

TITLE: Bill of Materials									
DESIGN: PC3216M5									
BOM VERSION: 1									
DATE: 01/22/2008									
NO. OF BOARDS REQD:			Please read comments column						
Line No.	Part Number	Part Description	Ref Des	Board Qty	Build Qty	Use Exact Part	Use Equiv. Part	Equivalent Part Number	Comments
1	AVX-KYOCERA TAJD476K016R	47uF SMD 16V Capacitor, Case Size D	C10,C386	2					Available from FARNELL 498-762
2	Farnell 722-042	47pF NPO Capacitor, 0603	C109	1					-
3	Siemens B37940K5470J60	47pF SMD Capacitor, 50V, 0805	C14,C31	2					Available from RS 211-3287
4	AVX-KYOCERA CM21X7R474K16VAT	470nF SMD Capacitor, 0805	C142,C159,C169,C173- C176,C181,C183,C185,C198,C200,C208,C210,C234, C236,C241,C272	18					Available from FARNELL 1216552
5	RS 298-9258	100pF SMD Capacitor, 0805, COG Dielectric, 100V	C147,C148,C395,C398,C401,C404,C407,C410,C413, C421,C422,C433-C437,C447,C449-C453,C459-C462	26					-
6	AVX-KYOCERA CM21X7R334K16VAT	330nF SMD Capacitor, 0805	C161	1					Available from FARNELL 1216551
7	CC0603HY5V103ZTR	10nF SMD Capacitor, 0603	C164,C167,C206,C212	4					-
8	PHYCOMP 2238 586 15636	10nF SMD Capacitor, 0603	C187,C190,C201,C204,C207,C213,C217- C219,C223,C225,C226,C230,C279,C280,C282,C285, C291,C359,C360,C387,C391	22					Available from FARNELL 722236
9	AVX-KYOCERA TAJB475K016R	4.7uF SMD 16V Capacitor, Case Size B	C1-C8,C11-C13,C15-C26,C30,C32- C42,C77,C78,C80,C82-C85,C87,C390,C393	45					Available from FARNELL 498-725
10	Murata GRM155R61A104KA01D	100nF X5R Capacitor, 0402, 10V	C237,C244,C247-C249,C255,C260,C265- C267,C270,C275,C298,C301-C303,C306,C311,C314- C316,C319	22					-
11	Farnell 1216548	10nF SMD Capacitor, 0402	C242,C243,C245,C246,C253,C254,C256- C259,C261,C262,C268,C269,C273,C274,C295,C297, C299,C300,C304,C305,C307- C310,C312,C313,C317,C318,C320,C321	32					-
12	AVX-KYOCERA CM105X7R104K16AT	100nF SMD Capacitor, 0603	C27,C29,C102-C108,C110- C138,C143,C144,C146,C149- C155,C157,C158,C160,C162,C163,C166,C168,C172, C177-C180,C182,C184,C188,C189,C191- C194,C196,C197,C199,C202,C203,C205,C209,C211, C214-C216,C222,C224,C227-C229,C231- C233,C235,C238-C240,C250- C252,C263,C264,C271,C276,C277,C281,C283,C284, C286-C290,C292-C294,C322-C335,C338-C358,C361- C363,C365- C384,C389,C392,C394,C397,C400,C403,C406,C409, C412,C418,C428,C431,C454,C456,C457	183					Available from FARNELL 1216538
13	Farnell 722-080	100pF NPO Capacitor, 0603	C28,C156,C165,C170,C171	5					-
14	Flint CC1206CX5R475KTR	4.7uF X5R 16V Capacitor, 1206	C385,C396,C399,C402,C405,C408,C411,C414,C438- C446,C458	18					-
15	AVX-KYOCERA TPSA106K010R1800	10uF SMD 10V Capacitor,Low ESR, Case Size A	C388,C463-C474	13					Available from FARNELL 1135105
16	AVX-KYOCERA TAJA474K025R	470nF SMD 25V Capacitor, Case Size A	C415-C417,C419,C420,C423- C427,C429,C430,C432,C448,C455	15					Available from FARNELL 498-828
17	AVX TAJC476K010R	47uF SMD 10V Capacitor, Case Size C	C43,C44,C46,C47,C50,C51,C53- C56,C58,C59,C62,C63,C69,C70	16					Available from FARNELL 197-166
18	AVX-KYOCERA TAJA105K016R	1uF SMD 16V Capacitor, Case Size A	C45,C48,C49,C52,C57,C60,C61,C68	8					Available from FARNELL 498-701
19	Farnell 9451110	470uF 16V Electrolytic	C71,C88-C90	4					-

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20	AVX-KYOCERA TPSE477K010R0050	470uF SMD 10V Low ESR Capacitor, Case Size E	C73,C74	2				-
21	AVX TPSD107K010R0100	100uF SMD 10V Capacitor, Case Size D	C75	1				Available from RS 406-9946
22	Farnell 9418369	1000uF 16V Axial Electrolytic	C86	1				-
23	AVX-KYOCERA CM21X7R104K25VAT	100nF SMD Capacitor, 0805	C9,C64-C67,C72,C76,C79,C81,C91-C101,C139-C141,C145,C186,C195,C220,C221,C278,C296,C336,C337,C364	33				Available from FARNELL 499-687
24	Farnell 1081177	1N4148PS, Small Signal Diode	D1,D2	2				-
25	Schroff 69004-287	Bi-Level Low Current Green/Green 3.2mm LED	DS1,DS2	2				-
26	Agilent Technologies HSMD-S660	Rt-Ang Surface Mount Orange LED	DS19,DS20	2				-
27	HP HSMC-C191	Surface Mount Flip-Chip Red LED, Metric	DS21-DS38	18				Available from Farnell 8554528
28	Schroff 69004-127	Bi-Level Standard Red/Green 3.2mm LED	DS3	1				-
29	Schroff 69004-126	Bi-Level Standard Yellow/Yellow 3.2mm LED	DS4,DS6	2				-
30	Schroff 69004-124	Bi-Level Standard Red/Red 3.2mm LED	DS5,DS7,DS11-DS18	10				-
31	Schroff 69004-125	Bi-Level Standard Green/Green 3.2mm LED	DS8-DS10	3				-
32	Littelfuse 154010	10A SMD Fuse in Holder (Larger Footprint), Nano2 Series	FS1,FS3	2				-
33	Littelfuse 0154005.DR	5A SMD Fuse in Holder (Larger Footprint), Nano2 Series	FS2,FS4-FS6	4				Available from Farnell 9943668
34	Harting 17250952102	95 Way HARBUS HM Shielded Rt-Angle Socket, Press fit	J0	1				Available from RS 366-7634
35	Harting 02011602101	160way Rt-Ang Plug Har-Bus 64 System	J1-J3	3				Available from RS 235-6406
36	Harwin M20-999 09 45	Harwin Straight 9 pin Header	J4A	1				Can be cut from M20-999 36 45
37	Molex 87331-1420	Molex Straight 2mm pitch 2x7 pin Header, PTH	J4B	1				-
38	FCI 98414-S08-14U	2mm pitch 2x7 pin Vertical Shrouded Header, PTH	J4C	1				-
39	Harwin M20-999 03 45	Harwin Straight 3 pin Header	LK1-LK6,LK91,PL41,PL118,PL122,PL166	11				Can be cut from M20-999 36 45
40	Harwin M20-999 04 45	Harwin Straight 4 pin Header	LK7	1				Can be cut from M20-999 36 45
41	Farnell 175-319	2 pin 0.4 inch pitch Jumper	LK72-LK76	5				-
42	3M 3408-D303	32-Pin Condo double-header, PCB RT-ANG	PL1	1				-
43	Harwin M20-999 02 45	Harwin Straight 2 pin Header	PL2,PL7,PL16,PL25,PL30-PL32,PL50-PL52,PL119,PL123-PL141,PL143,PL144,PL146-PL164,PL167,PL168,PL170,PL175-PL178,PL180-PL203	82				Can be cut from M20-999 36 45
44	Harwin M20-999 20 45	Harwin Straight 1 pin Header	PL73-PL76,PL117,PL120,PL121,PL142,PL145,PL165,PL169,PL171-PL174,PL179,PL204-PL207	20				Can be cut from M20-999 20 45
45	Farnell 9334572	470R SMD Resistor, 0.1W, 0805	R1,R2,R6-R36,R59,R60,R113	36				-
46	Farnell 9333720	10K SMD Resistor, 0.1W, 0805	R101,R102,R167-R170	6				-
47	Farnell 9352660	100K, 3266W Variable Resistor, 0.25W	R103	1				-
48	Farnell 9334599	47K SMD Resistor, 0.1W, 0805	R107,R166	2				-
49	Farnell 9333703	100R SMD Resistor, 0.1W, 0805	R110	1				-
50	Farnell 9331794	150R SMD Resistor, 0.063W, 0603	R114,R185,R187,R189,R191,R193,R195,R203,R209,R211,R213,R214,R250,R256,R258,R262	16				-
51	Farnell 9330801	220R SMD Resistor, 0.063W, 0603	R115,R251	2				-
52	Rohm MCR03EZPF101	100R SMD Resistor, 0.063W, 0603	R117-R120,R143-R146	8				-
53	Rohm MCR03EZHJ103	10K SMD Resistor, 0.1W, 0603	R149,R171,R232,R255	4				-
54	Rohm MCR03EZHJ332	3K3 SMD Resistor, 0.1W, 0603	R176,R184	2				-

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55	Farnell 9239235	1K0 SMD Resistor, 0.063W, 0402	R177,R179	2				-
56	Farnell 9232842	4K7 SMD Resistor, 0.063W, 0402	R178	1				-
57	Farnell 9330917	270R SMD Resistor, 0.063W, 0603	R197,R199,R201	3				-
58	Rohm MCR03EZHJ181	180R SMD Resistor, 0.1W, 0603	R198,R200,R202	3				-
59	Farnell 9331247	4K7 SMD Resistor, 0.063W, 0603	R217-R219,R222-R224	6				-
60	Farnell 9239111	100R SMD Resistor, 0.063W, 0402,5%	R225	1				-
61	Rohm MCR03EZHJ220	22R SMD Resistor, 0.063W, 0603	R227	1				-
62	Farnell 9330844	22R SMD Resistor, 0.063W, 0603	R238	1				-
63	Farnell 9333746	1M0 SMD Resistor, 0.1W, 0805	R239-R242	4				-
64	Farnell 9239111	100R SMD Resistor, 0.063W, 0402	R243	1				-
65	Farnell 9331050	33R SMD Resistor, 0.063W, 0603	R244-R249	6				-
66	Farnell 9334351	330R SMD Resistor, 0.1W, 0805	R3	1				-
67	Farnell 9331387	56R SMD Resistor, 0.063W, 0603	R37-R43,R49	8				-
68	Farnell 9333711	1K0 SMD Resistor, 0.1W, 0805	R4,R106	2				-
69	Rohm MCR03EZHJ102	1K0 SMD Resistor, 0.1W, 0603	R44,R46,R47,R50-R52,R116,R121-R123,R141	11				-
70	Rohm MCR03EZHJ101	100R SMD Resistor, 0.1W, 0603	R45,R112,R172	3				-
71	Farnell 9331239	470R SMD Resistor, 0.063W, 0603	R48,R53-R57,R140,R142,R147,R148	10				-
72	Farnell 9334785	680R SMD Resistor, 0.1W, 0805	R5	1				-
73	Rohm MCR03EZHJ472	4K7 SMD Resistor, 0.1W, 0603	R58,R63,R64,R67,R68,R100,R125,R152,R153,R174, R175,R180-R183,R226,R233,R234,R237	19				-
74	Farnell 9331255	47K SMD Resistor, 0.063W, 0603	R61,R62,R124,R126-R139,R150,R151,R154- R165,R205-R208,R235,R236,R254,R260,R261	40				-
75	Farnell 9334254	270R SMD Resistor, 0.1W, 0805	R65,R66,R109	3				-
76	Farnell 9331662	0R0 SMD Resistor, 0.063W, 0603	R69-R75,R77-R81,R85-R87,R89,R220,R221,R228- R231	22				-
77	Rohm MCR03EZHJ221	220R SMD Resistor, 0.1W, 0603	R76,R88,R186,R188,R190,R192,R194,R196,R204,R2 10,R212,R215,R216,R257,R259,R263	16				-
78	Farnell 9333681	0R0 SMD Resistor, 0.1W, 0805	R82-R84,R90-R97,R173,R252,R253	14				-
79	Farnell 9334580	4.7K SMD Resistor, 0.1W, 0805	R98,R99,R104,R105,R108,R111	6				-
80	Farnell 9241213	220R, ARC241, 4-isolated Resistors, 0.062W	RN1,RN2,RN41,RN44,RN48,RN50	6				-
81	Farnell 9241310	10K, ARC241, 4-isolated Resistors, 0.062W	RN15-RN18	4				-
82	Farnell 9241230	470R, ARC241, 4-isolated Resistors, 0.062W	RN19-RN22	4				-
83	Farnell 9235035	390R, ARC241, 4-isolated Resistors, 0.062W	RN23,RN24,RN29	3				-
84	Farnell 9241299	4K7, ARC241, 4-isolated Resistors, 0.062W	RN25-RN28,RN30- RN35,RN40,RN42,RN43,RN45,RN46	15				-
85	Farnell 9241256	1K, ARC241, 4-isolated Resistors, 0.062W	RN36-RN39	4				-
86	Farnell 9235027	270R, ARC241, 4-isolated Resistors, 0.062W	RN3-RN14	12				-
87	Farnell 9241205	150R, ARC241, 4-isolated Resistors, 0.062W	RN47,RN49	2				-
88	Farnell 9241353	47K, ARC241, 4-isolated Resistors, 0.062W	RN51,RN52	2				-
89	Lemo EPG.0B.302.HLN	Lemo Socket, 2 Female PCB Mount	SK1,SK15	2				-
90	Lemo EPL.00.250.DTN	Lemo Rt-Angle Socket Size 00, PCB Mount	SK2-SK14	13				-
91	RS 664-389	SPST Right-Angle Momentary Switch	SW1,SW2	2				-
92	C & K KSS221GLFS	Subminiature side-activated rt-ang SPST (NO) Momentary Switch	SW12	1				Available from Farnell 1201406
93	Cliff Electronic Components 41J41G	Sealed PCB Mount Vert Rotary Hex Switch	SW3-SW6,SW11	5				Parts made obsolete by manufacturer. 100 pcs in stock. Email peter.moorhouse@cliffuk.co.uk
94	Tyco Electronics GDH06S	6way SMD Half Pitch Switch	SW7-SW10	4				Available from Farnell 1123954
95	Vero 20-2137D	Black 1.02mm Test Point	TP1-TP5	5				-
96	ZTX302	General Purpose Switching NPN Transistor	TR1-TR8	8				-

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97	Motorola MC10H124FN	Quad TTL to ECL Translator	U1,U4,U18,U31,U32	5				-
98	Motorola MC100ELT21D	Differential PECL to TTL Translator	U107	1				-
99	Philips 74LVC4245AD	Octal Dual Supply Translating Transceiver	U108	1				-
100	Motorola MC10192FN	Quad Bus Driver	U13-U15	3				-
101	Philips N74F14D	SMD Hex Schmitt-Trigger Inverters	U19	1				-
102	Motorola MC10H125FN	Quad ECL to TTL Translator	U2,U3,U16,U17,U34	5				-
103	Philips N74F74D	SMD Dual D-Type Positive-Edge Trigger Flip-Flops	U20,U30	2				-
104	Philips N74F27D	Triple 3-Input NOR Gate, SOIC	U33	1				-
105	ECM GBS-204-80.15733-A	80.15733 MHz Crystal Clock Oscillator	U35	1				Tel 01903892810; Andy Hern. Customer reference number : 0580152
106	Philips 74ABT541D	SMD Octal Buffer, 3-state	U36,U42-U45,U50,U51,U56	8				74ABT541BDW is acceptable
107	ICS ICS581G-02	Zero-Delay Glitch Free Clock Multiplexer	U38,U58	2				-
108	Philips 74ABT04D	SMD Hex Invertors	U39	1				-
109	Philips N74ABT74D	Dual D-Type Flip-Flop	U40,U41,U64	3				-
110	Data Delay Devices PDU-16F-.5A4	6 Bit Programmable Delay Unit, TTL 0.5nS Steps, Gull-Wing	U46-U48,U61-U63,U69	7				-
111	Philips 74LVT244AD	3-State Low Voltage Octal Buffer	U49,U55,U75,U84	4				Available from RS 197-6920
112	Philips 74LVT16244BDL	3.3V 16-bit Buffer/Line Driver	U52,U60,U68,U77,U79-U81,U96	8				-
113	Motorola MC100ELT20D	TTL to Differential PECL Translator	U54,U90	2				-
114	Xilinx XC18V04PC44C	Xilinx In-System Programmable Configuration PROM	U59	1				-
115	TI SN74LS123D	SMD Dual Monostable	U5-U12,U21-U29,U37,U53	19				-
116	Philips N74F11D	Triple 3-Input AND Gate	U65	1				-
117	Philips 74ABT08D	SMD Quad 2-input AND Gate	U66	1				-
118	Xilinx XC2S600E-7FG456C	Xilinx Spartan-IIe 1.8V FPGA	U67	1				-
119	Philips 74LVT04D	Low Voltage Hex Invertors (3V3)	U70	1				-
120	Newport 50A10500	Active Buffered 10-Tap, 5ns Step Delay Line	U71	1				-
121	Xilinx XC18V02PC44C	Xilinx In-System Programmable Configuration PROM	U72	1				-
122	Euroquartz SPG8640AN	Programmable Crystal Oscillator	U73,U74	2				-
123	Xilinx XC2S200E-6FG456C	Xilinx Spartan-IIe 1.8V FPGA	U76	1				-
124	Philips 74ALVC164245DL	16-Bit Dual Supply Translating Transceiver	U78,U82	2				-
125	TRACO TAM 25-2411	25W Single 5V Output DC/DC Converter	U83	1				-
126	Philips 74ABT125D	3-State Quad Buffer	U85,U89	2				-
127	Philips N74F541N	Octal Buffers, 3-state outputs	U86,U92,U100,U101,U103-U105	7				-
128	TI SN74LS541N	Octal Buffers with 3 State Outputs	U87	1				-
129	Philips N74F760N	Octal Buffer (Open-Collector)	U88	1				-
130	NSC 74F543PC	Octal Registered Transceiver	U91,U99,U102,U106	4				-
131	TI SN74F38N	Quad 2 Input NAND Buffer	U93	1				-
132	Synergy SY100E111JC	1:9 Differential Clock Driver With Enable	U94,U95	2				Unsocketed Device
133	Philips 74ABT574D	SMD Octal Edge Triggered D-Type Latches	U97,U98	2				-
134	NSC LP3963ES-1.8	3A Fast Ultra Low Dropout Linear Regulator	VR1	1				-
135	PC3216M/5 ATLAS TIM 3E	PC Board	-	1				-
136	Rittal 3685.516	9Ux4HP Flat Front Panel	-	1				For Detail see Drawing A2-TE-0102-047-01-*
137	Rittal 3688.770	Injector/Extractor Handle - Top	-	1				-
138	Rittal 3688.771	Injector/Extractor Handle - Bottom	-	1				-
139	Schroff 60807-181	Front Panel Mounting Block	-	1				-

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140	Preci-Dip 714-91-125-31- 018001	PCB Sockets	-	6					4 Rows of 25 required for Daughter Card J21 and J23, 2 Rows of 13 Required for J23
141	RS 109-775	19 mm Kapton Tape, 33 m reel	-	1					For insulating J21, J22 and J23, See Assembly Notes
142	Harwin D01-9901401	Low Profile DIP Sockets	-	2					Required for 2 14-pin DIP chips
143	Harwin D01-9902001	Low Profile DIP Sockets	-	9					Required for 9 20-pin DIP chips
144	Harwin D01-9902401	Low Profile DIP Sockets	-	4					Required for 4 24-pin DIP chips
145	-	Stiffening Bar	-	3					For Detail see Drawing A3-TE-0116-005-01-*
146	RS 526-928	M2.5 x 6 mm Slotted Panhead Screws	-	15					For assembly of stiffening bars and front panel. See assembly notes.
147	RS 280-010	M3 Nuts	-	8					For assembly of stiffening bars
148	RS 528-160	M2.5 Nylon Washers	-	4					For assembly of stiffening bars