

Key

	Power	GND	Processor	Comms	GPIO	Expansion	Not Used	
Sam Pin	PIO	A	B	C	Extra	Pin Name	pin #	Exp
1	PD0	GTXCK				E4_STEP	64	E4_STEP
2	PD31					ESP_DATA_RDY	95	
3	VDDOUT					VDDOUT	n/a	
4	PE0					E2_STOP	96	SG_TST
5	VDDIN					VDDIN	n/a	
6	PE1					E3_STOP	97	CS6
7	PE2					E4_STOP	98	CS7
8	GND					GND	n/a	
9	ADVREF					ADVREF	n/a	
10	PE3					E5_STOP	99	CS8
11	PC0	D0	PWML0		AFE0_AD14	E6_DIR	32	E6_DIR
12	PC27	A9	TIOB4		AFE0_AD13	THERMISTOR6	59	THERMISTOR6
13	PC26	A8	TIOA4		AFE0_AD12	FAN1	58	
14	PC31	A13	TCLK5		AFE0_AD11	THERMISTOR5	63	THERMISTOR5
15	PC30	A12	TIOB5		AFE0_AD10	THERMISTOR4	62	THERMISTOR6]4
16	PC29	A11	TIOA5		AFE0_AD9	THERMISTOR3	61	THERMISTOR3
17	PC12	NCS3	TIOB8	CANRX1	AFE0_AD8	THERMISTOR2	44	
18	PC15	NCS1	PWML1	CANTX1	AFE0_AD7	THERMISTOR1	47	
19	PC13	NWAIT	PWML0	AFE0_AD6		THERMISTOR0	45	
20	PB1	PWMH1		TXD0	AFE0_AD5	SPI0_MOSI	27	SPI0_MOSI
21	PB0	PWMH0		RXD0	AFE0_AD4	SPI0_MISO	26	SPI0_MISO
22	PA20		PWML1	A16	AFE0_AD3	HEATER1	20	
23	PA19		PWML0	A15	AFE0_AD2	HEATER0	19	
24	PA18		PCK2	A14	AFE0_AD1	THERMISTOR7	18	THERMISTOR7
25	PA17		PCK1	PWMH3	AFE0_AD0	E6_STOP	17	SX1509_INT
26	PB2	CANTX0	NPCS2	CTS0	AFE1_AD0	SPI0_CS1	28	
27	PE4					ESP_RST	100	
28	PE5					ESP_EN	101	
29	VDDCORE					VDDCORE	n/a	
30	VDDIO					VDDIO	n/a	
31	PB3	CANRX0	PCK2	RTS0	AFE1_AD1	PWR_FAIL_DET1	29	
32	PA21	RXD1	PCK1		AFE1_AD2	SPI1_MISO	21	SPI1_MISO
33	VDDCORE					VDDCORE	n/a	
34	PD30					SAM_TFR_RDY	94	
35	PA7		PWMH3		XIN32	ENC_SW	7	
36	PA8		AFE0_ADTRG	WKUP5	XOUT32	EN_11+12	8	
37	PA22	TXD1	NPCS3	NCS2	AFE1_AD3	SPI1_MOSI	22	SPI1_MOSI
38	PC1	D1	PWML1		AFE1_AD4	Z_PROBE_IN	33	
39	PC2	D2	PWML2		AFE1_AD5	Z_PROBE_MOD	34	
40	PC3	D3	PWML3		AFE1_AD6	HEATER3	35	HEATER3
41	PC4	D4	NPCS1		AFE1_AD7	PWR_FAIL_DET2	36	
42	PA13	MOSI	PWMH2			MOSI	13	
43	VDDIO					VDDIO	n/a	
44	GND					GND	n/a	
45	PA16		TIOB1	PWML2	WKUP15	HEATER2	16	

46	PA23	SCK1	PWMH0	A19	PIODCCLK	SPI1_SCK	23	SPI1_SCK
47	PD27	PWML3				E6_STEP	91	E6_STEP
48	PC7	D7	TCLK6			EN_10	39	
49	PA15		TIOA1	PWML3	WKUP14	HEATER7	15	HEATER7
50	VDDCORE					VDDCORE	n/a	
51	PA14	SPCK	PWMH3		WKUP8	SPCK	14	
52	PD25	PWML1				E4_EN	89	E4_EN
53	PD26	PWML2				E5_EN	90	E5_EN
54	PC6	D6	TIOB6			ENN	38	ENN
55	PD24	PWML0				E3_EN	88	E3_EN
56	PA24	RTS1	PWMH1	A20	PIODC0	CS5	24	CS5
57	PD23	PWMH3				E2_EN	87	E2_EN
58	PC5	D5	TIOA6			HEATER4	37	HEATER4
59	PA25	CTS1	PWMH2	A23	PIODC1	DIR_11	25	DIR_11
60	PD22	PWMH2				E3_DIR	86	E3_DIR
61	GND					GND	n/a	
62	PA26	DCD1	TIOA2	MCDA2	PIODC2	MCDA2	106	
63	PD21	PWMH1				DIR_10	85	
64	PA11	NPCS0	PWMH0		WKUP7	NPCS0	11	
65	PD20	PWMH0				STEP_10	84	
66	PA10	UTXD0	NPCS2			UTXD0	10	UTXD0
67	PD19	NCS3				STEP_11	83	
68	PA12	MISO	PWMH1			MISO	12	
69	PD18	NCS1				STEP_12	82	
70	PA27	DTR1	TIOB2	MCDA3	PIODC3	MCDA3	107	
71	PD28					E2_DIR	92	E2_DIR
72	VDDIO					VDDIO	n/a	
73	PA5		NPCS3	URXD1	WKUP4	URXD1	5	
74	PD17	GTXER				E5_DIR	81	E5_DIR
75	PA9	URXD0	NPCS1	PWMFIO	WKUP6	URXD0	9	URXD0
76	PC28	A10	TCLK4			DIR_12	60	
77	PA4	TWCK0	TCLK0		WKUP3	TWCK0	4	TWCK0
78	PD16	GTX3				E4_DIR	80	E4_DIR
79	PB6				TMS	PB6/TMS	??	PB6
80	VDDIO					VDDIO	n/a	
81	VDDCORE					VDDCORE	n/a	
82	PC8	NWE	TIOA7			HEATER5	40	HEATER5
83	NRST					NRST	n/a	
84	PD14	GRXCK				X_EN	78	
85	TEST						n/a	
86	PC9	NANDOE	TIOB7			Y_EN	41	
87	PB12	PWML1			ERASE	ERASE	n/a	
88	PD13	GCOL				Z_DIR	77	
89	PB7				TCK	TCK	n/a	
90	PC10	NANDWE	TCLK7			Z_EN	42	
91	PA3	TWD0	NPCS3			TWD0	3	TWD0
92	PD12	GRX3				Y_DIR	76	
93	PA2	PWMH2		DATRG	WKUP2	Y_STOP	2	
94	PC11	NRD	TIOA8			HEATER6	43	HEATER6

95	GND					GND	n/a	
96	VDDIO					VDDIO	n/a	
97	PC14	NCS0	TCLK8			X_STOP	46	
98	PD11	GRX2				X_DIR	75	
99	PA1	PWMH1	TIOB0	A18	WKUP1	E0_DIR	1	
100	PC16	A21/NANDALE				E1_STOP	48	
101	PD10	GCRS				E0_STOP	74	
102	PA0	PWMH0	TIOA0	A17	WKUP0	FAN2		
103	PC17	A22/NANDCLE				E0_EN	49	
104	JTAGSEL					Not Used	n/a	
105	PB4	TWD1	PWMH2		TDI	TDI	n/a	
106	PD15	GTX2				PS_ON	79	
107	VDDCORE					VDDCORE	n/a	
108	PD29					Z_STOP	93	
109	PB5	TWCK1	PWML0	WKUP13	TDO	TDO	n/a	
110	PD9	GMDIO				E1_DIR	73	
111	PC18	A0	PWMH0			SPI0_CS2	50	
112	PA28	DSR1	TCLK1	MCCDA	PIODC4	MCCDA	102	
113	PD8	GMDC				Z_STEP	72	
114	PA6		PCK0	UTXD1		UTXD1	6	
115	GND					GND	n/a	
116	PA30	PWML2	NPCS2	MCDA0	WKUP11/PIODC6	MCDA0	104	
117	PC19	A1	PWMH1			SPI0_CS3	51	CS3
118	PA31	NPCS1	PCK2	MCDA1	PIODC7	MCDA1	105	
119	PD7	GRXER				Y_STEP	71	
120	PC20	A2	PWMH2			SPI0_CS4	52	CS4
121	PD6	GRX1				X_STEP	70	
122	PC21	A3	PWMH3			SD_CD	53	
123	VDDCORE					VDDCORE	n/a	
124	PC22	A4	PWML3			USB_PWR_MON	54	
125	PD5	GRX0				E0_STEP	69	
126	PD4	GRXDV				E1_STEP	68	
127	PC23	A5	TIOA3			FAN0	55	
128	PD3	GTX1				E5_STEP	67	E5_STEP
129	PA29	RI1	TCLK2	MCKK	PIODC5	MCKK	103	
130	PC24	A6	TIOB3			SPI0_CS0	56	
131	PD2	GTX0				E2_STEP	66	E2_STEP
132	PD1	GTXEN				E3_STEP	65	E3_STEP
133	PC25	A7	TCLK3			E1_EN	57	
134	VDDIO					VDDIO	n/a	
135	GND					GND	n/a	
136	PB10				DDM	DDM	n/a	
137	PB11				DDP	DDP	n/a	
138	GND					GND	n/a	
139	VDDPLL					VDDPLL	n/a	
140	PB14	NPCS1	PWMH3		DAC1	E6_EN	31	E6_EN
141	PB8				XOUT	XOUT	n/a	
142	PB9				XIN	XIN	n/a	
143	VDDIO					VDDIO	n/a	

