Robotics Cape SD-101C Pin Usage

Strawson Design - 2014

	Expansion Header P8 Pinout										
Cape Use	**PIN**	**PROC NAME**	**NAME**	**MODE0**	**MODE1**	**MODE2**	**MODE3**	**MODE4**	**MODE5**	**MODE6**	**MODE7**
GND	**1,2**						GND				
	3	R9	GPIO1_6	gpmc_ad6	mmc1_dat6				-	-	gpio1[6]
	4	T9	GPIO1_7	gpmc_ad7	mmc1_dat7				-	-	gpio1[7]
	5	R8	GPIO1_2	gpmc_ad2	mmc1_dat2				-	-	gpio1[2]
	6	T8	GPIO1_3	gpmc_ad3	mmc1_dat3				-	-	gpio1[3]
LED_RED	7	R7	TIMER4	gpmc_advn_ale		timer4			-	-	gpio2[2]
LED_GRN	8	T7	TIMER7	gpmc_oen_ren		timer7			-	-	gpio2[3]
PAUSE_BTN	9	T6	TIMER5	gpmc_be0n_cle		timer5			-	-	gpio2[5]
MODE_BTN	10	U6	TIMER6	gpmc_wen		timer6			-	-	gpio2[4]
QEP_2B	11*	R12	GPIO1_13	gpmc_ad13	lcd_data18	mmc1_dat5*	mmc2_dat1	eQEP2B_in	pr1_mii0_txd1	pr1_pru0_pru_r30_15	gpio1[13]
QEP_2A	12*	T12	GPIO1_12	gpmc_ad12	lcd_data19	mmc1_dat4*	mmc2_dat0	EQEP2A_IN	pr1_mii0_txd2	pr1_pru0_pru_r30_14	gpio1[12]
PWM_2B (Mot4)	13*	T10	EHRPWM2B	gpmc_ad9	lcd_data22	mmc1_dat1*	mmc2_dat5	ehrpwm2B	pr1_mii0_col	-	gpio0[23]
LED_4	14*	T11	GPIO0_26	gpmc_ad10	lcd_data21	mmc1_dat2*	mmc2_dat6	ehrpwm2_tripzone	pr1_mii0_txen	-	gpio0[26]
LED_2	15*	U13	GPIO1_15	gpmc_ad15	lcd_data16	mmc1_dat7*	mmc2_dat3	eQEP2_strobe	pr1_ecap0_ecap_capin_apwm_o	pr1_pru0_pru_r31_15	gpio1[15]
LED_3	16*	V13	GPIO1_14	gpmc_ad14	lcd_data17	mmc1_dat6*	mmc2_dat2	eQEP2_index	pr1_mii0_txd0	pr1_pru0_pru_r31_14	gpio1[14]
LED_1	17*	U12	GPIO0_27	gpmc_ad11	lcd_data20	mmc1_dat3*	mmc2_dat7	ehrpwm0_synco	pr1_mii0_txd3	-	gpio0[27]
	18	V12	GPIO2_1	gpmc_clk_mux0	lcd_memory_clk	gpmc_wait1	mmc2_clk		pr1_mdio_mdclk	mcasp0_fsr	gpio2[1]
PWM_2A (Mot3)	19*	U10	EHRPWM2A	gpmc_ad8	lcd_data23	mmc1_dat0*	mmc2_dat4	ehrpwm2A	pr1_mii_mt0_clk	-	gpio0[22]
	20*	V9	GPIO1_31	gpmc_csn2	gpmc_be1n	mmc1_cmd*		pr1_edio_data_out7	pr1_pru1_pru_r30_13	pr1_pru1_pru_r31_13	gpio1[31]
	21*	U9	GPIO1_30	gpmc_csn1	gpmc_clk	mmc1_clk*		pr1_edio_data_out6	pr1_pru1_pru_r30_12	pr1_pru1_pru_r31_12	gpio1[30]
	22	V8	GPIO1_5	gpmc_ad5	mmc1_dat5			-	-	-	gpio1[5]
	23	U8	GPIO1_4	gpmc_ad4	mmc1_dat4			-	-	-	gpio1[4]
	24	V7	GPIO1_1	gpmc_ad1	mmc1_dat1			-	-	-	gpio1[1]
	25	U7	GPIO1_0	gpmc_ad0	mmc1_dat0			-	-	-	gpio1[0]
	26	V6	GPIO1_29	gpmc_csn0				-	-	-	gpio1[29]
SERVO_1	27*	U5	GPIO2_22	lcd_vsync*	gpmc_a8			pr1_edio_data_out2	pr1_pru1_pru_r30_8	pr1_pru1_pru_r31_8	gpio2[22]
SERVO_2	28*	V5	GPIO2_24	lcd_pclk*	gpmc_a10			pr1_edio_data_out4	pr1_pru1_pru_r30_10	pr1_pru1_pru_r31_10	gpio2[24]
SERVO_3	29*	R5	GPIO2_23	lcd_hsync*	gpmc_a9			pr1_edio_data_out3	pr1_pru1_pru_r30_9	pr1_pru1_pru_r31_9	gpio2[23]
SERVO_4	30*	R6	GPIO2_25	lcd_ac_bias_en*	gpmc_a11			pr1_edio_data_out5	pr1_pru1_pru_r30_11	pr1_pru1_pru_r31_11	gpio2[25]
	31*	V4	UART5_CTSN	lcd_data14*	gpmc_a18	eQEP1_index	mcasp0_axr1	uart5_rxd	pr1_mii0_rxd3	uart5_ctsn	gpio0[10]
	32*	T5	UART5_RTSN	lcd_data15*	gpmc_a19	eQEP1_strobe	mcasp0_ahclkx	mcasp0_axr3	pr1_mii0_rxdv	uart5_rtsn	gpio0[11]
QEP_1B	33*	V3	UART4_RTSN	lcd_data13*	gpmc_a17	eQEP1B_in	mcasp0_fsr	mcasp0_axr3	pr1_mii0_rxer	uart4_rtsn	gpio0[9]
	34*	U4	UART3_RTSN	lcd_data11*	gpmc_a15	ehrpwm1B	mcasp0_ahclkr	mcasp0_axr2	pr1_mii0_rxd0	uart3_rtsn	gpio2[17]
QEP_1A	35*	V2	UART4_CTSN	lcd_data12*	gpmc_a16	eQEP1A_in	mcasp0_aclkr	mcasp0_axr2	pr1_mii0_rxlink	uart4_ctsn	gpio0[8]
	36*	U3	UART3_CTSN	lcd_data10*	gpmc_a14	ehrpwm1A	mcasp0_axr0	-	pr1_mii0_rxd1	uart3_ctsn	gpio2[16]
	37*	U1	UART5_TXD	lcd_data8*	gpmc_a12	ehrpwm1_tripzone	mcasp0_aclkx	uart5_txd	pr1_mii0_rxd3	uart2_ctsn	gpio2[14]
MDIR_2B	38*	U2	UART5_RXD	lcd_data9*	gpmc_a13	ehrpwm0_synco	mcasp0_fsx	uart5_rxd	pr1_mii0_rxd2	uart2_rtsn	gpio2[15]
SERVO_5	39*	T3	GPIO2_12	lcd_data6*	gpmc_a6		eQEP2_index	pr1_edio_data_out6	pr1_pru1_pru_r30_6	pr1_pru1_pru_r31_6	gpio2[12]
SERVO_6	40*	T4	GPIO2_13	lcd_data7*	gpmc_a7		eQEP2_strobe	pr1_edio_data_out7	pr1_pru1_pru_r30_7	pr1_pru1_pru_r31_7	gpio2[13]
SERVO_7	41*	T1	GPIO2_10	lcd_data4*	gpmc_a4		eQEP2A_in	-	pr1_pru1_pru_r30_4	pr1_pru1_pru_r31_4	gpio2[10]
SERVO_8	42*	T2	GPIO2_11	lcd_data5*	gpmc_a5		eQEP2B_in	-	pr1_pru1_pru_r30_5	pr1_pru1_pru_r31_5	gpio2[11]
MDIR_3B	43*	R3	GPIO2_8	lcd_data2*	gpmc_a2		ehrpwm2_tripzone	-	pr1_pru1_pru_r30_2	pr1_pru1_pru_r31_2	gpio2[8]
MDIR_3A	44*	R4	GPIO2_9	lcd_data3*	gpmc_a3		ehrpwm0_synco	-	pr1_pru1_pru_r30_3	pr1_pru1_pru_r31_3	gpio2[9]
MDIR_4A	45*	R1	GPIO2_6	lcd_data0*	gpmc_a0		ehrpwm2A	-	pr1_pru1_pru_r30_0	pr1_pru1_pru_r31_0	gpio2[6]
MDIR_4B	46*	R2	GPIO2_7	lcd_data1*	gpmc_a1		ehrpwm2B	-	pr1_pru1_pru_r30_1	pr1_pru1_pru_r31_1	gpio2[7]

	Expansion Header P9 Pinout										
Cape Use	**PIN**	**PROC NAME**	**NAME**	**MODE0**	**MODE1**	**MODE2**	**MODE3**	**MODE4**	**MODE5**	**MODE6**	**MODE7**
GND	**1,2**			**GND**							
3.3V	**3,4**			**3.3V**							
5.0V	**5,6**			**VDD_5V**							
	7,8			**SYS_5V**							
	9			**PWR_BUT**							
	10	A10		**Reset Out**							
UART4_RX (dsm2)	**11**	T17	UART4_RXD	gpmc_wait0	mii2_crs	gpmc_csn4	rmii2_crs_dv	mmc1_sdcd	pr1_mii1_col	uart4_rxd	gpio0[30]
MDIR_1A	**12**	U18	GPIO1_28	gpmc_be1n	mii2_col	gpmc_csn6	mmc2_dat3	gpmc_dir	pr1_mii1_rxlink	mcasp0_aclkr	gpio1[28]
MDIR_1B	**13**	U17	UART4_TXD	gpmc_wpn	mii2_rxerr	gpmc_csn5	rmii2_rxerr	mmc2_sdcd	pr1_mii1_txen	uart4_txd	gpio0[31]
PWM_1A (Mot 1)	**14**	U14	EHRPWM1A	gpmc_a2	mii2_txd3	rgmii2_td3	mmc2_dat1	gpmc_a18	pr1_mii1_txd2	ehrpwm1A	gpio1[18]
MDIR_2A	**15**	R13	GPIO1_16	gpmc_a0	gmii2_txen	rmii2_tctl	mii2_txen	gpmc_a16	pr1_mii_mt1_clk	ehrpwm1_tripzone_input	gpio1[16]
PWM_1B (Mot 2)	**16**	T14	EHRPWM1B	gpmc_a3	mii2_txd2	rgmii2_td2	mmc2_dat2	gpmc_a19	pr1_mii1_txd1	ehrpwm1B	f
I2C1_SCL (external)	**17**	A16	I2C1_SCL	spi0_cs0	mmc2_sdwp	I2C1_SCL	ehrpwm0_synci		pr1_edio_data_in1	pr1_edio_data_out1	gpio0[5]
I2C1_SDA (external)	**18**	B16	I2C1_SDA	spi0_d1	mmc1_sdwp	I2C1_SDA	ehrpwm0_tripzone		pr1_edio_data_in0	pr1_edio_data_out0	gpio0[4]
I2C2_SCL (internal)	**19**	D17	I2C2_SCL	uart1_rtsn	timer5	dcan0_rx	I2C2_SCL	spi1_cs1	pr1_uart0_rts_n	pr1_edc_latch1_in	gpio0[13]
I2C2_SDA (internal)	**20**	D18	I2C2_SDA	uart1_ctsn	timer6	dcan0_tx	I2C2_SDA	spi1_cs0	pr1_uart0_cts_n	pr1_edc_latch0_in	gpio0[12]
UART2_TX (GPS)	**21**	B17	UART2_TXD	spi0_d0	uart2_txd	I2C2_SCL	ehrpwm0B		pr1_edio_latch_in	EMU3	gpio0[3]
UART2_RX (GPS)	**22**	A17	UART2_RXD	spi0_sclk	uart2_rxd	I2C2_SDA	ehrpwm0A		pr1_edio_sof	EMU2	gpio0[2]
SPI1_SS2	**23**	V14	GPIO1_17	gpmc_a1	gmii2_rxdv	rgmii2_rxdv	mmc2_dat0	gpmc_a17	pr1_mii1_txd3	ehrpwm0_synco	gpio1[17]
CAN1_RX	**24**	D15	UART1_TXD	uart1_txd	mmc2_sdwp	dcan1_rx	I2C1_SCL		pr1_uart0_txd	pr1_pru0_pru_r31_16	gpio0[15]
IMU-INT	**25**	A14	GPIO3_21	mcasp0_ahclkx	eQEP0_strobe	mcasp0_axr3	mcasp1_axr1	EMU4_mux2	pr1_pru0_pru_r30_7	pr1_pru0_pru_r31_7	gpio3[21]
CAN1_TX	**26**	D16	UART1_RXD	uart1_rxd	mmc1_sdwp	dcan1_tx	I2C1_SDA		pr1_uart0_rxd	pr1_pru1_pru_r31_16	gpio0[14]
QEP_0B	**27**	C13	GPIO3_19	mcasp0_fsr	eQEP0B_in	mcasp0_axr3	mcasp1_fsx	EMU2_mux2	pr1_pru0_pru_r30_5	pr1_pru0_pru_r31_5	gpio3[19]
SPI1_SS1	**28**	C12	SPI1_CS0	mcasp0_ahclkr	ehrpwm0_synci	mcasp0_axr2	spi1_cs0	eCAP2_in_PWM2_out	pr1_pru0_pru_r30_3	pr1_pru0_pru_r31_3	gpio3[17]
SPI1_MISO	**29**	B13	SPI1_D0	mcasp0_fsx	ehrpwm0B		spi1_d0	mmc1_sdcd_mux1	pr1_pru0_pru_r30_1	pr1_pru0_pru_r31_1	gpio3[15]
SPI1_MOSI	**30**	D12	SPI1_D1	mcasp0_axr0	ehrpwm0_tripzone		spi1_d1	mmc2_sdcd_mux1	pr1_pru0_pru_r30_2	pr1_pru0_pru_r31_2	gpio3[16]
SPI1_SCK	**31**	A13	SPI1_SCLK	mcasp0_aclkx	ehrpwm0A		spi1_sclk	mmc0_sdcd_mux1	pr1_pru0_pru_r30_0	pr1_pru0_pru_r31_0	gpio3[14]
VDD_ADC	**32**		VADC	VADC							
	33	C8	AIN4	AIN4							
GND	**34**		AGND	AGND							
V_DIV_BAT	**35**	A8	AIN6	AIN6							
V_DIV_DC	**36**	B8	AIN5	AIN5							
AIN2	**37**	B7	AIN2	AIN2							
AIN3	**38**	A7	AIN3	AIN3							
AIN0	**39**	B6	AIN0	AIN0							
AIN1	**40**	C7	AIN1	AIN1							
MOT_STBY	**41#**	D14		xdma_event_intr1		tclkin	clkout2	timer7_mux1	EMU3_mux0		gpio0[20]
		D13		mcasp0_axr1	eQEP0_index		Mcasp1_axr0	emu3			gpio3[20]
QEP_0A	42@	C18		eCAP0_in_PWM0_out	uart3_txd	spi1_cs1	pr1_ecap0_ecap	spi1_sclk	xdma_event_intr2		gpio0[7]
							_capin_apwm_o				
		B12		Mcasp0_aclkr	eQEP0A_in	Mcaspo_axr2	Mcasp1_aclkx				gpio3[18]
GND	43-46	**GND**									