

DLite 1.5 Quick Start

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Before you begin

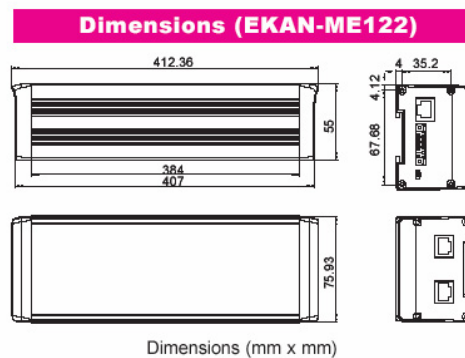
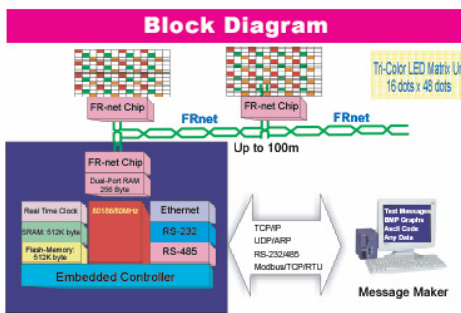
Please check your computer equipped with RS-232 and Ethernet interface connector, and your computer is running Windows 98 or later version.



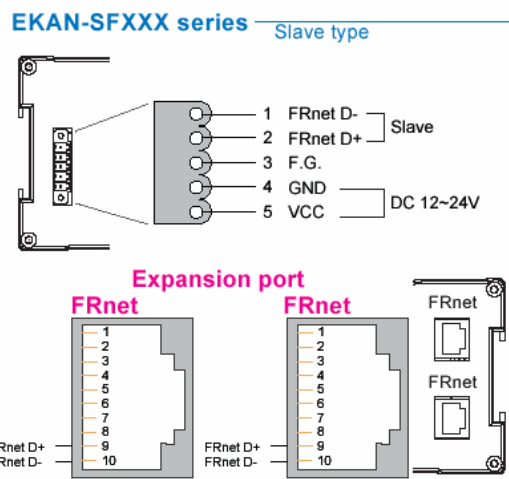
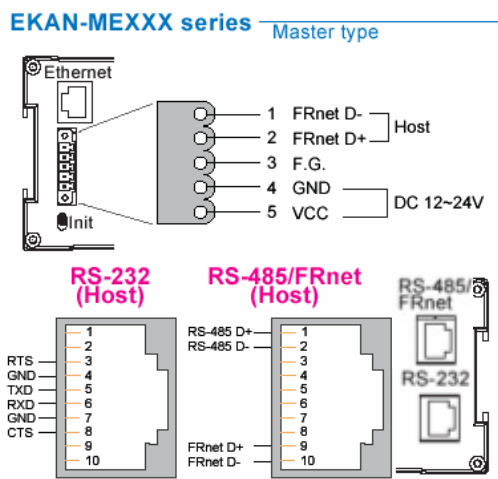
If your computer don't have RS-232 connector

Some of the new computer don't equipped with RS-232 communication port. If your computer has USB port, you can try to find a USB to RS-232 cable from nearby computer shop.

Web-Enabled LED Display



Pin Assignment



Check DLite 1.5 Items

DLite version 1.5 package including following items:

- EKAN LED display master module
- RJ45 to Null Modem cable
- DLite 1.5 software driver CD-ROM
- Quick Start guide

Please contact local ICPDAS dealer, for more selective option for EKAN LED display.



Different between **master** module and **slave** module

EKAN mater module can use “**Daisy Chain**” to link EKAN slave module. Mater module equipped with 7186 embedded controller board and FR-net control chip made by ICPDAS, and can control up to 31 slave modules. Slave module only equipped with FR-net chips and LED display module.

Slave module ordering information

Ordering Information

Master Type with Dlite SDK software

Model Name	Pixel Matrix	Display(mm) Dimensions	Dots of Char	Max Chars (8x8)	Power Consumption (max)
EKAN-ME122	16 x 96	6.4 x 384	English 8 x 8 or 16 x 8	2 x 12	48W@24VDC
EKAN-ME124	16 x 192	6.4 x 768		2 x 24	90W@24VDC

Slave Type (Expansion)

Model Name	Pixel Matrix	Display(mm) Dimensions	Dots of Char	Max Chars (8x8)	Power Consumption (max)
EKAN-SF121	16 x 48	6.4 x 192	English 8 x 8 or 16 x 8	2 x 6	22W@24VDC
EKAN-SF122	16 x 96	6.4 x 384		2 x 12	45W@24VDC
EKAN-SF124	16 x 192	6.4 x 768		2 x 24	85W@24VDC

Note: Call manufacturer for Custom design

Chapter 1 DLite 1.5 hardware setup

1-1 Hardware installation

After you open the DLite 1.5 package, please follow the steps to install and test hardware device.



The default IP address of DLite

Default IP address of DLite is 192.168.0.xx before you connect LED display's to your network, please make sure there is no other device using the same IP in the network right now. You could use **init switch** (need 10 seconds to reset) to reset factory setting of DLite display.

Step 1: Connect the Ethernet with the RJ-45 connector network cable with Null modem cable

Step 2: Please connect the power (+24 at right end, shows in figure) cable to LED device

Step 3: Power on the LED device

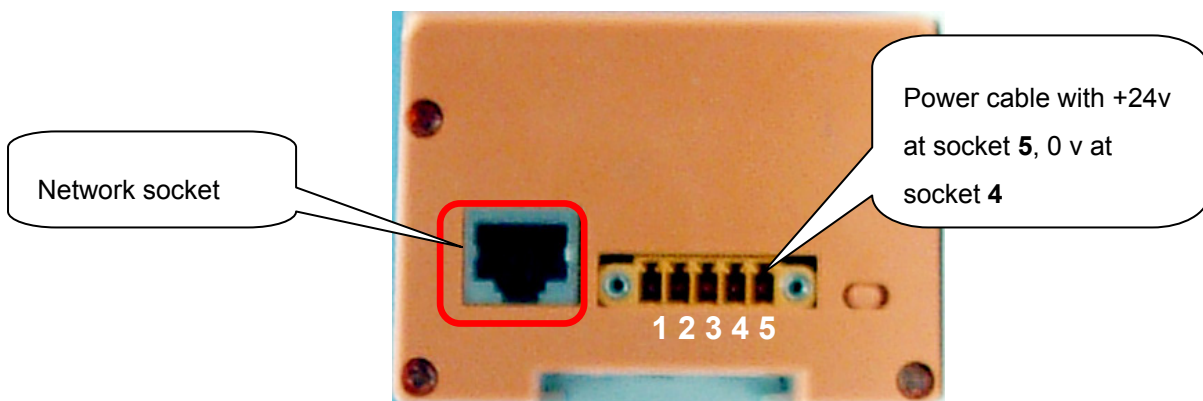


Fig 1-1

After power on the LED, The LED display screen will show the welcome message of DLite and the IP address, and the date/time information inside the LED operating system.

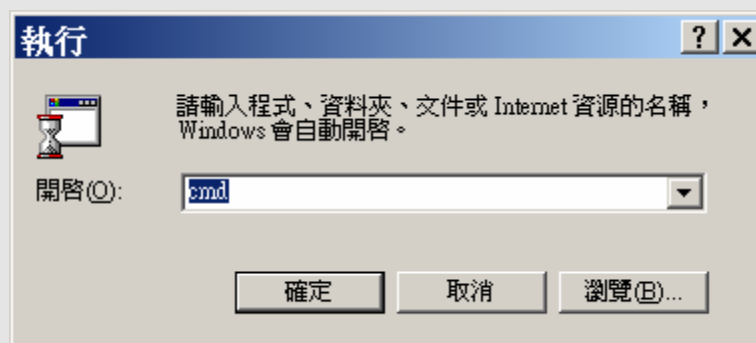
Step 4: The default welcome message will be shown on DLite 1.5



How to avoid IP conflict

Before you turn on the power of DLite 1.5, if you are not sure about is there have another network device using the same IP address? You could enter the windows command mode and using command “ping 192.168.0.xx” (xx is your LED ip address) to detect is other network device using the same IP address now?

1. From [Start] Menu, Select [Run] then input “cmd”



2. Input the command “ping 192.168.0.xx” (xx is your LED IP address)
3. Check is any device in the network. “Request time out” means no device using that IP address now.

```
C:\WINNT\system32\cmd.exe
Microsoft Windows 2000 [版本 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

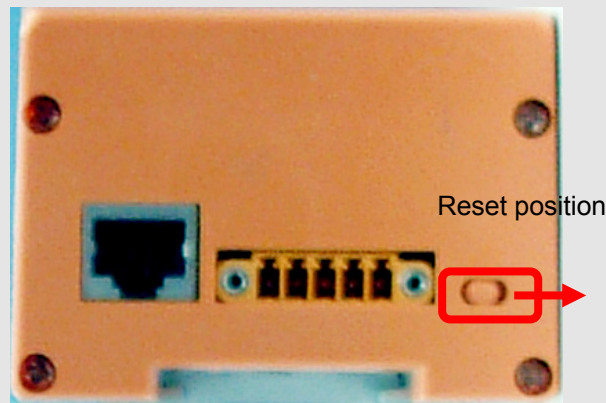
C:\Documents and Settings\Neng-Yu Tu>ping 192.168.100.99

Pinging 192.168.100.99 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.
```

STOP **How to soft reset DLite firmware**

You can use the init switch to reset DLite display into factory preset mode. The **init switch** is located at same side of network socket. You can switch to network socket side for **10 secs**, than the DLite will clear all message and configuration data, and then into factory preset mode. Please remember **switch the init button back after soft reset**.



1-2 DLite 1.5 firmware Configuration Program

EKAN LED display device is using ICPDAS MiniOS7 as operating system, you can use MiniOS7 utility or 7188xw program to configure the DLite 1.5 or update system image in the flash memory via RS-232 cable. You can download the program from the ICPDAS website, the address is:

"ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/minios7/utility/".

Same directory path is under CD-ROM folder.

After MinOS7 installation finished, you could see "7188E" entry item on the windows menu.

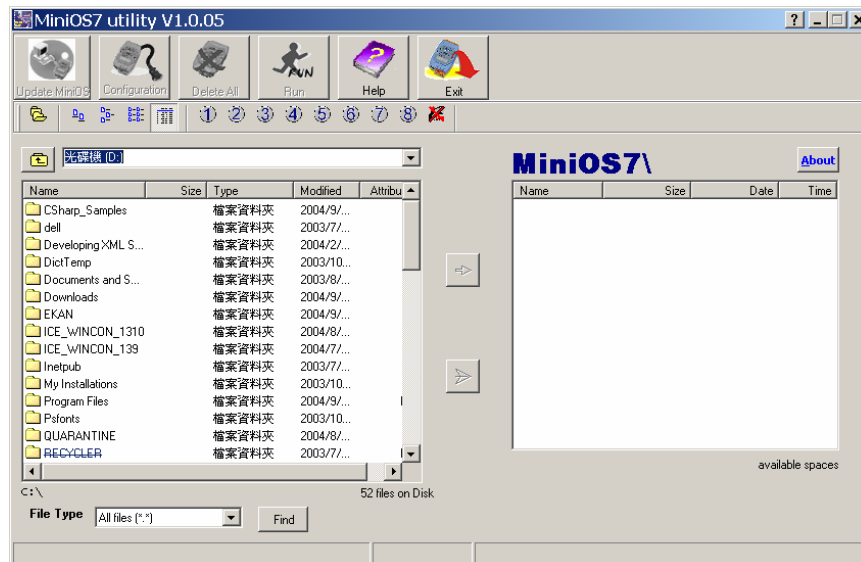


Fig 1-4: ICPDAS MiniOS7 configuration program

Detail about how to use those program and steps, please refer to **1-3** for further information.

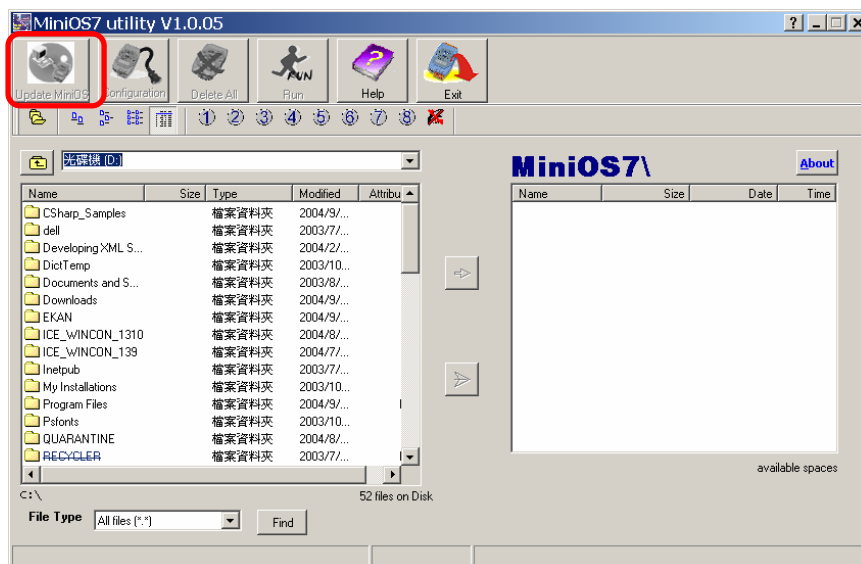
Caution: Improper updating firmware may cause serious damage to your data on LED. Please contact your local dealer for firmware update/maintain service.

Chapter 2 DLite 1.5 LED firmware installation

2-1 Operating system image update on DLite LED

DLite 1.5 comes with lkit.exe and 3 other files installed on LED module. All system files needed were installed on disk B.

If you need to update your LED system image, you can contact your local dealer for help, or using the MiniOS7 utility comes with ICPDAS installation CD-ROM to install it.



Using MiniOS7 utility to update your system image

Detail information please refers to the MiniOS7 online document.

By Default, The DLite 1.5's program is using about 145 Kbytes of total 512Kbytes flash memory to storage files, including necessary autoexec.bat and system font.

2-2 System configuration on DLite 1.5

If you need to make further configuration, you could using ICPDAS 7188xw DOS mode command to configure your system. You can copy the program to your working directory, and simple click the icon to start the program.

Here is part of MiniOS7 command list and command sample:

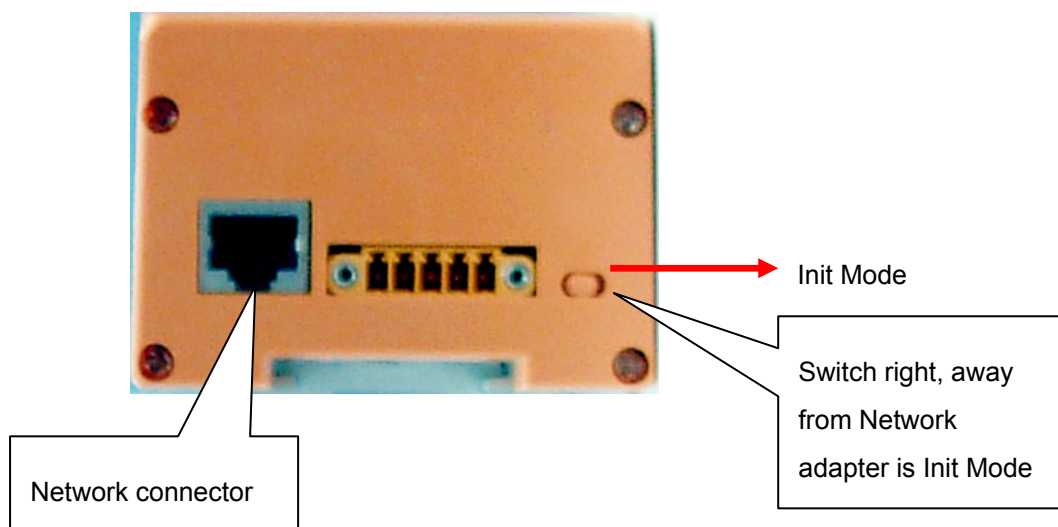
Command	Function	Example
Time	Set the system time	Time 00:00:00
Date	Set the system date	Date 2004/09/12
Time Init	Initial system clock after changing battery	Time init
disksize	Partitioning the flashsize into 2 disk, disksize 6 1 means first disk is 64kb*6, second one is 64kb*1	Disksize 5 2
Del	Delete file on disk A	Del .
Delb	Delete file on disk B	Delb .
Loadb	Load file to disk B	loadb
IP	Show current IP or set IP	IP IP 192.168.0.100
Mask	Show current IP mask or set IP mask	Mask Mask 255.255.255.0
Gateway	Show current IP gateway or set IP gateway	Gateway Gateway 192.168.0.1

2-3 Restore DLite system on LED device

Here is the complete step by step guide to restore DLite 1.5 system on LED device:

Step 1: Turn off the LED display power

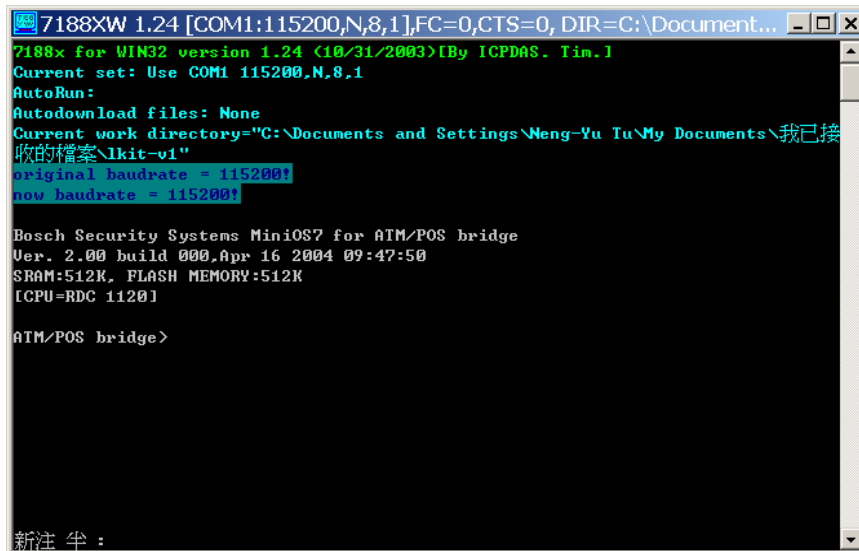
Step 2: Setting the device into init mode.



Step 3: Connect RS-232 cable to your PC COM port 1 and LED device RS-232 Port with Null modem connect cable.

Step 4: Start the 7188xw program from the directory that have "lkit.exe", "ascfont2.15", "autoexec.bat" "index.htm" files.

Step 5: Power up the LED device, 7188xw program will communication with LED device.



```
7188XW 1.24 [COM1:115200,N,8,1],FC=0,CTS=0, DIR=C:\Document...
7188x for WIN32 version 1.24 (10/31/2003) [By ICPDAS. Tin.1]
Current set: Use COM1 115200,N,8,1
AutoRun:
Autodownload files: None
Current work directory="C:\Documents and Settings\Neng-Yu Tu\My Documents\我已接收的檔案\lkit-v1"
original baudrate = 115200!
now baudrate = 115200!

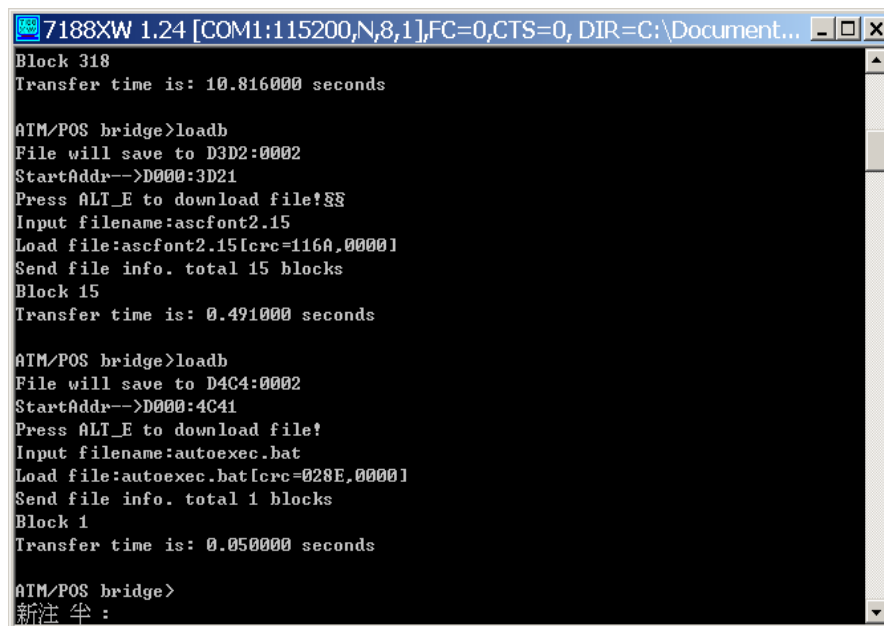
Bosch Security Systems MiniOS7 for ATM/POS bridge
Ver. 2.00 build 000, Apr 16 2004 09:47:50
SRAM:512K, FLASH MEMORY:512K
[CPU=RDC 1120]

ATM/POS bridge>
新注半:
```

7188 program communicates with LED device

Step 6: Using the "disksize 5 2" command to partition the flash disk on LED device. And "del ." and "delb ." to delete all files on disk A and Disk B.

Step 7: use "loadb" and Alt + E command to load the LED system file into LED. There are total 4 system files need to make LED work. They are "autoexec.bat", "ascfont2.15", "index.htm" and "lkit.exe" system files.



```
7188XW 1.24 [COM1:115200,N,8,1],FC=0,CTS=0, DIR=C:\Document...
Block 318
Transfer time is: 10.816000 seconds

ATM/POS bridge>loadb
File will save to D3D2:0002
StartAddr-->D000:3D21
Press ALT_E to download file!SS
Input filename:ascfont2.15
Load file:ascfont2.15 [crc=116A,0000]
Send file info. total 15 blocks
Block 15
Transfer time is: 0.491000 seconds

ATM/POS bridge>loadb
File will save to D4C4:0002
StartAddr-->D000:4C41
Press ALT_E to download file!
Input filename:autoexec.bat
Load file:autoexec.bat [crc=028E,0000]
Send file info. total 1 blocks
Block 1
Transfer time is: 0.050000 seconds

ATM/POS bridge>
新注半:
```

Using "loadb" to upload DLite 1.5 system files

You can use "dir" command to see those files being to loaded at diskb

Step 8: Turn off the EKAN LED display power, switch off the init mode, then turn the power, restart DLite 1.5 system.

For detailed system command list, you could check the CD-ROM comes with LED, or check ICPDAS website:

<ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/7188e/minios7/doc/eng/index.htm>

2-4 Trouble Shooting

There might be some problems happened during the set up process, this chart list some problem might happened, and the solution.

Problem	Reason might cause this problem	Solution
This LED display just black	Not correct connect cable	Check the power cable is connected correctly
Part of the LED panel is full of noisy mixed color	Device in the configuration mode	Please switch to Run mode. To understand initial process, please read Appendix A or 7188 menu on the CD-ROM
LED panel blinking with noise	Improper connecting FR-net cable or power cable to the LED device	Check the power cable or the FR-net cable of the device
LED panel freeze the text	Lost FR-net connection, It play alert message, or didn't clean play message after online mode. Or you are in the online mode. Please using Web interface to input a empty Alert (emergency message) on the LED	Check the FR-net cable or re-power up the system. Please using Web interface to input a empty Alert (emergency message) on the LED or Use DLite API to remote clear the message on the screen.
Last LED panel in the panel array is blinking with noise signal	The voltage or current is too low to power up LED device, or the cable fail inside the LED device	Check the power unit or the cable inside the LED device

Chart 1-1 Trouble shooting

Chapter 3 DLite 1.5 software Installation

3-1 Check your system requirement

The system requirement suggested by DLite 1.5 program is shown as follow:

Operation system version: Windows 2000 or higher

CPU: Pentium II 350Mhz or higher

RAM: 128MB or higher

Display: Standard display

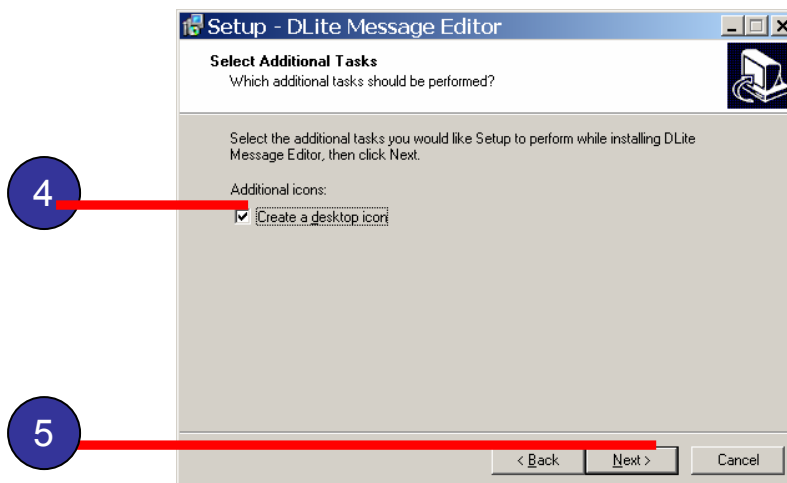
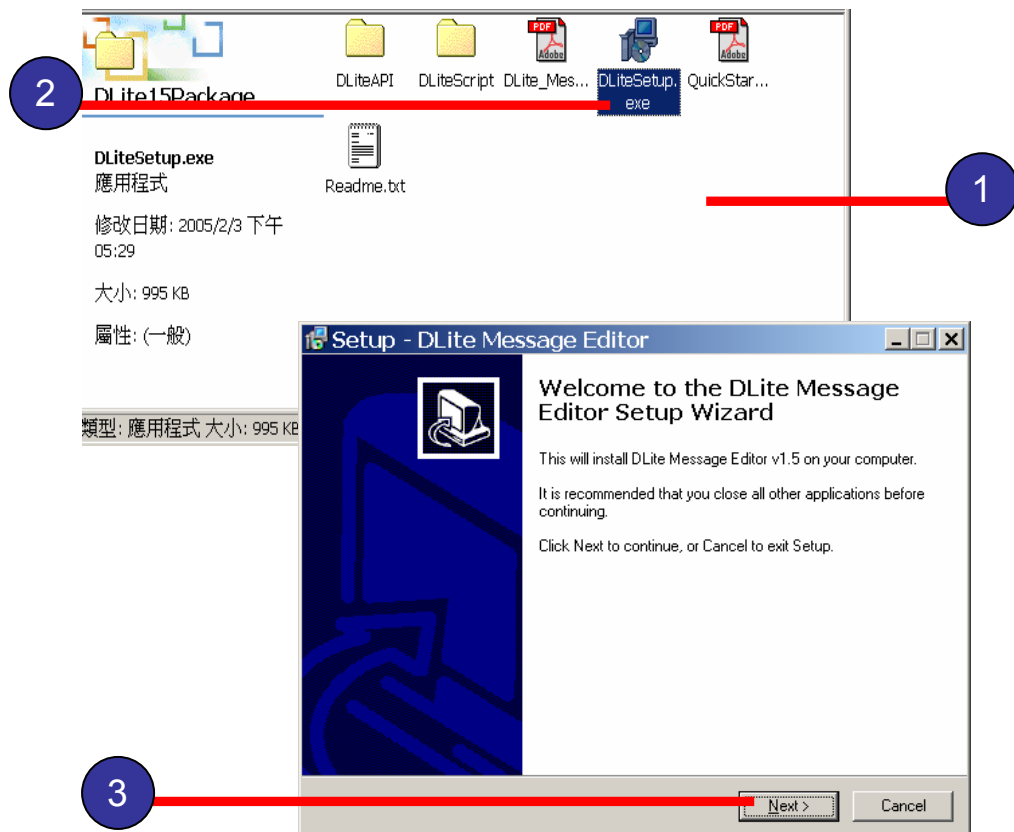
Disk space needed: 5 MB or Higher

3-2 DLite 1.5 program Installation

Please browse the CD-ROM DLite directory to install learning kit software.
You can use simple drag and drop to finish

Step 1: Find the DLiteSetup.exe from your CD-ROM

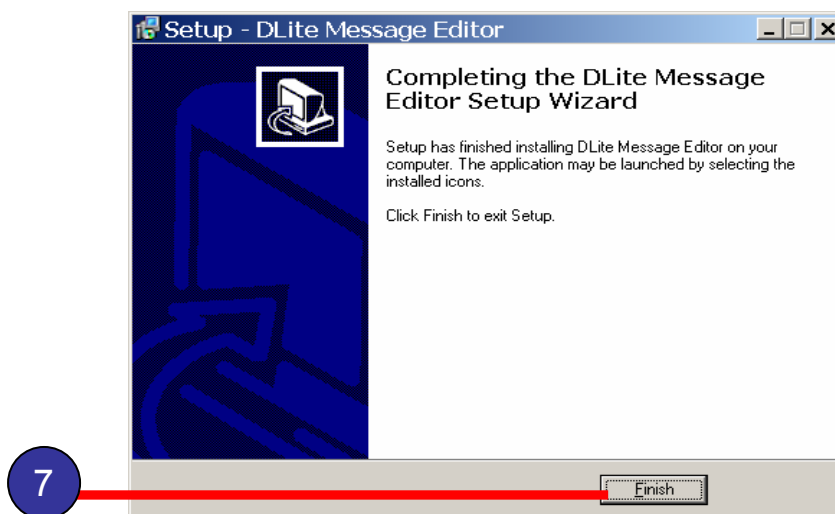
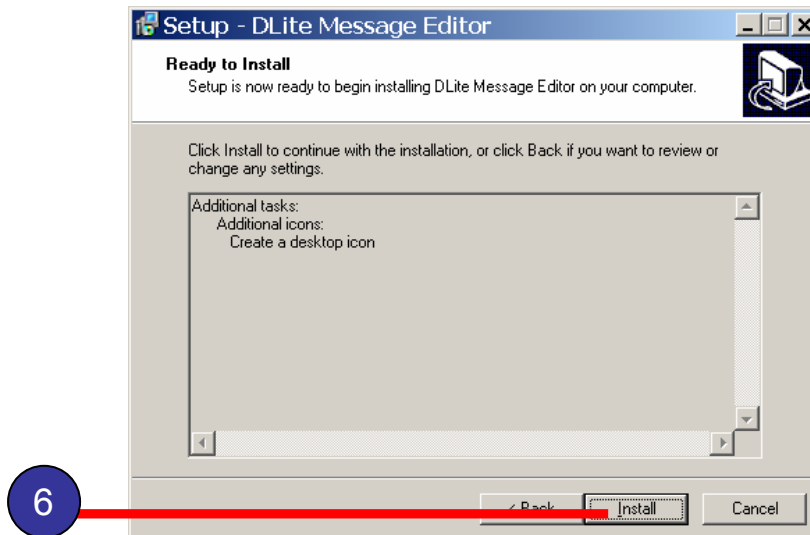
Step 2: Double click the DLite, start installation process.



Step 3: Press **[Next]** to start installation process.

Step 4: Please select create desktop icon, if you want start the program directly from desktop.

Step 5: Click **[Next]** to continue installation progress.



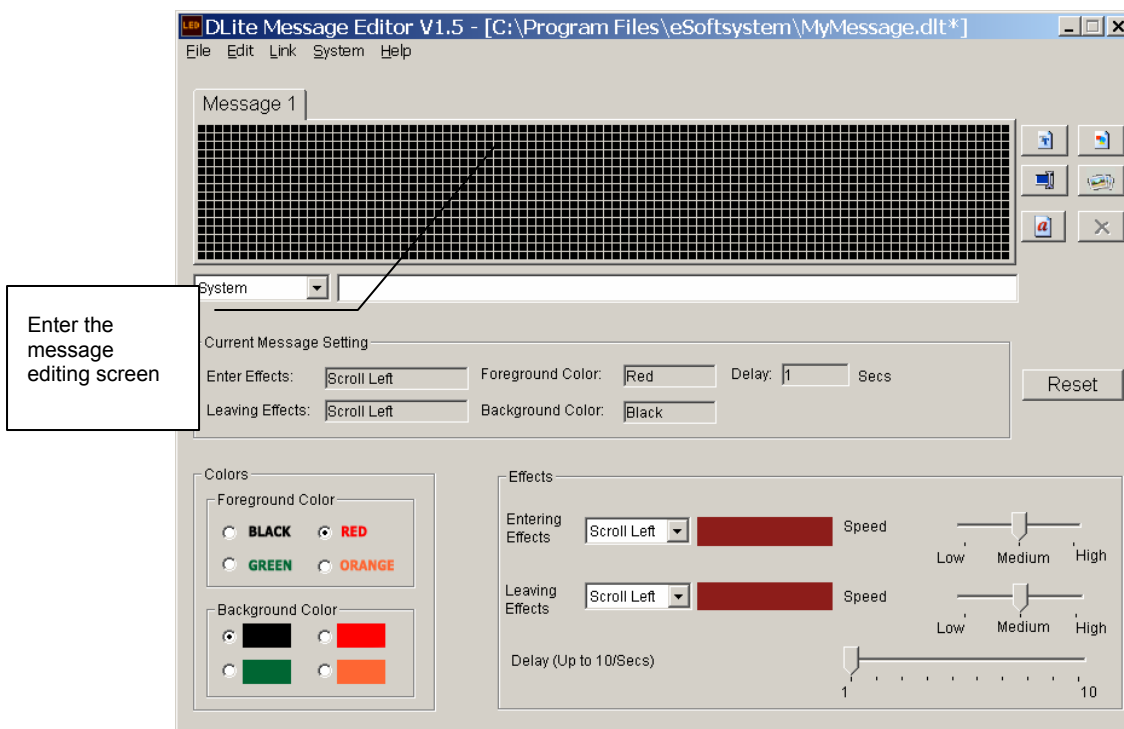
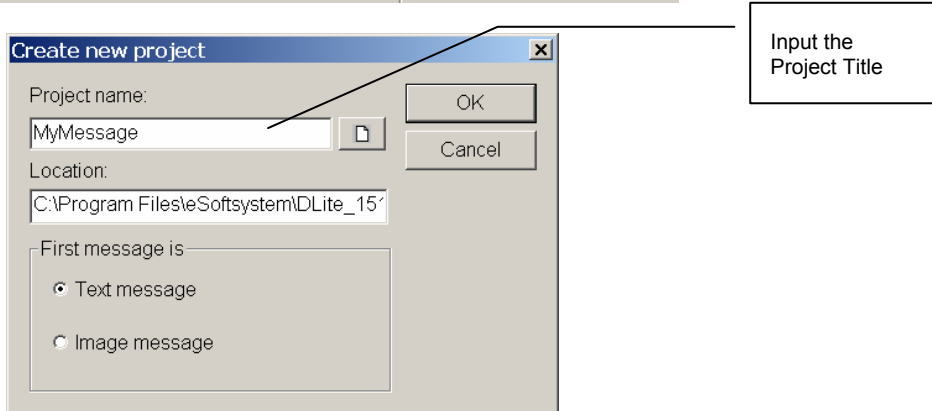
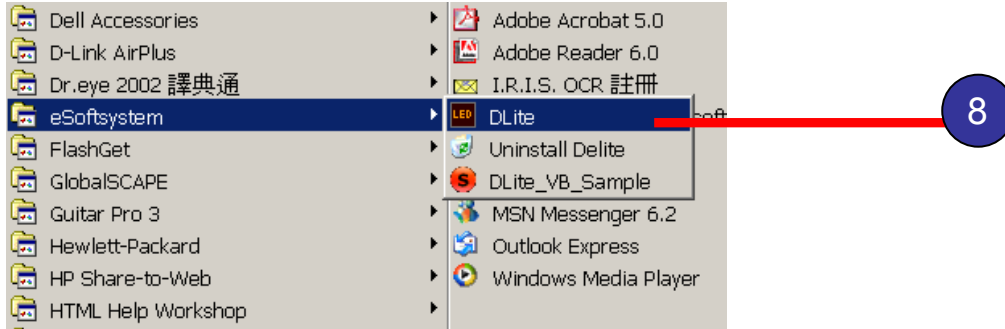
Step 6: Click **[Install]** to start installation.

Step 7: Click **[Finish]** to finish the software installation.

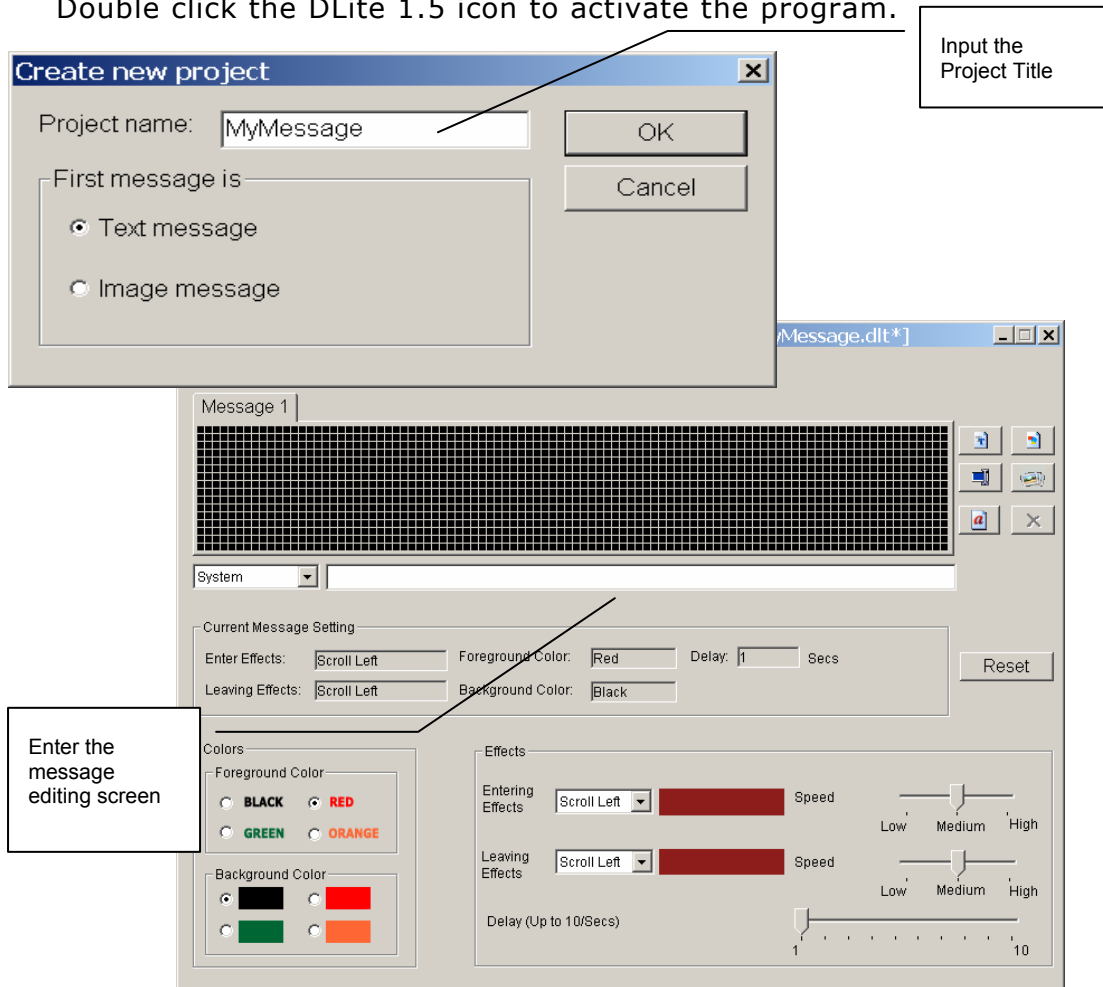
The DLite message software will be installed under \Program Files\eSoftsystem\DLite.exe. After installation process complete, you could see the icon on the desktop and the Start Menu.

Icon will show on the installation directory and desktop.

Step 8: Click the DLite icon to on the [Start] menu [Program/eSoftsystem/DLite] to activate the program.



Double click the DLite 1.5 icon to activate the program.

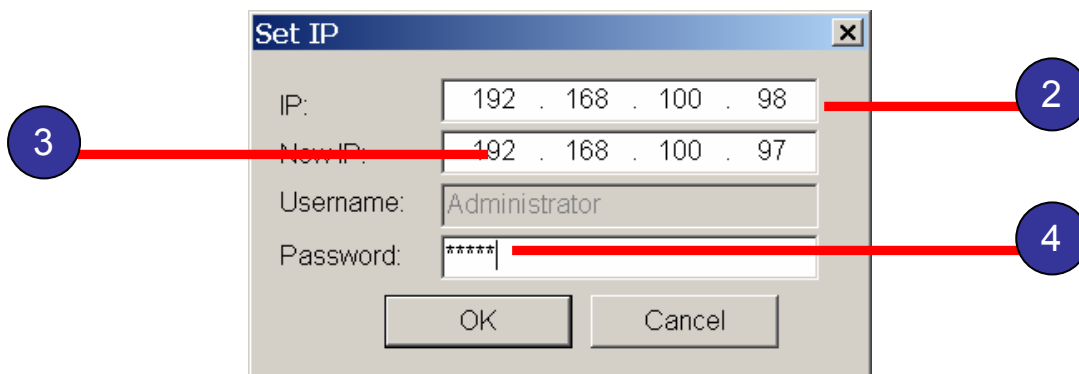
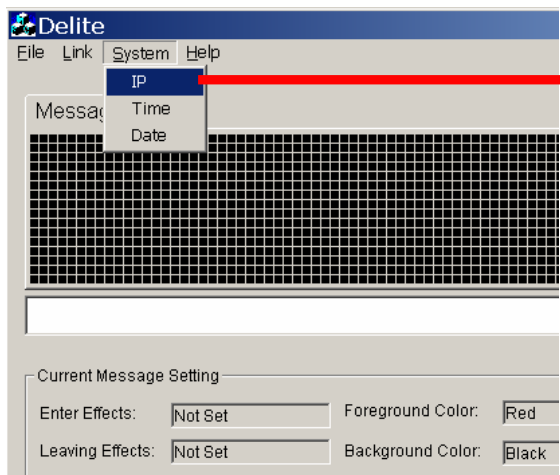


DLite 1.5 user interface

3-3 TCP/IP Setting

You could use the DLite 1.5 to modify original IP setting, please select the **[System]** from the file menu, then select **[IP]** command to setup IP address and other system setting.

If have IP conflict problem with other network device within your network, you could use DLite 1.5 program to modify the IP setting, Please select the **[System]** then the **[IP]** to modify the IP address setting.



Step 1: Select the **[System]** then the **[IP]**

Step 2: Enter **old** IP address

Step 3: new LED module IP address

Step 4: Input the default password 'admin' Press [OK] to connect the dialog box



About Date and Time setting for LED device

You can also set Time/Date function using DLite 1.5 message editor or ICPDAS utility, like 7188xw or MiniOS7 utility. Or you can use <http://your LED IP> then enters the **option** page to set up LED (Looks like <http://192.168.0.100/cgi-bin/options>).

Chapter 4 Web message editor

4-1 What is web message editor?

Web browser is most common type of user interface that access internet or intranet resource nowadays. DLite also provides Web interface to access message and management function. You can post newest message or update system configuration via TCP/IP network with the Web browser like Internet Explorer.

4-2 Edit and update message using web browser

Before you using the Web Interface, you should make sure the network you use should be properly configured. If you access the LED via local lan environment, here is the simple check list:

- The IP address of DLite LED
- Mask setting
- Your computer's IP setting
- Your computer's mask setting

You can use ping command to make sure that DLite LED's IP address.

DLite LED Web Messenger							
Messages List							
No	Entering Effects	Message Text (max. 30 chars/slot)	Delay (Sec)	Leaving Effects	Fore Ground Color	Back Ground Color	Speed
1	SCROLL LEFT ▾	My First Message	1 ▾	SCROLL LEFT ▾	Green ▾	Black ▾	Normal ▾
2	SCROLL LEFT ▾		1 ▾	SCROLL LEFT ▾	Green ▾	Black ▾	Normal ▾
3	SCROLL LEFT ▾		1 ▾	SCROLL LEFT ▾	Green ▾	Black ▾	Normal ▾
4	SCROLL LEFT ▾		1 ▾	SCROLL LEFT ▾	Green ▾	Black ▾	Normal ▾
5	SCROLL LEFT ▾		1 ▾	SCROLL LEFT ▾	Green ▾	Black ▾	Normal ▾
6	SCROLL LEFT ▾		1 ▾	SCROLL LEFT ▾	Green ▾	Black ▾	Normal ▾
7	SCROLL LEFT ▾		1 ▾	SCROLL LEFT ▾	Green ▾	Black ▾	Normal ▾
8	SCROLL LEFT ▾		1 ▾	SCROLL LEFT ▾	Green ▾	Black ▾	Normal ▾
9	SCROLL LEFT ▾		1 ▾	SCROLL LEFT ▾	Green ▾	Black ▾	Normal ▾
10	SCROLL LEFT ▾		1 ▾	SCROLL LEFT ▾	Green ▾	Black ▾	Normal ▾
RESET		UPDATE MESSAGES					

1. Please input " http://192.168.0.xx " (xx is your ip address) on your browser
2. Wait for the web page download
3. Message input interface

- Input the message**
- Select scroll-in effects**
- Delay of the message**
- Select scroll-out effects**
- The color of the message text**
- The speed for display**

After you change the setting, you could simply click the UPLOAD button to upload the message setting you just made.

You will see the message on the LED display after you successfully upload.



You can modify the HTML page if needed

DLite 1.5 using standard HTML file for the message input, you can edit the HTML file by standard HTML editing tools. If you familiar with http protocol, you can direct send http command to CGI program to bypass the html page to update the message.

4-3 Priority message (Instant message)

Priority message can be treated as some kinds of emergency message or alert message. After you upload the priority message, It will interrupt current display immediately, then loop the message if needed.

You could input the priority message at bottom of each message process page.

Instant Message							
Repeat	Entering Effects	Message Text (max. 30 chars)	Delay (Sec)	Leaving Effects	Fore Ground Color	Back Ground Color	Speed
1	BLINK		1	BLINK	Red	Black	Normal
RESET		INSTANT MESSAGE					

Priority message have 2 different states, first one will only play priority message once, and second one will loop play priority message until upload new messages.



Let LED return message play list

You can send a “**blank**” message on the instant message field, and then the LED will clean the message on the LED display and back to message play list.

4-4 System Management function

Bottom of DLite Web Messenger has a option link, to the system configuration page, you can change the following setting:

DLite LED Options				
System Setting				
No	Description	Current Value	Setting Value	Examples (Def.)
1	IP Address	192.168.0.94	<input type="text" value="192.168.0.94"/>	192.168.0.94
2	Netmask	255.255.255.0	<input type="text" value="255.255.255.0"/>	255.255.255.0
3	Gateway	192.168.0.1	<input type="text" value="192.168.0.1"/>	192.168.0.1
4	HTTP port	80	<input type="text" value="80"/>	80
5	Anonymous Login	Yes	<input type="text" value="Yes"/>	Yes
6	Password	admin	<input type="text" value="admin"/>	admin
7	Date	2005/1/29	<input type="text"/>	2000/01/01
8	Time	9:19	<input type="text"/>	00:00:00
9	LED Modules	2	<input type="text" value="2"/>	2
10	Default Mode	Basic	<input type="text" value="Basic"/>	Basic
11	Memo	SYSTEM DEFAULT	<input type="text" value="SYSTEM DEFAULT"/>	SYSTEM DEFAULT
		<input type="button" value="RESET SETTINGS"/>	<input type="button" value="UPDATE SETTINGS"/>	

Function name	Default value	Description
IP address:	192.168.0.100	Set the LED master module IP address
Mask:	255.255.255.0	Set the LED master module IP mask

Gateway:	192.168.0.1	Set the LED master module gateway address
Web port:	80	Set the LED master module port for web configuration interface. Default port is 80 for HTTP protocol, you may change if needed.
Anonymous Login:	Yes	Is allowing anonymous user to login into system. The DLite 1.5.57 is always "yes".
Password Setting:	admin	Set the password of API/Web login interface.
Date Setting:		Set Date, format is "2005/12/10".
Time Setting:		Set Time, format is "22:12:10"
LED module used:	2	Current LED panel number connected to the EKAN LED display. Default module is 2 LED panel, maximum number is 8 (8 LED panels).
Default Mode:		Not used in DLite 1.5
Memo:		User could write the memo for system setting.

RESET SETTINGS:		The Web page will reset the web page data to initial web page value.
UPDATE SETTINGS:		Update the setting to EKAN system.

And You can see following system information on the page:

System Information	
DLite Firmware Version	v1.5.57
Support Fonts	8x16, 5x7 ASCII



You can direct connect CGI page if needed

The option page located [http://192.168.0.100 \(Your IP Address\) /cgi-bin/options](http://192.168.0.100 (Your IP Address) /cgi-bin/options) you can direct connect this address to modify your pages. If you familiar with http protocol, you can send required parameter to set the system setting.

About eSoftsystem Corp.

eSoftsystem Technology Corp. is the most innovative embedded solution provider. It has built up a team of world experts in embedded software and hardware systems to provide customer high-performance and high-quality embedded solution product and services.