Robotics Cape Pin Usage

Strawson Design - 2013

	Expansion Header P8 Pinout											
Cape Use	**PIN**	**PROC NAME**	**NAME**	**MODE0**	**MODE1**	**MODE2**	**MODE3**	**MODE4**	**MODE6**	**MODE7**	**PRU**	**RESTRICTED**
GND	1,2					GND						
	3	R9	GPIO1_6	gpmc_ad6	mmc1_dat6					gpio1[6]		eMMC
	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_GRN	7	R7	TIMER4	gpmc_advn_ale		timer4				gpio2[2]		
LED_RED	8	T7	TIMER7	gpmc_oen_ren		timer7				gpio2[3]	PRU0	
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		gpio1[13]		
QEP_2A	12*	T12	GPIO1_12	gpmc_ad12	lcd_data19	mmc1_dat4*	mmc2_dat0	EQEP2A_IN		gpio1[12]		
PWM_2B	13*	T10	EHRPWM2B	gpmc_ad9	lcd_data22	mmc1_dat1*	mmc2_dat5	ehrpwm2B		gpio0[23]		
LED_1	14*	T11	GPIO0_26	gpmc_ad10	lcd_data21	mmc1_dat2*	mmc2_dat6	ehrpwm2_tripzone		gpio0[26]		
LED_2	15*	U13	GPIO1_15	gpmc_ad15	lcd_data16	mmc1_dat7*	mmc2_dat3	eQEP2_strobe		gpio1[15]	PRU0	
LED_3	16*	V13	GPIO1_14	gpmc_ad14	lcd_data17	mmc1_dat6*	mmc2_dat2	eQEP2_index		gpio1[14]		
LED_4	17*	U12	GPIO0_27	gpmc_ad11	lcd_data20	mmc1_dat3*	mmc2_dat7	ehrpwm0_synco		gpio0[27]		
	18	V12	GPIO2_1	gpmc_clk_mux0	lcd_memory_clk	gpmc_wait1	mmc2_clk		mcasp0_fsr	gpio2[1]		
PWM_2A	19*	U10	EHRPWM2A	gpmc_ad8	lcd_data23	mmc1_dat0*	mmc2_dat4	ehrpwm2A		gpio0[22]		
SERVO_1	20*	V9	GPIO1_31	gpmc_csn2	gpmc_be1n	mmc1_cmd*				gpio1[31]	PRU1	eMMC
SERVO_2	21*	U9	GPIO1_30	gpmc_csn1	gpmc_clk	mmc1_clk*				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_3	27*	U5	GPIO2_22	lcd_vsync*	gpmc_a8					gpio2[22]	PRU1	HDMI
SERVO_4	28*	V5	GPIO2_24	lcd_pclk*	gpmc_a10					gpio2[24]		
SERVO_5	29*	R5	GPIO2_23	lcd_hsync*	gpmc_a9					gpio2[23]		
SERVO_6	30*	R6	GPIO2_25	lcd_ac_bias_en*	gpmc_a11					gpio2[25]		
	31*	V4	UART5_CTSN	lcd_data14*	gpmc_a18	eQEP1_index	mcasp0_axr1	uart5_rxd	uart5_ctsn	gpio0[10]		
	32*	T5	UART5_RTSN	lcd_data15*	gpmc_a19	eQEP1_strobe	mcasp0_ahclkx	mcasp0_axr3	uart5_rtsn	gpio0[11]		
QEP_1B	33*	V3	UART4_RTSN	lcd_data13*	gpmc_a17	eQEP1B_in	mcasp0_fsr	mcasp0_axr3	uart4_rtsn	gpio0[9]		
PWM_1B (Mot3)	34*	U4	UART3_RTSN	lcd_data11*	gpmc_a15	ehrpwm1B	mcasp0_ahclkr	mcasp0_axr2	uart3_rtsn	gpio2[17]		
QEP1A	35*	V2	UART4_CTSN	lcd_data12*	gpmc_a16	eQEP1A_in	mcasp0_aclkr	mcasp0_axr2	uart4_ctsn	gpio0[8]		
PWM_1A (Mot4)	36*	U3	UART3_CTSN	lcd_data10*	gpmc_a14	ehrpwm1A	mcasp0_axr0		uart3_ctsn	gpio2[16]		
MDIR_4A	37*	U1	UART5_TXD	lcd_data8*	gpmc_a12	ehrpwm1_tripzone	mcasp0_aclkx	uart5_txd	uart2_ctsn	gpio2[14]		
MDIR_4B	38*	U2	UART5_RXD	lcd_data9*	gpmc_a13	ehrpwm0_synco	mcasp0_fsx	uart5_rxd	uart2_rtsn	gpio2[15]		
SERVO_7	39*	T3	GPIO2_12	lcd_data6*	gpmc_a6		eQEP2_index			gpio2[12]		
SERVO_8	40*	T4	GPIO2_13	lcd_data7*	gpmc_a7		eQEP2_strobe	pr1_edio_data_out7		gpio2[13]		
MDIR_3A	41*	T1	GPIO2_10	lcd_data4*	gpmc_a4		eQEP2A_in			gpio2[10]		
MDIR_3B	42*	T2	GPIO2_11	lcd_data5*	gpmc_a5		eQEP2B_in			gpio2[11]	PRU1	
MDIR_2A	43*	R3	GPIO2_8	lcd_data2*	gpmc_a2		ehrpwm2_tripzone			gpio2[8]		
MDIR_2B	44*	R4	GPIO2_9	lcd_data3*	gpmc_a3		ehrpwm0_synco			gpio2[9]		
MDIR_1A	45*	R1	GPIO2_6	lcd_data0*	gpmc_a0		ehrpwm2A			gpio2[6]		
MDIR_1B	46*	R2	GPIO2_7	lcd_data1*	gpmc_a1		ehrpwm2B			gpio2[7]		

	Expansion Header P9 Pinout									
Cape Use	**PIN**	**PROC NAME**	**MODE0**	**MODE1**	**MODE2**	**MODE3**	**MODE4**	**MODE6**	**MODE7**	**PRU**
GND	**1,2**					**GND**				
3.3V	**3,4**					**DC_3.3V**				
5.0V	**5,6**					**VDD_5V**				
	7,8					**SYS_5V**				
	9					**PWR_BUT**				
	10	A10				**RESET_OUT**				
UART4_RX (dsm2)	**11**	T17	gpmc_wait0	mii2_crs	gpmc_csn4	rmii2_crs_dv	mmc1_sdcd	uart4_rxd_mux2	gpio0[30]	
	12	U18	gpmc_be1n	mii2_col	gpmc_csn6	mmc2_dat3	gpmc_dir	mcasp0_aclkr_mux3	gpio1[28]	
	13	U17	gpmc_wpn	mii2_rxerr	gpmc_csn5	rmii2_rxerr	mmc2_sdcd	uart4_txd_mux2	gpio0[31]	
	14	U14	gpmc_a2	mii2_txd3	rgmii2_td3	mmc2_dat1	gpmc_a18	ehrpwm1A_mux1	gpio1[18]	
	15	R13	gpmc_a0	gmii2_txen	rmii2_tctl	mii2_txen	gpmc_a16	ehrpwm1_tripzone	gpio1[16]	
MOT_STBY	**16**	T14	gpmc_a3	mii2_txd2	rgmii2_td2	mmc2_dat2	gpmc_a19	ehrpwm1B_mux1	gpio1[19]	
I2C1_SCL (external)	**17**	A16	spi0_cs0	mmc2_sdwp	I2C1_SCL	ehrpwm0_synci			gpio0[5]	
I2C1_SDA (external)	**18**	B16	spi0_d1	mmc1_sdwp	I2C1_SDA	ehrpwm0_tripzone			gpio0[4]	
I2C2_SCL (internal)	19	D17	uart1_rtsn	timer5	dcan0_rx	I2C2_SCL	spi1_cs1		gpio0[13]	
I2C2_SDA (internal)	20	D18	uart1_ctsn	timer6	dcan0_tx	I2C2_SDA	spi1_cs0		gpio0[12]	
UART2_TX (GPS)	**21**	B17	spi0_d0	uart2_txd	I2C2_SCL	ehrpwm0B		EMU3_mux1	gpio0[3]	
UART2_RX (GPS)	**22**	A17	spi0_sclk	uart2_rxd	I2C2_SDA	ehrpwm0A		EMU2_mux1	gpio0[2]	
SPI1_SS2	**23**	V14	gpmc_a1	gmii2_rxdv	rgmii2_rxdv	mmc2_dat0	gpmc_a17	ehrpwm0_synco	gpio1[17]	
CAN1_RX	**24**	D15	uart1_txd	mmc2_sdwp	dcan1_rx	I2C1_SCL			gpio0[15]	PRU0
IMU-INT	**25**	A14	mcasp0_ahclkx	eQEP0_strobe	mcasp0_axr3	mcasp1_axr1	EMU4_mux2		gpio3[21]	
CAN1_TX	**26**	D16	uart1_rxd	mmc1_sdwp	dcan1_tx	I2C1_SDA			gpio0[14]	PRU1
QEP_0B	**27**	C13	mcasp0_fsr	eQEP0B_in	mcasp0_axr3	mcasp1_fsx	EMU2_mux2		gpio3[19]	
SPI1_SS1	**28**	C12	mcasp0_ahclkr	ehrpwm0_synci	mcasp0_axr2	spi1_cs0	eCAP2_in_PWM2_out		gpio3[17]	
SPI1_MO	**29**	B13	mcasp0_fsx	ehrpwm0B		spi1_d0	mmc1_sdcd_mux1		gpio3[15]	PRU0
SPI1_MI	**30**	D12	mcasp0_axr0	ehrpwm0_tripzone		spi1_d1	mmc2_sdcd_mux1		gpio3[16]	
SPI1_SCK	**31**	A13	mcasp0_aclkx	ehrpwm0A		spi1_sclk	mmc0_sdcd_mux1		gpio3[14]	
	32					VADC				
	33	C8				AIN4				
	34					AGND				
V_DIV_BAT	**35**	A8				AIN6				
V_DIV_DC	**36**	B8				AIN5				
	37	B7				AIN2				
	38	A7				AIN3				
	39	B6				AIN0				
	40	C7				AIN1				
MDIR_1A	**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_capin_apwm_o	spi1_sclk	xdma_event_intr2	gpio0[7]	
		B12	Mcasp0_aclkr	eQEP0A_in	Mcaspo_axr2	Mcasp1_aclkx			gpio3[18]	
GND	43-46					**GND**				