

BOM

Title TS2 68000 Single Board Computer
Company Jeff Tranter
Revision 2.1
Date Issue 2017-01-23

Reference	Value	Type	# Pins	Comments
C1	0.1uF	capacitor	n/a	
C2	0.1uF	capacitor	n/a	
C3	0.47uF	capacitor	n/a	
C4	100 uF 16V	capacitor	n/a	Power supply filter
C5-C38,C41-C43	0.1uF	capacitor	n/a	Bypass caps, one per IC (34 needed)
C39	22pF	capacitor	n/a	
C40	22pF	capacitor	n/a	
D1	RESET/HALT	diode	n/a	LED, red
D2	POWER	diode	n/a	LED, green
D3	1N5404	diode	n/a	Reverse polarity protection
J1	Baud rate select	jumper	n/a	1 6-position jumper (or hardwire)
J2	DTACK speed select	jumper	n/a	4 2-position jumpers or 4 pos DIP switch
P1	FTDI (TERMINAL)	socket	6	6 pin sip header
P2	FTDI (HOST)	socket	6	6 pin sip header
R1	1M	resistor	n/a	
R4	1M	resistor	n/a	
R6	470	resistor	n/a	
R20	10M	resistor	n/a	
R25	330	resistor	n/a	
RR1	4.7K	SIP resistor network	9	
RR2	4.7K	SIP resistor network	9	
RR3	4.7K	SIP resistor network	9	
RR4	4.7K	SIP resistor network	9	
SW1	RESET	switch	n/a	SPDT momentary
SW2	SINGLE STEP/RUN	switch	n/a	SPDT
SW3	STEP	switch	n/a	SPDT momentary
U1	555	IC, timer	8	
U2	8 MHz	IC, oscillator	14	
U3	74LS00	IC, quad 2-input NAND	14	

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U4	74LS06	IC, OC hex inverter	14	
U5	74LS04	IC, hex inverter	14	
U6	68000	IC, CPU	64	8 MHz
U7	74LS08	IC, quad 2-input AND	14	
U8	74LS32	IC, quad 2-input OR	14	
U9	74LS32	IC, quad 2-input OR	14	
U10	74LS32	IC, quad 2-input OR	14	
U11	HM6264	IC, static RAM	28	
U12	28C64	IC, EEPROM	28	Or 2764 EPROM
U13	HM6264	IC, static RAM	28	
U14	28C64	IC, EEPROM	28	Or 2764 EPROM
U15	HM6264	IC, static RAM	28	
U16	28C64	IC, EEPROM	28	Or 2764 EPROM
U17	HM6264	IC, static RAM	28	
U18	28C64	IC, EEPROM	28	Or 2764 EPROM
U19	74LS20	IC, dual 4-input NAND	14	
U20	74LS74	IC, dual JK flip-flop	14	
U21	74LS161	IC, counter	16	
U22	74LS161	IC, counter	16	
U23	74LS74	IC, dual JK flip-flop	14	
U24	74LS260	IC, dual 5-input NOR	14	
U25	74LS260	IC, dual 5-input NOR	14	
U26	74LS138	IC, decoder	16	
U27	74LS138	IC, decoder	16	
U28	74LS148	ICS, priority encoder	16	
U29	6850	IC, ACIA	24	
U30	6850	IC, ACIA	24	
U31	74HC4060	IC, 14 stage binary count	16	
U32	74LS138	IC, decoder	16	
U33	74LS138	IC, decoder	16	
U34	74LS00	IC, quad 2-input NAND	14	
U35	74LS74	IC, dual JK flip-flop	14	
U36	74LS27	IC, triple 3-input NOR	14	
U37	74LS00	IC, quad 2-input NAND	14	
Y1	2.4576 MHz	crystal	n/a	

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n/a	IC sockets	misc.	various	May need to make 64-pin from two 40-pin sockets.
n/a	wire	misc.	n/a	Wirewrap wire
n/a	PCB or protoboard	misc.	n/a	

Power Connections

Identifier	Type	# Pins	Vcc	Ground
U1	555	8	8	1
U2	8 MHz	14	14	7
U3	74LS00	14	14	7
U4	74LS06	14	14	7
U5	74LS04	14	14	7
U6	68000	64	14,49	16,53
U7	74LS08	14	14	7
U8	74LS32	14	14	7
U9	74LS32	14	14	7
U10	74LS32	14	14	7
U11	HM6264	28	28	14
U12	28C64	28	28	14
U13	HM6264	28	28	14
U14	28C64	28	28	14
U15	HM6264	28	28	14
U16	28C64	28	28	14
U17	HM6264	28	28	14
U18	28C64	28	28	14
U19	74LS20	14	14	7
U20	74LS74	14	14	7
U21	74LS161	16	16	8
U22	74LS161	16	16	8
U23	74LS74	14	14	7
U24	74LS260	14	14	7
U25	74LS260	14	14	7
U26	74LS138	16	16	8
U27	25LS2548	20	20	10
U28	74LS148	16	16	8
U29	6850	24	12	1
U30	6850	24	12	1
U31	MC14411	24	24	12
U32	74LS138	16	16	8
U33	74LS138	16	16	8
U34	74LS00	14	14	7

Power Connections

U35	74LS74	14	14	7
U36	74LS27	14	14	7
U37	74LS00	14	14	7