

ICE EM78811 manual

(1)ICE reference

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1. EMC IN CIRCUIT EMULATOR

1.1 Introduction

E8 ICE is intended to provide the product development engineer a powerful microcontroller design tool. The E8 ICE operates on PC compatible 386 and above machines

1.2 System Requirement

1. EGA and above MONITOR.
2. 1M RAM.
3. and above IBM PC compatible machines.
4. In circuit emulator (ICE).
5. PC host ICE control software.
6. 16V 500mA power adaptor.
7. ICE software setup by soft disk: extracted WICE20.ZIP file and run setup.exe.
8. You can get User manual or other software at EMC internet . www.emc.com.tw
9. Customer => download => micro controller (8-bit) => ICE software

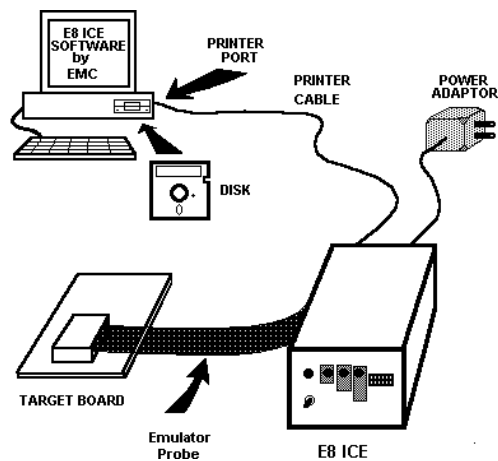


Figure 1.1 ICE Sy stem Configuration

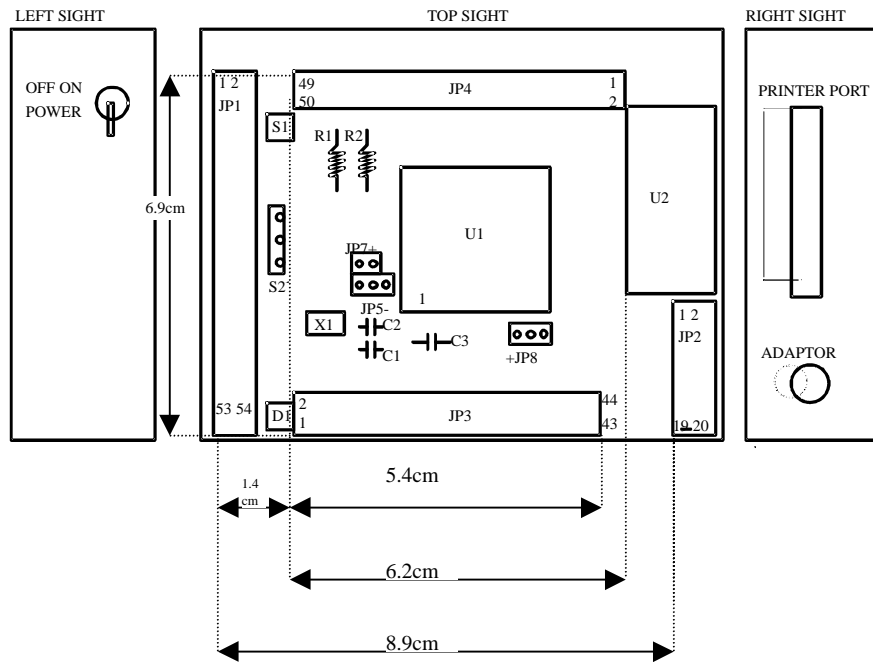


Figure 1.2 ICE Outline

2. Power on the E8 ICE before executing the control software, or an error message due to lack of hardware will appear.
3. E8 - ICE uses the printer port to communicate with host PC. If a user wants to use the printer, it is recommended to install another printer port.
4. Power on switch located on the left side of ICE box. By switching left or right side to turn off or turn on the ICE power.
5. Printer port and the adapter locate on the right side. The ICE connects to personal computer by printer port. The adapter connects to the power. Besure turn power off of ICE before plug in the adapter for avoiding over current which may be burn the chip off.
6. On the top sight, we have four connections and one EM78811 romless chip and some switches. The JP1 and the JP2 connect to the second layer of ICE for the code instruction accessing. The JP3 and the JP4 is more important for ICE user. They are the EM78811 control signals and I/O ports. ICE user can connect these connections to user's application board. The connections are list in Figure 1.3.
7. The U1 is EM78811 romless chip. The U2 is a 32K bytes ROM for on board testing one day by piggyback. If user have developed application code by this ICE. User can use PIGGYBACK (user can buy from EMC) to connect to user's application board with 32 bytes EPROM (27c256). To verify user's program.
8. The S1 is a reset button (for PIGGYBACK). It is used for resetting the target board. The D1 is a LED that indicate power is on or off.
9. X1 is 32.768k crystal. C1and C2 is capacitor 27p. C3 is PLL capacitor. (0.01u .. 0.044u)
10. S2 is a switch for testing .

11. ICE setup. (1)S2 =>32.768K clock (2)X1=> 32.768k crystall (3) J7 open (4)J5 connect VDD or GND (5)J8=>VDD
12. PIGGYBACK setup. (1)S1=>A switch (2)S2=> 32.768k clock (3)J7 short (4)J5 connect to VDD or GND (5)J8 =>GND (6)R1=> 3.7K (7)U2=> 32k byte EPROM (27c256).

(User can use file “*.MIX” which generate by WICE for masking EPROM . The *.mix file is a binary file and addressing from zero.)

13. JP5 is a /POVD option. User can connect to VDD (disable) or GND (enable).
14. The romless chip's 160 pin is the option of main clock (MCLK). The main clock is 3.68MHz when this pin open. And the main clock is 1.84MHz when this pin connect to VDD (159 pin). User can scope the frequency at JP1 pin13.
14. RUN WICE software to enter ICE environment.

	pin	Name	pin	Name	pin	Name	pin	name	pin	Name
JP3	1	GND	11	SEG2	21	SEG12	31	SEG22	41	SEG32
	2	GND	12	SEG3	22	SEG13	32	SEG23	42	SEG33
	3	DTMF	13	SEG4	23	SEG14	33	SEG24	43	VDD
	4	R-TIME	14	SEG5	24	SEG15	34	SEG25	44	VDD
	5	DET1	15	SEG6	25	SEG16	35	SEG26		
	6	NC	16	SEG7	26	SEG17	36	SEG27		
	7	RING	17	SEG8	27	SEG18	37	SEG28		
	8	TIP	18	SEG9	28	SEG19	38	SEG29		
	9	SEG0	19	SEG10	29	SEG20	39	SEG30		
	10	SEG1	20	SEG11	30	SEG21	40	SEG31		
JP4	1	SEG34	11	PORT60	21	PORT72	31	SEG40	41	PORT86
	2	SEG35	12	PORT61	22	PORT73	32	SEG41	42	PORT87
	3	COM0	13	PORT62	23	PORT74	33	SEG42	43	PORT90
	4	COM1	14	PORT63	24	PORT75	34	SEG43	44	PORT91
	5	COM2	15	PORT64	25	PORT76	35	PORT80	45	PORT92
	6	COM3	16	PORT65	26	PORT77	36	PORT81	46	PORT93
	7	COM4	17	PORT66	27	SEG36	37	PORT82	47	PORT94
	8	COM5	18	PORT67	28	SEG37	38	PORT83	48	PORT95
	9	COM6	19	PORT70	29	SEG38	39	PORT84	49	PORT96
	10	COM7	20	PORT71	30	SEG39	40	PORT85	50	PORT97

Figure 1.3 ICE Connection