Date: 20Jan2017

cCARD Pinout: F28004x-120-100

HSEC Pinout: 2.13

	HSEC pin	MCU pin	MCU Usage for Std	HSEC cCARD standard	HSEC cCARD standard	MCU Usage for Std	MCU pin	HSEC pin	
	1			JTAG-EMU1	JTAG-EMU0			2	
	3	TMS	TMS	JTAG-TMS	JTAG-TRSTn			4	
	5	TCK	TCK	JTAG-TCK	JTAG-TDO	TDO	GPIO37,TDO #	6	
	7			GND	JTAG-TDI	TDI	GPIO35,TDI #	8	
Analog	9	A0, B15, C15, DACA	Analog, DACA	ADC1 (and/or DACA)	GND		PGA7NEG	10	
	11	A1, DACB	Analog, DACB	ADC1 (and/or DACB)	ADC2	Analog	B0	12	Analog
	13	PGA1NEG		GND	ADC2	Analog	B1, A10, C10, PGA7_IN *	14	
	15	A2, B6, PGA1_IN *	Analog	ADC1 (and/or CMPIN+)	GND		PGA3NEG	16	
	17	A3	Analog	ADC1	ADC2	Analog	B2, C6, PGA3_IN *	18	
	19	PGA246NEG		GND	ADC2	Analog	B3, VDAC	20	
	21	A4, B8, PGA2_IN *	Analog	ADC1 (and/or CMPIN+)	GND		PGA246NEG	22	
	23	A5	Analog	ADC1	ADC2	Analog	B4, C8, C3, PGA4_IN *	24	
	25	A6, PGA5_IN *	Analog	ADC (and/or CMPIN+)	ADC2	Analog	C0	26	
	27	A9	Analog	ADC	ADC	Analog	C1	28	
	29	PGA5NEG		GND	ADC	Analog	C2	30	
	31	C5, PGA6_IN	Analog	ADC	Rsv			32	
	33	A8 *	Analog	ADC	ADC	Analog	C4	34	
	35	PGA246NEG		GND	ADC	Analog	C14	36	
	37			ADC	GND			38	
	39			ADC	ADC			40	
	41			Rsv	ADC			42	
	43			VREFLO	Rsv			44	
	45	All VREFHIs **	VREFHI	VREFHI	GND			46	
	47			GND	5V0			48	
Digital	49	GPIO-00	PWM1A	PWM1A	PWM3A	PWM3A	GPIO-04	50	Digital
	51	GPIO-01	PWM1B	PWM1B	PWM3B	PWM3B	GPIO-05	52	
	53	GPIO-02	PWM2A	PWM2A	PWMA	PWM4A	GPIO-06	54	
	55	GPIO-03	PWM2B	PWM2B	PWMB	PWM4B	GPIO-07	56	
	57	GPIO-12	PWM7A	PWMA	PWMA or TZ1	GPIO | PWM5A	GPIO-37,TDO # @@	58	
	59	GPIO-13	PWM7B	PWMB	PWMB or TZ2	GPIO | PWM6A	GPIO-35,TDI # @	60	
	61	GPIO-14	PWM8A	PWMA	PWMA or TZ3	GPIO	GPIO-39	62	
	63	GPIO-15	PWM8B	PWMB	PWMB or TZ4	GPIO	GPIO-23 [DCDC]	64	
	65			GND	Rsv			66	
	67	GPIO-16	SPISIMOA	SPISIMO	QEPA or McBSP-MDX	QEP1A	GPIO-40	68	
	69	GPIO-17	SPISOMIA	SPISOMI	QEPB or McBSP-MDR	QEP1B	GPIO-57	70	
	71	GPIO-09	SPICLKA	SPICLK	QEPS or McBSP-MCLKX	QEP1S	GPIO-22 [DCDC]	72	
	73	GPIO-11	SPISTEA	SPISTE	QEPI or McBSP-MFSX	QEP1I	GPIO-31	74	
	75	GPIO-24 #	SPISIMOB	eCAP or SPISIMO	SCIRX/UARTRX	SCIRXA	GPIO-28	76	
	77	GPIO-25 #	SPISOMIB	eCAP or SPISOMI	SCITX/UARTTX	SCITXA	GPIO-29	78	
	79	GPIO-26 #	SPICLKB	eCAP or SPICLK	CANRX	CANRXA	GPIO-30	80	
	81	GPIO-27 #	SPISTEB	eCAP or SPISTE	CANTX	CANTXA	GPIO-32	82	
	83			GND	5V0			84	
	85	GPIO-10 @	I2CSDAA | GPIO	I2CSDA	GPIO	GPIO	GPIO-34	86	
	87	GPIO-08 @@	I2CSCLA | GPIO	I2CSCL	GPIO			88	
	89	GPIO-18 ##	GPIO	GPIO	GPIO			90	
	91			GPIO	GPIO			92	
	93			GPIO	GPIO			94	
	95			GPIO	GPIO			96	
	97			GND	5V0			98	
	99	GPIO-58	SD-D4	SD-D	QEPA	QEP2A	GPIO-24 #	100	
	101	GPIO-59	SD-C4	SD-C	QEPB	QEP2B	GPIO-25 #	102	
	103	GPIO-56	SD-D3	SD-D	QEPS			104	
	105	GPIO-33	SD-C3	SD-C	QEPI			106	
	107	GPIO-26 #	SD-D2	SD-D	GPIO or McBSP-MCLKR			108	
	109	GPIO-27 #	SD-C2	SD-C	GPIO or McBSP-MFSR			110	
	111			GND	5V0			112	
	113			Rsv	Rsv			114	
	115			Rsv	Rsv			116	
	117			Rsv	Rsv			118	
	119			Rsv	Device Reset (Active low)	XRSn	XRSn	120	
	121			GPIO	GPIO			122	
	123			GPIO	GPIO			124	
	125			GPIO	GPIO			126	
	127			GPIO	GPIO			128	
	129			GPIO	GPIO			130	
	131			GPIO	GPIO			132	
	133			GPIO	GPIO			134	
	135			GND	Rsv			136	
	137			GPIO	GPIO			138	
	139			GPIO	GPIO			140	
	141			GPIO	GPIO			142	
	143			GPIO	GPIO			144	
	145			GPIO	GPIO			146	
	147			GPIO	GPIO			148	
	149			GPIO	GPIO			150	
	151			GPIO	GPIO			152	
	153			GPIO	GPIO			154	
	155			GPIO	GPIO			156	
	157			GND	5V0			158	
	159			GPIO	GPIO			160	
	161			GPIO	GPIO			162	
	163			GPIO	GPIO			164	
	165			GPIO	GPIO			166	
	167			GPIO	GPIO			168	
	169			GPIO	GPIO			170	
	171			Rsv	Rsv			172	
	173			Rsv	Rsv			174	
	175			Rsv	Rsv			176	
	177			Rsv	Rsv			178	
	179			GND	5V0			180	

* This PGA's switch may be put into the off position to use PGA filtering. If done, some ADC channels listed will no longer go to the HSEC connector.

** Resistors may be altered to connect this HSEC pin to the MCU's VREFHI inputs

Signal can be in only one of two slots via switch

Signal goes to the XTAL (X2) by default but can be configured to come to this HSEC pin by soldering/desoldering resistors

@ Signal may be flipped with the other @ via a switch

@@ Signal may be flipped with the other @@ via a switch

[] This signal comes to the HSEC header by default, but could instead be used as the function in brackets