

TITLE: Bill of Materials									
DESIGN: PC3304M ISSUE 2									
BUILD ISSUE:									
DATE: 29/01/2007									
NO. OF BOARDS REQD: 9									
Line No.	Part Number	Part Description	Ref Des	Board Qty	Build Qty	Use Exact Part	Use Equiv. Part	Equivalent Part Number	Comments
1	PC3304M/2	TCM-CP/JE Printed Circuit Board	-	1	9				
2	Elma 66-514-29	9U x 4HP Blank Front Panel	-	1	9				4 off blank panels FREE ISSUE, For detail see drawing A2-TE-0073-101-01-B
3	Elma 81-058-09-1	EMC Spring for Front Panel	-	1	9				
4	Elma 61-287-4	Fixing Screws	-	1	9				
5	Elma 81-095	Ejector Handle - Top	-	1	9				
6	Elma 81-096	Ejector Handle - Bottom	-	1	9				
7	-	Stiffening Bar	-	3	27				FREE ISSUE, For detail see drawing A2-TE-0116-005-01-A
8	PC3196P/3	TCM Hex Display Board	-	1	9				FREE ISSUE, to be plugged into SK3
9	RS 526-928	M2.5 x 6 mm Slotted Panhead Screws	-	12	108				
10	Farnell 707351	Heatsink for VR1	-	1	9				FREE ISSUE
11	Farnell 520214	Insulating Kit for heatsink	-	1	9				FREE ISSUE, for heatsink
12	Farnell 758670	M3 x 12 P/head screw with washer	-	1	9				FREE ISSUE, for heatsink
13	Farnell 7108163	M3 Self Locking nut	-	1	9				FREE ISSUE, for heatsink
14	AMP2-1393589-9	High Current Socket, Power contact for SK4	-	2	18				To be assembled with SK4, line 82
15	Amp 2-1393589-7	High Current Socket, Power contact for SK4	-	1	9				To be assembled with SK4, line 82
16	-	100nF SMD Capacitor, 0805, X7R Dielectric, 50V	C1,C2,C7,C13,C28-C30,C39,C43-C57,C59,C61-C115,C117,C118,C120,C121,C123-C127,C129-C133,C135,C136,C138-C149,C151	108	972				-
17	Murata GRM219R61A225KA01D	2.2uF SMD 10V X5R Capacitor, 0805	C10	1	9				-
18	Flint CC0805CX7R105KTR	1uF X7R 16V Capacitor, 0805	C11,C20,C24,C26,C150	5	45				-
19	Panasonic ECHU1H221GB5	220pF SMD Capacitor, 0805	C119	1	9				Available from FARNELL 550-395
20	ES 430818D	22pF SMD Capacitor, 0805	C122,C128	2	18				-
21	AVX-KYOCERA CM21X7R334K16VAT	330nF SMD Capacitor, 0805	C134	1	9				Available from FARNELL 578-216
22	AVX-KYOCERA TAJA105K016R	1uF SMD 16V Capacitor, Case Size A	C15-C19	5	45				Available from FARNELL 498-701
23	-	10nF SMD Capacitor, 0603, X7R Dielectric, 25V	C21,C25,C27,C152,C153,C156	6	54				-
24	-	100nF SMD Capacitor, 0603, X7R Dielectric, 16V	C22,C35-C37,C42,C58,C60,C116,C137,C154,C155,C157-C167	22	198				-
25	Farnell 912-967	1000uF 16V Axial Electrolytic	C23	1	9				-
26	AVX-KYOCERA TAJB475K016R	4.7uF SMD 16V Capacitor, Case Size B	C3,C5,C6,C9,C12	5	45				Available from FARNELL 498-725
27	-	100uF SMD Tantalum Capacitor, Case Size E, 16V	C31,C32,C38	3	27				-
28	-	1uF SMD Capacitor, 1206, X7R Dielectric, 16V	C33	1	9				-
29	AVX-KYOCERA TAJD226K016R	22uF SMD 16V Capacitor, Case Size D	C34	1	9				Available from FARNELL 498-749
30	AVX-KYOCERA TAJB226K016R	22uF SMD 16V Capacitor, Case Size B	C4	1	9				Available from FARNELL 197-294
31	-	100uF SMD Tantalum Capacitor, Case Size D, 10V	C40	1	9				-
32	AVX-KYOCERA TAJD106K025R	10uF SMD 25V Capacitor, Case Size D	C41	1	9				Available from FARNELL 498-890

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33	Farnell 422-7153	10nF SMD Capacitor, 0805, Ceramic Dielectric, 50V	C8,C14	2	18		-
34	Temic LL4148	LL4148, General Purpose Diode	D1	1	9		Available from Farnell 739-182
35	Newport 34A-020	Triple 20ns Delay Module	DL1-DL3	3	27		-
36	RS 309-5067	Bi-Level Red/Red 2.0mm LED	DS1-DS30	30	270		-
37	RS 309-5089	Bi-Level Yellow/Yellow 2.0mm LED	DS31,DS32	2	18		-
38	RS 309-5073	Bi-Level Green/Green 2.0mm LED	DS33,DS35	2	18		-
39	Dialight 571-0132-100	Bi-Level Yellow/Green 2.0mm LED	DS34	1	9		-
40	Farnell 319-326	5A Wire Ended Fuse	FS1,FS3	2	18		-
41	Farnell 1123036	1A Wire Ended Fuse	FS2	1	9		-
42	AMP 223979-1	Female backplane guide module	GM1	1	9		-
43	Farnell 1174506	3615 Series 0.22uH Inductor	L1	1	9		-
44	Murata BLM21PG331SN1	Ferrite Bead Inductor	L2	1	9		-
45	Farnell 175-319	2 pin 0.4 inch pitch Jumper	LK5-LK8,LK11,LK14,LK19,LK20	8	72		-
46	Agilent HFBR-2119T	Fiber Optic Receiver Data Link (for 266 MBd)	OC1	1	9		-
47	Farnell 639-564	4MHz Surface Mount Crystal Oscillator	OSC1	1	9		-
48	Harwin M20-995-02-05	Harwin Rt-Ang 2x2 pin Header	PL1	1	9		-
49	McMurdo SDES9PN	9way Rt-Ang PCB D-Type Plug with Screwlocks	PL2	1	9		Available from Farnell 150-710
50	HARWIN M20-998 05 05	Straight Header connector for Altera Bit/Byte Blaster Cable	PL3	1	9		-
51	Farnell 911-124	120R SMD Resistor, 0.063W, 0603	R1	1	9		-
52	Farnell 772-239	0R0 SMD Resistor, 0.1W, 0805	R12-R15,R46,R47,R49-R51,R83,R85,R87,R89	13	117		-
53	Farnell 613-290	47K SMD Resistor, 0.1W, 0805	R16	1	9		-
54	Farnell 912-098	100K SMD Resistor, 0.1W, 0805	R17,R23,R27,R35,R94	5	45		-
55	Farnell 613-174	4.7K SMD Resistor, 0.1W, 0805	R2,R7,R8,R28,R33,R36,R37,R40,R41,R44,R45,R48,R52-R55,R57,R70-R77,R82,R84,R86,R88,R90,R91	31	279		-
56	Farnell 9352856	200K, 3266X Variable Resistor, 0.25W	R24,R25	2	18		-
57	Farnell 911-859	1K0 SMD Resistor, 0.1W, 0805	R26,R29,R32,R34	4	36		-
58	Farnell 911-069	39R SMD Resistor, 0.063W, 0603	R3	1	9		-
59	Farnell 613-356	150K SMD Resistor, 0.1W, 0805	R30,R31	2	18		-
60	Farnell 613-150	3.3K SMD Resistor, 0.1W, 0805	R38,R39	2	18		-
61	Farnell 357-1294	130R SMD Resistor, 0.063W, 0603	R4,R10,R18,R19	4	36		-
62	Farnell 613-022	270R SMD Resistor, 0.1W, 0805	R42,R43	2	18		-
63	Farnell 612-364	100R SMD Resistor, 0.063W, 0603	R56,R58-R69	13	117		-
64	Farnell 613-095	1K0 SMD Resistor, 0.1W, 0805	R6	1	9		-
65	Farnell 9333746	1M0 SMD Resistor, 0.1W, 0805, 5%	R78-R81	4	36		-
66	Farnell 613-046	390R SMD Resistor, 0.1W, 0805	R9,R11,R20,R21	4	36		-
67	Farnell 911-100	82R SMD Resistor, 0.063W, 0603	R92,R93,R95,R96	4	36		-
68	Farnell 613-071	680R SMD Resistor, 0.1W, 0805	R97	1	9		-
69	Farnell 613-010	220R SMD Resistor, 0.1W, 0805	R98	1	9		-
70	Farnell 776-658	150R, ARC241, 4-isolated Resistors, 0.062W	RN15,RN16,RN62-RN67,RN74	9	81		-
71	Farnell 776-701	1K, ARC241, 4-isolated Resistors, 0.062W	RN17,RN18	2	18		-
72	Farnell 776-749	4K7, ARC241, 4-isolated Resistors, 0.062W	RN19	1	9		-
73	Farnell 776-695	680R, ARC241, 4-isolated Resistors, 0.062W	RN1-RN14	14	126		-
74	Farnell 219-174	4K7, 4-commoned Resistors, 200mW	RN20,RN21	2	18		-
75	Farnell 307-0104	39R, ARC241, 4-isolated Resistors, 0.062W	RN22-RN31	10	90		-
76	Farnell 307-0177	560R, ARC241, 4-isolated Resistors, 0.062W	RN32-RN41	10	90		-

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77	Farnell 776-660	220R, ARC241, 4-isolated Resistors, 0.062W	RN42-RN51,RN73	11	99		-
78	Farnell 307-0207	1K8, ARC241, 4-isolated Resistors, 0.062W	RN52-RN61,RN68-RN72	15	135		-
79	Lemo EPL.00.250.DTN	Lemo Rt-Angle Socket Size 00, PCB Mount	SK1	1	9		-
80	RS 437-5522	9way Rt-Ang PCB D-Type Socket	SK2	1	9		-
81	Harwin M20-9892006	Horizontal Single Row socket with Tapered Entry	SK3	1	9		-
82	AMP 100752-1	Z-Pack 2mm Hard Metric PCB Rtang connector Housing	SK4	1	9		See lines 14 & 15
83	AMP 352171-1	95 Pin (5x19), B Type, Z-Pack Right Angle Socket, 2mm Pitch	SK5	1	9		-
84	AMP 352152-1	110 Pin, 5x22, B Type, Z-Pack Right Angle Socket, 2mm Pitch	SK6	1	9		-
85	APEM TL46WW00050	DPDT PCB Switch, Rt-Angle, Vertical	SW1	1	9		Available from Farnell 286-047
86	APEM TL39WW00050	SPDT Rt-Ang Vertical Toggle Switch ON-OFF-ON	SW2	1	9		Available from Farnell 286-035
87	Hartmann TP32W003050	SPDT Rt-Ang Horizontal Push Switch	SW3	1	9		Available from RS 664-367
88	Hartmann PT65-106	Sealed PCB Mount Horiz Rotary Hex Complement Switch	SW4,SW5	2	18		Available from Farnell 102-647
89	Vero 20-2137D	Black 1.02mm Test Point	TP1-TP7	7	63		-
90	Motorola MC74HC4538AD	SMD Dual Monostable, Retriggerable	U1,U13,U22	3	27		-
91	PHILIPS PCA82C250T	PHILIPS PCA82C250 CAN Controller Interface	U11,U12	2	18		-
92	Motorola MC100ELT21D	Differential PECL to TTL Translator	U14	1	9		-
93	SGS Thompson TS3V555ID	3V Low Power Single Timer	U15,U23	2	18		-
94	FUJITSU MB90F594APF	Dual Can Bus F2MC-16LX Micro Processor	U18	1	9		-
95	Philips 74ABT541D	SMD Octal Buffer, 3-state	U19	1	9		-
96	ON Semiconductor MC100LVEL92DW	5V Triple PECL Input to LVECL Output Translator	U2	1	9		Available from Farnell 360-8463
97	Philips N74F04D	SMD Hex Invertors	U20,U38	2	18		-
98	Altera EPM7128SQC100-15	High Performance EEPROM PLD	U21,U28-U33	7	63		-
99	DCP020505U	Miniature 5V 2W isolated DC-DC Converter	U24	1	9		Available from Onecall 3535046
100	Philips 74HCT245D	SMD Octal Bus Transceivers, 3-state	U25	1	9		Available from Farnell 1085315
101	Maxim MAX232ECSE	EIA232 Interface	U26	1	9		Available from RS 225-8526
102	IDT7133SA35J	High Speed 2k x 16 Dual Port Static RAM - MASTER, 35nS	U27	1	9		Available from Onecall 640086
103	Agilent Technologies HCPL-0600	High CMR, High Speed TTL Compatible Optocouplers	U3,U4	2	18		-
104	Fairchild 74ACT521SC	8-Bit Identity Comparator	U34	1	9		Available from RS 324-3711
105	ON Semiconductor MC100LVEL14DW	3V3 ECL 1:5 Clock Distribution Chip	U35,U40,U41	3	27		Available from Farnell 360-8396
106	Fairchild 74LVT245WM	Low Voltage Octal Bidirectional Transceivers with 3-State I/O	U36,U37,U43-U47	7	63		Available from Farnell 325-2565
107	TI SN74F38D	Quad 2 Input NAND Buffer	U39	1	9		-
108	Power Trends PT5022C	+ve Input/-ve Output Integrated Switching Regulator (ISR) -5Volts	U42	1	9		-
109	Micrel SY10EP89VZI	5V/3.3V 3GHz Coaxial Cable Driver	U48-U57	10	90		-
110	Philips SemiConductors 74HCT157D	Quad 2-input Multiplexer	U5	1	9		Available from Farnell 489-591
111	Intersil ICM7228AIBI	8 Digit LED Display Driver, Common Anode	U6	1	9		-
112	Philips 74HC541D	3-State Octal Buffer/Driver	U7-U10,U16,U17	6	54		Available from RS 177-6657
113	Linear Tech. LT1587CT-3.3	3-Terminal 3.3V Fixed Voltage Regulator	VR1	1	9		-