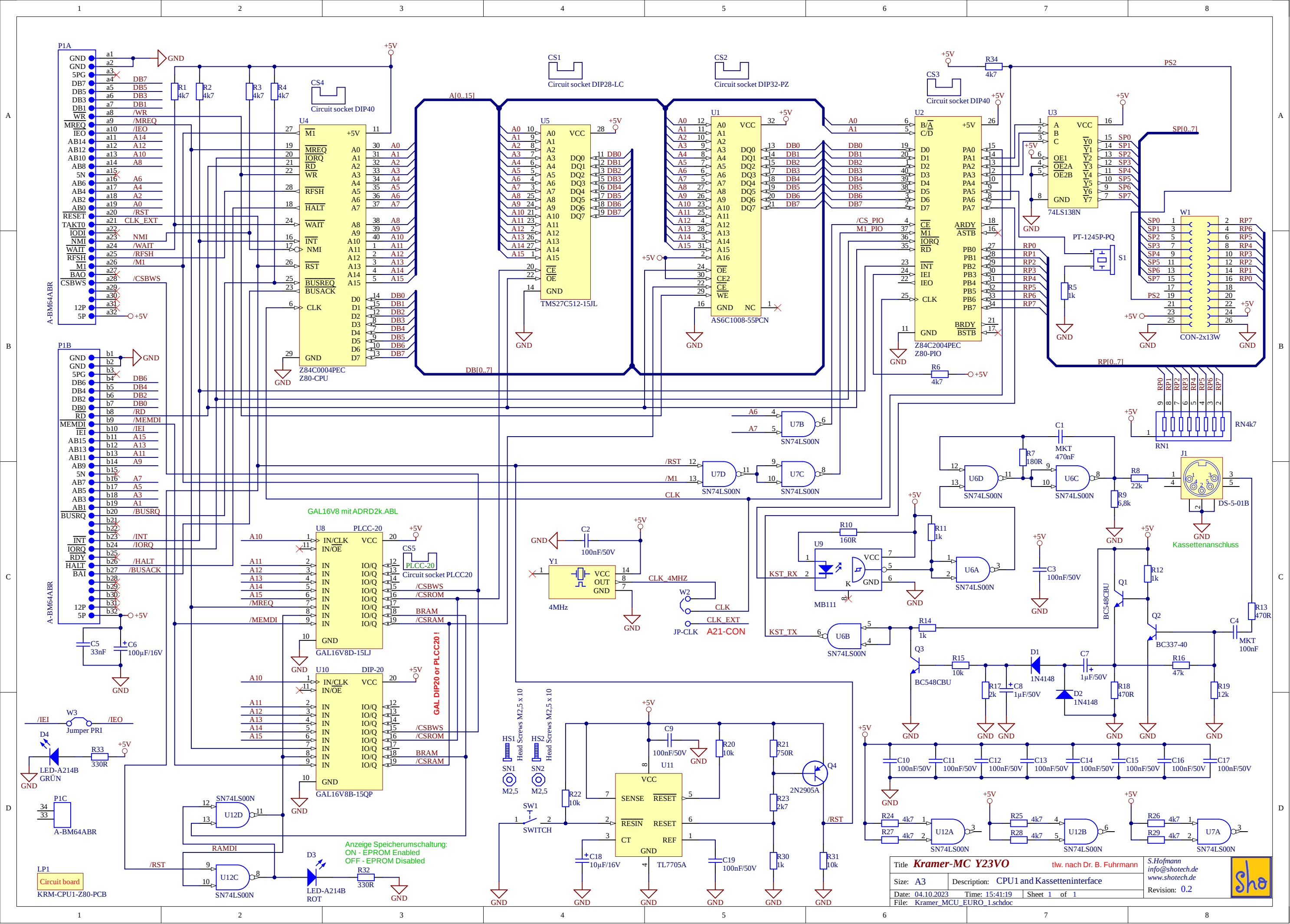
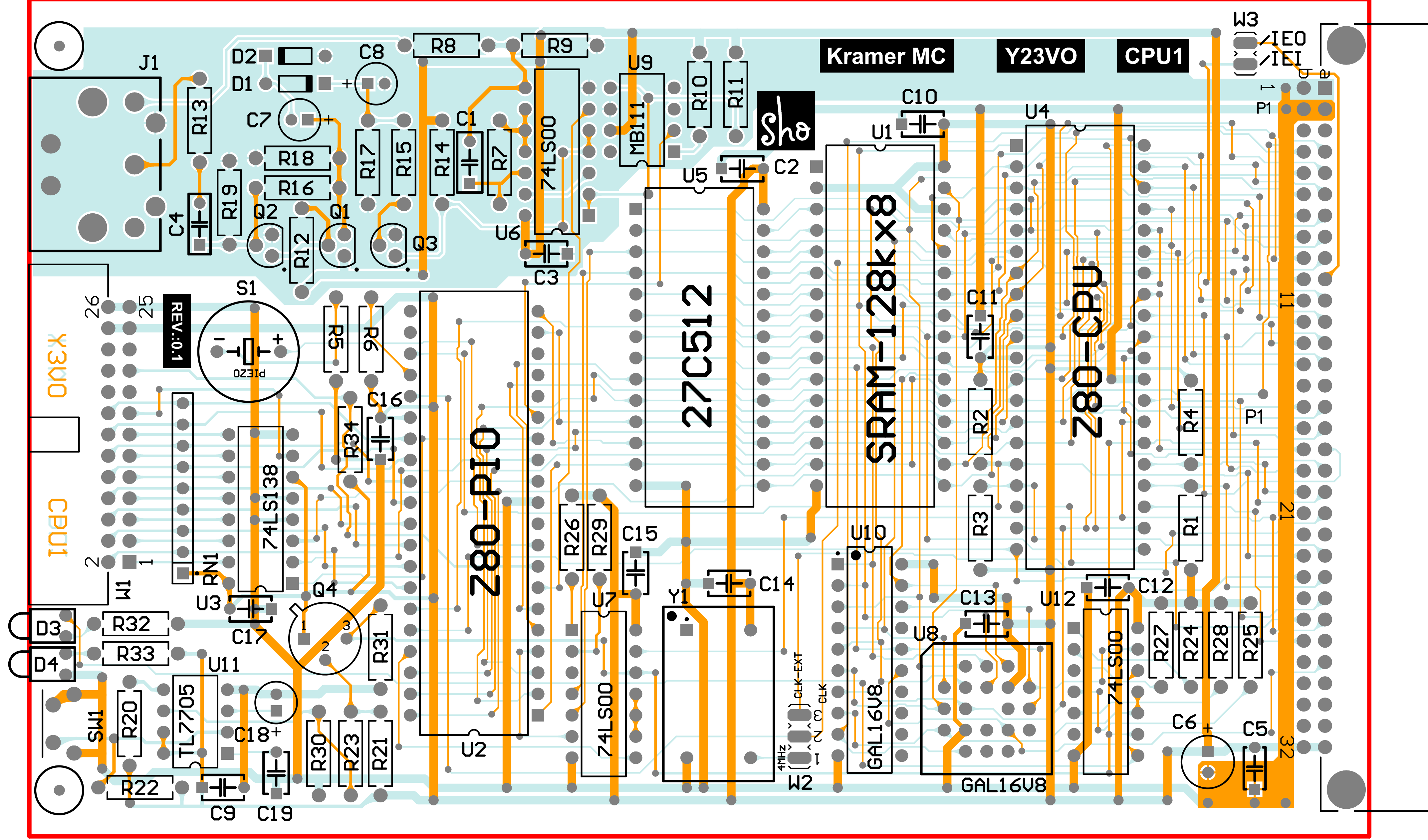








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Bill of Materials

Datum:	4. Oktober 2023
Zeit:	15:41:29
Variant:	None
Bezeichnung:	Kramer-MC_Y23VO
Revision:	0.2
Description:	CPU1 und Kassetteninterface

Quantity	Designator	Footprint	Bemerkung	Value	MFT	Order-Code	Second-source	shotech
1	C1	CAP_Radial_5MM_7k2_3k0	Folienkondensator, 470nF / 63V / 10% RM5	470nF	KEMET	R82DC3470AA60K		2045
12	C14, C15, C16, C17, C19	CAP_Radial_5MM	100nF/50V/±10%/X7R/RM 5.08	100nF/50V	Vishay / BC Components	K104K15X7RFS3H5	C322C104K5R5TA - shotech	1347
1	C4	CAP_Radial_5MM_7k2_2k5	Folienkondensator, 100nF, 63V, RM5, 10%	100nF	KEMET	R82DC3100AA50K		1682
1	C5	CAP_Radial_5MM_4_2k5	Vielschichtkondensator MLCC – 50volts 0.033uF 10% X7R Radial	33nF	TDK	FG28X7R1H333KNT06	FK28X7R1H333K - shotech	1553
1	C6	CAPPR5-6.3x11	Subminiatur-Elko, radial, 100 µF, 16 V, RM 2.5, 85°C, 1000h	100µF/16V	REC	Artikel-Nr.: SM 100/16RAD	Multcomp	1740
2	C7, C8	CAPPR2-5x11	1uF/50V/20%/2000h/RM 2	1µF/50V	Würth Elektronik	8,60021E+11		1550
1	C18	CAPPR2-5x11	Alu-Elektrolytkondensatoren - verdrahtet 47uF 16 Volts 10%	10µF/16V	Nichicon	UK1LC100KDDANA	SSR100M1VC07M / 002039	n.a
1	CS1		Circuit socket DIP28-LC	Circuit socket DIP28-LC	ASS	A 28-LC-TT		1521
1	CS2		Circuit socket DIP32-PZ	Circuit socket DIP32-PZ	ASS	AR32-H2L-TT		1329
2	CS3, CS4		Circuit socket DIP40	Circuit socket DIP40	ASS	A 40-LC-TT		1582
1	CS5		Circuit socket PLCC-20	Circuit socket PLCC20	MC	MC-20PLCC		2224
2	D1, D2	DO-35	Dioden (Allzweck, Leistung, Schaltung) Vr75V Io150mA T/R	1N4148	On Semiconductors	1N4148TR		1594
1	D3	LED-A214B-RED	LED diffus rot 200mcd 25° 3mm	LED-A214B	Everlight	A214B/SUR/S530-A3		2005
1	D4	LED-A214B-GREEN	LED diffus grün 200mcd 25° 3mm	LED-A214B	Everlight	A214B/SYG/S530-E2		2004
2	HS1, HS2		Head Screws M2,5 x 10	Head Screws M2,5 x 10	TR FASTENINGS			2087
1	J1	SDF-50J	DIN, 5Pjack, r, throughhole, w/shielding	DS-5-01B	shotech	DS-5-01B		2257
1	LP1		Circuit board Kramer MC CPU1	KRM-CPU1-Z80-PCB	frei	KRM-CPU1-Z80-PCB		2358
1	P1	0902164x921	Messerleiste A+B gewinkelt 64polig	A-BM64ABR	Assmann WSW	A-BM64ABR		2021
2	Q1, Q3	SC_TO-92	Hole TO-92-3	BC548CBU	Fairchild	BC548CBU	BC548BU (On Semi)	1169
1	Q2	SC_TO-92	Bipolartransistoren - BJT NPN 45V 800mA HFE/630	BC337-40	On-Semiconductor	BC33740BU		1650
1	Q4	TO-39	Bipolartransistor, PNP, 60V, 0.6A, 1W, TO-39	2N2905A	CDL	2N2905A		2009
12	R26, R27, R28, R29, R34	RES10-7.8x2.8	WIDERSTAND, 207, axial, 1%	4k7				1587
8	R5, R11, R12, R14, R30	RES10-7.8x2.8 - 1k	Metallsch. 0207 1/4W 1%	1k	frei	RMGK001		1235
1	R7	RES10-7.8x2.8	WIDERSTAND, 207, 1%	180R				2026
1	R8	RES10-7.8x2.8 - 22k	WIDERSTAND, 207, axial, 1%	22k				1672
1	R9	RES10-7.8x2.8	WIDERSTAND, 207, 1%, axial	6.8k	frei			2117
1	R10	RESADV200W55L630D240P	WIDERSTAND, 207, 1%	160R				2029
2	R13, R18	RES10-7.8x2.8	WIDERSTAND, 207, axial, 1%	470R	frei			1748
4	R15, R20, R22, R31	RES10-7.8x2.8 - 10k	WIDERSTAND, 207, axial, 1%	10k	frei	RMGK010		1233
1	R16	RES10-7.8x2.8 - 47k	WIDERSTAND, 207, axial, 1%	47k	frei	RMGK047		1237
1	R17	RES10-7.8x2.8 - 2k2	WIDERSTAND, 207, axial, 1%	2k	frei	MF12 2k		1245
1	R19	RES10-7.8x2.8	WIDERSTAND, 207, 1%	12k				2115
1	R21	RESADV200W55L630D240P	WIDERSTAND, 207, 1%	750R				2017
1	R23	RES10-7.8x2.8	WIDERSTAND, 207, axial, 1%	2k7	frei			2116
2	R32, R33	RES10-7.8x2.8 - 330R	WIDERSTAND, 207, axial, 1%	330R				1588
1	RN1	SIP240W50P254L2276H508Q9P	Widerstandnetzwerke u. -Arrays 9pins 1Kohms Bussed	RN4K7	Bourns	4609X-101-472LF		2049
1	S1	PIEZO_12mm	Piezo-Signalg 13mm 30V 4kHz 80dB PC	PT-1245P-PQ	Hitpoint	PT-1245P-PQ		2370
2	SN1, SN2		steel nuts M2,5	M2,5	frei			1872
1	SW1	SW-DTSA-6	Mini-Taster print stehend 1N	DTSA62K	Diptronics	DTSA62K		2013
1	U1	PDIP32	SRAM 1Mb, 2.7V-5.5V, 55ns 128K x 8 Asynch SRAM	AS6C1008-55PCN	Alliance Memory	AS6C1008-55PCN	AS6C1008-55PIN	1487
1	U2	PDIP40	CMOS Parallel I/O Controller	ZB4C2004PEC	Zilog		80A-PIO	823
1	U3	N016	3-Line to 8-Line Decoder / Demultiplexer	74LS138N	NXP	74LS138N	SN74S138D	1540
1	U4	PDIP40		ZB4C0004PEC	Zilog	ZB4C0004PEC	VB880D	822
1	U5	PDIP28	64KB x 8 EPROM	TMS27C512-15JL		TMS27C512-15JL	W27C512-45 / 001299	1079
3	U6, U7, U12	N014	Quadruple 2-Input Positive-NAND Gate	SN74LS00N	Texas Instruments	SN74LS00N	DL000D	1546
1	U8	PLCC-20	Programmable Logic Device 8 Macro Cells 62.5MHz 5V 20-Pin PLCC	GAL16V8D-15LJ	Lattice	GAL16V8D-15LJ		1035
1	U9	P008	Optokoppler Ga-LED+Si-Fotodiode+ TTL-Verstärker DIP-8	MB111	RFT	MB111		2050
1	U10	N0020A	15 ns, Industrial Grade	GAL16V8B-15QP	Lattice	GAL16V8B-15QP		
1	U11	P008	SUPPLY VOLTAGE SUPERVISORS	TL7705A	Texas Instruments	TL7705A		1283
1	W1	918526x323	W-Stiftleiste 26polig gewinkelt, schwarz	CON-2x13W	SHENZHEN JINLING ELECTRONICS	3210-26RGOCBK00A01		2184
1	W2	JP2	Jumper 3pin	Jumper 3pin	frei	frei		1564
1	W3	JP1	Jumper RM2,54, rot	JUMP-RT		JUMP-RT		
1	Y1	DIP-14-Crystal	Clock-Standardoszillatoren 4MHz 100ppm 14Pin DIP/STD	4MHz	Abundance	COF-4M-100-5V		n.a
92								