Beaglebone Black P9 Header

Head_pin	$PINS	ADDR/OFFSET	Name	GPIO NO.	Mode7	Mode6	Mode5	Mode4	Mode3	Mode2	Mode1	Mode0	PIN	Notes
P9_01			GND											Ground
P9_02			GND											Ground
P9_03			DC_3.3V											250mA Max Current
P9_04			DC_3.3V											250mA Max Current
P9_05			VDD_5V											1A Max Current (only if DC jack powered)
P9_06			VDD_5V											1A Max Current (only if DC jack powered)
P9_07			SYS_5V											250mA Max Current
P9_08			SYS_5V											250mA Max Current
P9_09			PWR_BUT											Has a 5V Level (pulled up by TPS65217C)
P9_10			SYS_RESETn									RESET_OUT	A10	
P9_11	28	0x870/070	UART4_RXD	30	gpio0[30]	uart4_rxd_mux2		mmc1_sdcd	rmii2_crs_dv	gpmc_csn4	mii2_crs	gpmc_wait0	T17	NB: GPIOs limit current to 4-6mA output
P9_12	30	0x878/078	GPIO1_28	60	gpio1[28]	mcasp0_aclkr_mux3		gpmc_dir	mmc2_dat3	gpmc_csn6	mii2_col	gpmc_be1n	U18	and approx. 8mA on input.
P9_13	29	0x874/074	UART4_TXD	31	gpio0[31]	uart4_txd_mux2		mmc2_sdcd	rmii2_rxerr	gpmc_csn5	mii2_rxerr	gpmc_wpn	U17	
P9_14	18	0x848/048	EHRPWM1A	50	gpio1[18]	ehrpwm1A_mux1		gpmc_a18	mmc2_dat1	rgmii2_td3	mii2_txd3	gpmc_a2	U14	
P9_15	16	0x840/040	GPIO1_16	48	gpio1[16]	ehrpwm1_tripzone_input		gpmc_a16	mii2_txen	rmii2_tctl	gmii2_txen	gpmc_a0	R13	
P9_16	19	0x84c/04c	EHRPWM1B	51	gpio1[19]	ehrpwm1B_mux1		gpmc_a19	mmc2_dat2	rgmii2_td2	mii2_txd2	gpmc_a3	T14	
P9_17	87	0x95c/15c	I2C1_SCL	5	gpio0[5]			pr1_uart0_txd	ehrpwm0_synci	I2C1_SCL	mmc2_sdwp	spi0_cs0	A16	
P9_18	86	0x958/158	I2C1_SDA	4	gpio0[4]			pr1_uart0_rxd	ehrpwm0_tripzone	I2C1_SDA	mmc1_sdwp	spi0_d1	B16	
P9_19	95	0x97c/17c	I2C2_SCL	13	gpio0[13]		pr1_uart0_rts_n	spi1_cs1	I2C2_SCL	dcan0_rx	timer5	uart1_rtsn	D17	Allocated (Group: pinmux_i2c2_pins)
P9_20	94	0x978/178	I2C2_SDA	12	gpio0[12]		pr1_uart0_cts_n	spi1_cs0	I2C2_SDA	dcan0_tx	timer6	uart1_ctsn	D18	Allocated (Group: pinmux_i2c2_pins)
P9_21	85	0x954/154	UART2_TXD	3	gpio0[3]	EMU3_mux1		pr1_uart0_rts_n	ehrpwm0B	I2C2_SCL	uart2_txd	spi0_d0	B17	
P9_22	84	0x950/150	UART2_RXD	2	gpio0[2]	EMU2_mux1		pr1_uart0_cts_n	ehrpwm0A	I2C2_SDA	uart2_rxd	spi0_sclk	A17	
P9_23	17	0x844/044	GPIO1_17	49	gpio1[17]	ehrpwm0_synco		gpmc_a17	mmc2_dat0	rgmii2_rxdv	gmii2_rxdv	gpmc_a1	V14	
P9_24	97	0x984/184	UART1_TXD	15	gpio0[15]	pr1_pru0_pru_r31_16	pr1_uart0_txd		I2C1_SCL	dcan1_rx	mmc2_sdwp	uart1_txd	D15	
P9_25	107	0x9ac/1ac	GPIO3_21	117	gpio3[21]	pr1_pru0_pru_r31_7	pr1_pru0_pru_r30_7	EMU4_mux2	mcasp1_axr1	mcasp0_axr3	eQEP0_strobe	mcasp0_ahclkx	A14	Allocated (Group: mcasp0_pins)
P9_26	96	0x980/180	UART1_RXD	14	gpio0[14]	pr1_pru1_pru_r31_16	pr1_uart0_rxd		I2C1_SDA	dcan1_tx	mmc1_sdwp	uart1_rxd	D16	
P9_27	105	0x9a4/1a4	GPIO3_19	115	gpio3[19]	pr1_pru0_pru_r31_5	pr1_pru0_pru_r30_5	EMU2_mux2	mcasp1_fsx	mcasp0_axr3	eQEP0B_in	mcasp0_fsr	C13	
P9_28	103	0x99c/19c	SPI1_CS0	113	gpio3[17]	pr1_pru0_pru_r31_3	pr1_pru0_pru_r30_3	eCAP2_in_PWM2_out	spi1_cs0	mcasp0_axr2	ehrpwm0_synci	mcasp0_ahclkr	C12	Allocated (Group: mcasp0_pins)
P9_29	101	0x994/194	SPI1_D0	111	gpio3[15]	pr1_pru0_pru_r31_1	pr1_pru0_pru_r30_1	mmc1_sdcd_mux1	spi1_d0		ehrpwm0B	mcasp0_fsx	B13	Allocated (Group: mcasp0_pins)
P9_30	102	0x998/198	SPI1_D1	112	gpio3[16]	pr1_pru0_pru_r31_2	pr1_pru0_pru_r30_2	mmc2_sdcd_mux1	spi1_d1		ehrpwm0_tripzone	mcasp0_axr0	D12	Allocated? Mcasp0_pins? Check...
P9_31	100	0x990/190	SPI1_SCLK	110	gpio3[14]	pr1_pru0_pru_r31_0	pr1_pru0_pru_r30_0	mmc0_sdcd_mux1	spi1_sclk		ehrpwm0A	mcasp0_aclkx	A13	Allocated (Group: mcasp0_pins)
P9_32			VADC											Voltage Reference for ADC (NB: 1.8V)
P9_33			AIN4										C8	NB: 1.8V tolerant
P9_34			AGND											Ground for ADC
P9_35			AIN6										A8	NB: 1.8V tolerant
P9_36			AIN5										B8	NB: 1.8V tolerant
P9_37			AIN2										B7	NB: 1.8V tolerant
P9_38			AIN3										A7	NB: 1.8V tolerant
P9_39			AIN0										B6	NB: 1.8V tolerant
P9_40			AIN1										C7	NB: 1.8V tolerant
P9_41A	109	0x9b4/1b4	CLKOUT2	20	gpio0[20]	EMU3_mux0	pr1_pru0_pru_r31_16	timer7_mux1	clkout2	tclkin		xdma_event_intr1	D14	Both signals are connected to P21 of P11
P9_41B		0x9a8/1a8	GPIO3_20	116	gpio3[20]	pr1_pru0_pru_r31_6	pr1_pru0_pru_r30_6	emu3	Mcasp1_axr0		eQEP0_index	mcasp0_axr1	D13	Both signals are connected to P21 of P11
P9_42A	89	0x964/164	GPIO0_7	7	gpio0[7]	xdma_event_intr2	mmc0_sdwp	spi1_sclk	pr1_ecap0_ecap_capin_apwm_o	spi1_cs1	uart3_txd	eCAP0_in_PWM0_out	C18	Both signals are connected to P22 of P11
P9_42B		0x9a0/1a0	GPIO3_18	114	gpio3[18]	pr1_pru0_pru_r31_4	pr1_pru0_pru_r30_4		Mcasp1_aclkx	Mcaspo_axr2	eQEP0A_in	Mcasp0_aclkr	B12	Allocated (Group:mcasp0_pins)
P9_43			GND											- See Pg.50 of the SRM
P9_44			GND											Ground
P9_45			GND											Ground
P9_46			GND											Ground
														For updates see: www.derekmolloy.ie
P9 Header	cat $PINS	ADDR +	Name	GPIO NO.	Mode 7						Mode 1	Mode 0	CPU	Notes
	Allocated	44e10000		(Mode 7)										Please e-mail me directly at:
		Offset from:												derek@derekmolloy.ie
		44e10800												if you notice a mistake
														Thanks Frank for the PRU work!

GPIO Settings				
Bit 6	Bit 5	Bit 4	Bit 3	Bit 2,1,0
Slew Control	Receiver Active	Pullup/Pulldown	Enable Pullup/Pulldown	Mux Mode
0 Fast	0 Disable	0 Pulldown select	0 Enabled	000 Mode 0 to
1 Slow	1 Enable	1 Pullup select	1 Disabled	111 Mode 7

```
e.g. OUTPUT GPIO(mode7) 0x07 pulldown, 0x17 pullup, 0x?f no pullup/down
e.g. INPUT GPIO(mode7) 0x27 pulldown, 0x37 pullup, 0x?f no pullup/down
```