



Feature

1. Program debugging function by PC
2. Software
 - TURBO-C 2.0 or later
 - Support Startup Code
3. Program download and trace function
4. Display the register contents
5. Memory contents modification and dump function
6. Various Command function
7. Included stepper motor interface circuit
8. DOT MATRIX unit
9. LCD display unit
10. D/A and A/D converter experiment
11. Sound experiment with Speaker
12. Interrupt experiments
13. Thermistor Sensor
14. Bar LED unit
15. Key board experiment
16. External interface connector
17. Display the current BUS status on LED
18. +5V, +12V, -12V 의 S.M.P.S (Free Voltage) Power
19. Aluminum case


Specification

CPU	8086
MAIN RAM	64KB (62256 x 2)
MONITOR ROM	64KB (27256 x 2)
DISPLAY UNIT	LCD (16 x 2 LINE)
I/O PORT	8255A
SERIAL PORT	RS-232C (8251A x1)
SYSTEM CLOCK	14.7456MHz
CLOCK GENERATOR	8284 (CLOCK GENERATOR)
INTERRUPT CONTROLLER	8259
TIMER CONTROLLER	8253
LEVEL METER	HG101A
DOT MATRIX LED	8 x 8 (2COLOR)
SOFTWARE	8086 ASSEMBLER
	SUPPORT C-LANGUAGE EXAMPLE PROGRAM
	MDA-WinIDE8086 Integration Development Environment Program
KEY BOARD	16 hexadecimal and 10 function keys
System BUS indicator	LED(3 ϕ) x 12
Extended Connector	System BUS : 62 pins
	External interface : 20 pins
Stepper motor interface	Driver T.R x 4
A/D, D/A Converter	ADC ADC0804
	DAC DAC0800
POWER	Input : AC 85~264V Output : DC +5V(3A), +12V(1A), -12V(500mA)
Board size (mm)	310 x 265
Case size (mm)	400(W) X 320(D) X 140(H) \pm 10(mm)
Weight	4 Kg
Accessories	1. Example Software CD : 1 Set
	2. RS-232C Cable : 1 ea
	3. User's manual : 1 Book
Remark	1 year warranty

* Above product can be changed for improving capability without notice

The screenshot shows the MDA-WinIDE8086 environment. On the left, a C program is displayed in a text editor. The program includes a main function with a loop that toggles an LED, a function named 'fnd' that prints data to PPI1_A, and a 'matrix' function that prints data to PPI2_C. On the right, a terminal window shows the execution output, starting with '8086 >L' and 'Down load start !!', followed by a long list of hexadecimal memory addresses and values, and ending with 'OK Completed !!' and '8086 >G'.

```

C:\Wmda\W8086\W8086C\WTest8086.C
{
    led = led << 1;
    if( led == 0x10 ) led = 0x01;
    outportb( PPI1_B, led );
    delay(5000);
}

void fnd(void)
{
    if( *data1 != 0x00 ){
        outportb( PPI1_A, *data1 );
        delay(30000);
        data1++;
    }
    else {
        data1 = data;
    }
}

void matrix(void)
{
    if( index == 8 ){
        index = 0;
        dot = 0x01;
    }
    else {
        outportb( PPI2_C, dot );
    }
}

```

```

8086 >L
Down load start !!
:20100000B8000F8C08E0D0E1E300081C3000888E3BA24018EAD8E000
:20102000FCF3A48E833CBF3000B930002BCF7402F3AAE88300FAE8FE3
:20104000E81DB8020050E83014444A9800075F28A0498508040050E8
:201060003C0075DE5E5DC3558E8C8B56068B460483E0401835E0600B
:20108000EC568B7604E2AB8020050E86E01444A9800075F28A049850
:2010A00093C404463308B10275250E897F83C404803C0075D13E50E8
:2010C000E8640189C40433D2B964095250E897F83C404803000503C0
:2010E00033D2B80A05250E8970FF83C4048030005033C050E8300183C4
:2011000050E863FF83C4048020050E8EE0444A9800075F283C00050
:20112000C4048020050E8D300444A9800075F28060005033C050E8E0
:2011400050E8B800444A9800075F2801005033C050E8D20083C40480
:2011600044A9800075F280C005033C050E887083C40480E0050E804
:20118000E7900444A9800075F28C0005033C050E8930083C40481F0
:2011A000B8020050E8350044A9800075F280005033C050E86F0083
:2011C0005250E8A2FE83C4048020050E8E2D00444A9800075F280F00
:2011E00083C40433D2B8204E5250E87A7E83C404E8AEC3558E8C8B5604
:201200005604EC32E45DC3558E8C8B5604E5DC3558E8C8B5604EC32E4
:20122000048B4606E8F5DC3558E8C8B56048A4606EE3DC3558E8C8B5604
:201240008E8C8B56048A4606EE32E45DC30053657269616C206D6F6E69
:1012600044412D57696E383038362048697421005F
:00
OK Completed !!
8086 >G
Execute Address = 0000:1000
COM1 baud=9600 Parity=N data=8 stop=1

```

MDA-WinIDE8086 Program

Experiment List

- LED Display Experiment
- FND Display Experiment
- DAC Experiment
- Bar LED Display Experiment
- ADC Experiment
- PIT&INT Experiment
- 8253 Interface Experiment
- Sound Experiment
- 8255 Interface Experiment
- 8X8 DOT Matrix Display Experiment
- 8251 Interface Experiment
- Text LCD Display Experiment
- Keyboard Interface Experiment