	USB READY	40
24	USB FLAG C (EF-)	38
25	USB FLAG B (FF-)	37
26	USB FLAG A (PF)	36
27	USB D3	28
28	USB D7	32
29	GND	
30	USB D6	31
31	USB D5	30
32	USB D4	29
33	USB D0	25
34	VccO	
35	USB D1	26
36	USB D2	27
37	M1 (low)	
38	M0 (high)	
39	M2 (high)	
40	CODEC MCLK (512X)	15
41	CODEC PDWN-	20
42	GND	
43	VccO	
44	CODEC DOUT	11
45	GND	
46	CODEC DIN	10
47	CODEC FS	9
48	VccAUX	
49	VccINT	
50	CODEC BCK	8
51	MCU XWR	60
52	DAC RESET & SELECT	19 20
53	DAC WRITE & CLOCK	17 18
54	VccO	
55	nc	
56	GCLK1 – USB IFCLK	20
57	DAC D0	14
58	DAC D1	13
59	DAC D2	12
60	DAC D3	11
61	VccINT	
62	VccAUX	
63	DAC D4	10
64	GND	
65	DAC D5	9
66	VccO	
67	GND	
68	DAC D6	8
69	DAC D7	7
70	DAC D8	6
71	DONE – MCU PIOC7	60
72	GND	

FPGA Pin	Function	Target Pin
73	DAC D9	5
74	DAC D10	4
75	VccO	
76	DAC D11	3
77	DAC D12	2
78	DAC D13	1
79	ADC OF	48
80	ADC D13	46
81	GND	
82	ADC D12	45
83	ADC D11	44
84	ADC D10	42
85	ADC D9	41
86	ADC D8	40
87	ADC D7	39
88	GND	
89	ADC D6	35
90	ADC D5	34
91	VccO	
92	ADC D4	33
93	ADC D3	31
94	GND	
95	ADC D2	30
96	ADC D1	29
97	ADC D0	28
98	MCU DREQCLR1 (in)	79
99	MCU DREQ1 (out)	78
100	MCU DREQCLR1 (in)	76
101	GND	
102	MCU DREQ0 (out)	75
103	MCU IOCS-	68
104	MCU WE-	63
105	MCU OE-	61
106	VccO	
107	MCU FIQ-	102
108	MCU A3	33
109	TDO - MCU PIOC5	57
110	TCK – MCU PIOC4	56
111	TMS – MCU PIOC6	59
112	MCU A2	32
113	MCU A1	31
114	GND	
115	VccO	
116	MCU D15	29
117	GND	
118	MCU D14	28
119	MCU D13	27
120	VccAUX	
121	VccINT	
122	MCU D12	25
123	MCU D11	24
124	MCU D10	21
125	MCU D9	20
126	VccO	
127	MCU D8	19
128	GCLK - ADC CLK	26
129	MCU D7	16
130	MCU D6	14
131	MCU D5	13
132	MCU D4	10
133	VccINT	
134	VccAUX	
135	MCU D3	9
136	GND	
137	MCU D2	8
138	VccO	
139	GND	
140	MCU D1	7
141	MCU D0	6
142	HSWAP_EN (high)	
143	PROG_B - MCU PIOC2	53
144	TDI - MCU PIOC3	55

Table 1. DCP-1 Rev. C XC3S400 FPGA Pinout

MCU Pin	Function	Target Pin
1	GND	
2	nc	
3	nc	
4	RESET- (JTAG ICE)	15
5	VddIO	
6	D0	141
7	D1	140
8	D2	137
9	D3	135
10	D4	132
11	GND	
12	CLKMD0 (high)	
13	D5	131
14	D6	130
15	GND	
16	D7	129
17	CLKMD1 (tie high)	
18	VddIO	
19	D8	127
20	D9	125
21	D10	124
22	VddCORE	
23	nc	
24	D11	123
25	D12	122
26	VddIO	
27	D13	119
28	D14	118
29	D15	116
30	A0	
31	A1	113
32	A2	112
33	A3	108
34	GND	
35	nc	
36	nc	
37	nc	
38	nc	
39	nc	
40	nc	
41	VddIO	
42	nc	
43	nc	
44	nc	
45	nc	
46	nc	
47	GND	
48	nc	
49	nc	
50	nc	
51	GND	
52	nc	
53	PIOC2 – FPGA PROG_B	53
54	VddIO	
55	PIOC3 – FPGA TDI	55
56	PIOC4 – FPGA TCK	110
57	PIOC5 – FPGA TDO	109
58	VddCORE	
59	PIOC6 – FPGA TMS	111
60	PIOC7 – FPGA DONE	71
61	OE-	105
62	VddIO	
63	WE-	104
64	nc	
65	nc	
66	nc	
67	nc	
68	IOCS-	103
69	GND	
70	nc	
71	nc	
72	nc	

MCU Pin	Function	Target Pin
73	nc	
74	nc	
75	DREQ0 (from FPGA)	102
76	DREQCLR0 (to FPGA)	100
77	VddIO	
78	DREQ1 (from FPGA)	99
79	DREQCLR1 (to FPGA)	98
80	nc	
81	nc	
82	PIOC0 - DAC SYNC-	6
83	PIOC 1- DAC SCLK	5
84	GND	
85	nc	
86	nc	
87	VddCORE	
88	PIOD0 - DAC DIN	4
89	PIOD1 - XMT	
90	GND	
91	VddIO	
92	PIOD2 – RED LED	
93	PIOD3 – GRN LED	
94	nc	
95	nc	
96	BSEL0 (gnd)	
97	BSEL1 – flash boot jumper	
98	PIOE5/XINT0 – CS4 (SPI)	2 5
99	PIOE6/XINT1 – CS3 (SPI)	3 3
100	PIOE7/XINT2 – CS2 (SPI)	4 1
101	PIOE8/XINT3 – CS1 (SPI)	5
102	FIQ- (from FPGA)	107
103	SCK (SPI)	6
104	SDI (SPI)	8
105	SDO (SPI)	7
106	TDI (JTAG ICE)	5
107	TDO (JTAG ICE)	13
108	TRST- (JTAG ICE)	3
109	VddIO	
110	GND	
111	nc	
112	JSEL (low)	
113	TMS (JTAG ICE)	7
114	TCK (JTAG ICE)	9/11
115	DRAME- (high)	
116	CKOE- (high)	
117	GND	
118	OSC0 – 7.3728 MHz crystal	
119	OSC1 – 7.3728 MHz crystal	
120	VddIO	
121	TEST (low)	
122	SIN – RS-232/485 RXD (plup)	1/10
123	SOUT – RS-232/485 TXD	4/12
124	AVdd	
125	Vref	
126	AIN0 (Vref)	
127	AIN1 (Vref)	
128	AIN2 – ADC input	2
129	AIN3 – USB Vbus	
130	AGND	
131	AGND	
132	GND	
133	CTS – RS-232 input	15
134	VddIO	
135	DSR – RS-232 INVALID-	11
136	DCD – RS-232 INVALID-	11
137	VddCORE	
138	DTR – RS-232 EN- (pullup)	1
139	RTS – RS-232 output	13
140	RI (low)	
141	GND	
142	PIOE3 – RS-485 RXEN-	2
143	PIOE4 – RS-485 TXEN+	3
144	PIOB6 - USB WAKEUP-	51

Table 2. DCP-1 Rev. C ML67Q5003 MCU Pinout