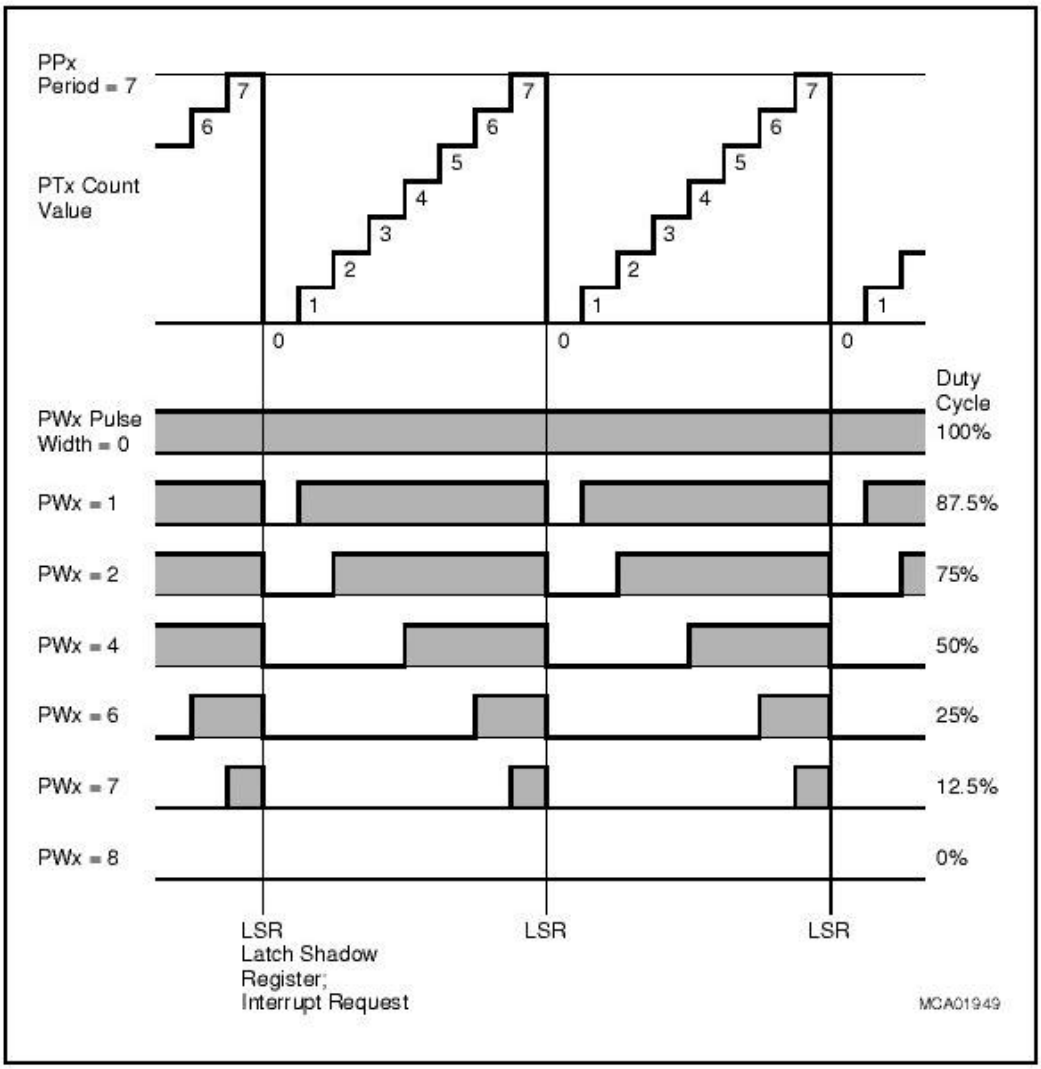
Appendix B: Pinouts and Tables

1. The KitCON Connector

3.2 The kitCON-Connector

Supply Voltage	PIN 1	VCC	2	VCC	3	GND	4	GND
Data-Bus	5	D0	6	D2	7	D4	8	D6
	9	D1	10	D3	11	D5	12	D7
	13	D8	14	D10	15	D12	16	D14
	17	D9	18	D11	19	D13	20	D15
Address-Bus	21	A0	22	A2	23	A4	24	A6
	25	A1	26	A3	27	A5	28	A7
	29	A8	30	A10	31	A12	32	A14
	33	A9	34	A11	35	A13	36	A15
	37	A16	38	A18	39	A20/RXDC1	40	A22/TXDC0
	41	A17	42	A19	43	A21/RXDC0	44	A23/TXDC1
Control-Signals	45	/RD-U	46	/RD-U	47	/RESO-U	48	/RES-U
	49	/WRL	50	ALE	51	/EA	52	/NMI-U
	53	P6.0/CS0	54	P6.2/CS2	55	P6.4/CS4	56	P6.6
	57	P6.1/CS1	58	P6.3/CS3	59	/HLD-U	60	P6.7
Special Purose	61	VREF	62	VGND	63	P2.8	64	
	65	VREF	66	VGND	67	VPP	68	
Analog Input	69	P5.0	70	P5.2	71	P5.4	72	P5.6
	73	P5.1	74	P5.3	75	P5.5	76	P5.7
	77	P5.8	78	P5.10	79	P5.12	80	P5.14
	81	P5.9	82	P5.11	83	P5.13	84	P5.15
Digital-Port P2	85	P2.0	86	P2.2	87	P2.4	88	P2.6
	89	P2.1	90	P2.3	91	P2.5	92	P2.7
	93	P2.8	94	P2.10	95	P2.12	96	P2.14
	97	P2.9	98	P2.11	99	P2.13	100	P2.15
Digital-Port P3	101	P3.0	102	P3.2	103	P3.4	104	P3.6
	105	P3.1	106	P3.3	107	P3.5	108	P3.7
	109	P3.8	110	P3.10/TXD0	111	/WRH	112	/RDY-U
	113	P3.9	114	P3.11/RXD0	115	P3.13	116	P3.15
Digital-Port P7	117	P7.0	118	P7.2	119	P7.4	120	P7.6
	121	P7.1	122	P7.3	123	P7.5	124	P7.7
Digital-Port P8	125	P8.0	126	P8.2	127	P8.4	128	P8.6
	129	P8.1	130	P8.3	131	P8.5	132	P8.7
	133		134		135		136	
	137		138		139		140	
	141		142		143		144	
	145		146		147		148	
Supply Voltage	149	VCC	150	VCC	151	GND	152	GND

2. PWM Module



Inp.Clk. (f_{CPU}/x) (Counter resol.)	PWM Mode	8-bit PWM Resolution	10-bit PWM Resolution	12-bit PWM Resolution	14-bit PWM Resolution	16-bit PWM Resolution
20 MHz/1	0	78.13 KHz	19.53 KHz	4.88 KHz	1.22 KHz	305.2 Hz
(50 ns)	1	39.06 KHz	9.77 KHz	2.44 KHz	610.4 Hz	152.6 Hz
20 MHz/64	0	1.22 KHz	305.2 Hz	76.29 Hz	19.07 Hz	4.77 Hz
(3.2 µs)	1	610.4 Hz	152.6 Hz	38.15 Hz	9.54 Hz	2.38 Hz

PWMCON0
PWM Control Register 0 **SFR ($FF30_H/98_H$)** **Reset value: 0000_H**

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
PIR 3	PIR 2	PIR 1	PIR 0	PIE 3	PIE 2	PIE 1	PIE 0	PTI 3	PTI 2	PTI 1	PTI 0	PTR 3	PTR 2	PTR 1	PTR 0
rwh	rwh	rwh	rwh	rw	rw	rw	rw	rw	rw	rw	rw	rwh	rwh	rw	rw

Bit	Function
PTRx	**PWM Timer x Run Control Bit** 0: Timer PTx is disconnected from its input clock 1: Timer PTx is running
PTIx	**PWM Timer x Input Clock Selection** 0: Timer PTx clocked with CLK_{CPU} 1: Timer PTx clocked with $CLK_{CPU}/64$
PIEx	**PWM Channel x Interrupt Enable Flag** 0: Interrupt from channel x disabled 1: Interrupt from channel x enabled
PIRx	**PWM Channel x Interrupt Request Flag** 0: No interrupt request from channel x 1: Channel x interrupt pending (must be reset via software)

PWMCON1
PWM Control Register 1 **SFR ($FF32_H/99_H$)** **Reset value: 0000_H**

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
PS3	PS2	-	PB 01	-	-	-	-	PM3	PM2	PM1	PM0	PEN 3	PEN 2	PEN 1	PEN 0
rw	rw	-	rw	-	-	-	-	rw	rw	rw	rw	rw	rw	rw	rw

Bit	Function
PENx	**PWM Channel x Output Enable Bit** 0: Channel x output signal disabled, generate interrupt only 1: Channel x output signal enabled
PMx	**PWM Channel x Mode Control Bit** 0: Channel x operates in mode 0, i.e. edge aligned PWM 1: Channel x operates in mode 1, i.e. center aligned PWM
PB01	**PWM Channel 0/1 Burst Mode Control Bit** 0: Channel 0 and channel 1 work independently in their respective standard mode 1: Outputs of channels 0 and 1 are ANDed to POUT0 in burst mode
PSx	**PWM Channel x Single Shot Mode Control Bit** 0: Channel x works in respective standard mode 1: Channel x operates in single shot mode

3. Motor Driver