

Web-Enabled LED Display

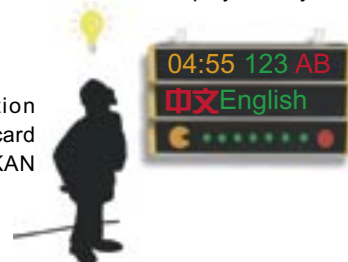


EKAN Display open a new Era of Visual Management Communication

LED displays are seen everyday as building communication system, transportation information displays, for advertising in front of the store. Due to very limited functions and difficult-to-use, LED display isn't so popular and widely used. Our innovative EKAN series LED display overcomes those drawbacks of traditional LED display and open a new Era of Visual Management Communication. The EKAN display can help the manager communicate with employees anywhere and anytime.

Visual Communication can be Bi-Direction

Since Master-type EKAN embedded a μ PAC (Programmable Automation Controller), many devices can be connected, such as keypad, Barcode reader, card reader, and temperature-sensor, PLC... etc. All those devices can upgrade EKAN display from one-way communication to bi-direction communication.



Outstanding Features

The EKAN display features web-enable capability, cost-effective, easy programming, easy installation, software configurable multi-display, diversified text and image display, compact size, and optional fieldbus. We provide Dlite SDK for EKAN display. The user can use Dlite SDK to integrate EKAN display to their system easily.

Applications

- Office Automation
- Factory Automation
- ATM, Kiosk, Vending Machine display
- Display for Data acquisition system
- Game and Lottery machine
- Restaurant Automation
- Hotel Automation
- Fast food Automation
- Machinery & Equipment display
- Transportation message display
- Campus Message Display



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EKAN Display revolutionizes the Factory Automation Industry

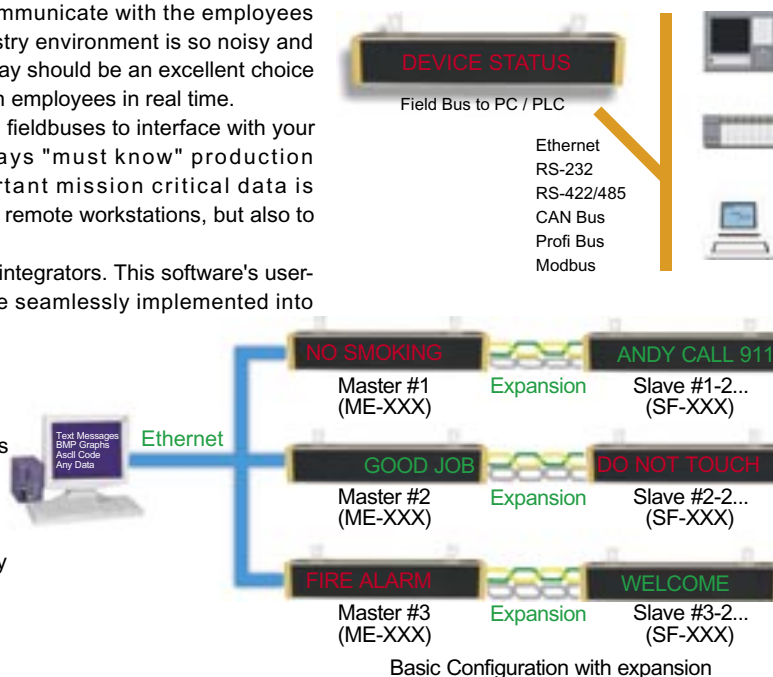
As a manager, it is not easy to communicate with the employees effectively. Especially when the industry environment is so noisy and the space is so huge. Our EKAN display should be an excellent choice to help the manager communicate with employees in real time.

The EKAN displays provide several fieldbuses to interface with your manufacturing systems. It displays "must know" production information. Relevant and important mission critical data is disseminated not just to employees at remote workstations, but also to the entire production line team.

We provide a Dlite SDK for system integrators. This software's user-friendly feel will ensure that it can be seamlessly implemented into your facility's communications system.

Applications

- Company regulation announcement
- Manager's message to all employees
- Emergency message broadcast
- Productivity against target
- Quality result against standard
- Machine status and parts availability
- Safety reminder
- Task description

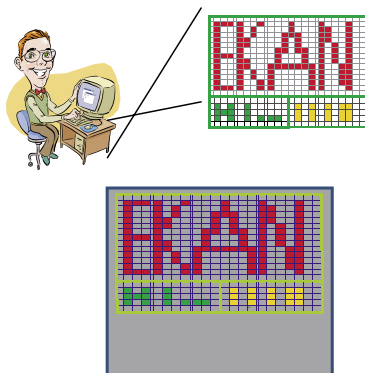


Embedded Controller inside Master-type EKAN (ME-122/124)

Traditional LED display is usually a proprietary system and provides very limited function for customer. Our master-type EKAN embedded our I-7188 controller and inherits all advantages of I-7188. The I-7188 is an open and TCP/IP ready environments, user can develop their own software on that. Since I-7188 supports Ethernet, FRnet, RS-232 and RS-485 bus, it can communicate with RS-232/485 devices or our remote I/O module, such as I-7000, I-2000 and I-87K via RS-485 or FRnet.

Memory-Mapping & Real-time Display

The master-type EKAN display consists of one or several EKAN module. Each EKAN module has several FRnet chips to control every single LED dot. The EKAN display uses memory-mapping skill to light on the individual LED. The refresh time of each LED module is 5.76 ms. More EKAN modules need more refresh time. For example, if the EKAN display has 6 EKAN LED modules, the refresh time is 34.56 ms. Each LED module can display 6 English characters or three Chinese words. Compared to traditional LED display, EKAN has much better display quality and can display message or graphics in real time.



Flexible Display Layout

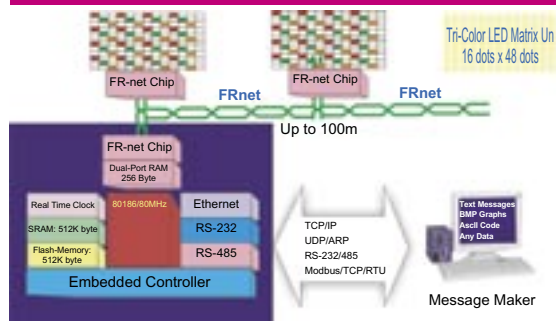
The EKAN display uses memory-mapping mechanism to control LED displays, which means every physical dot on the LED displays corresponds to a virtual dot of the memory arrays, so you can easily divide a physical display into any numbers of virtual display region. Because each virtual display region can display its own message with its own message type and message effect, the user can easily combine several elements such as real-time data, moving message and animations on a single physical display.

Software

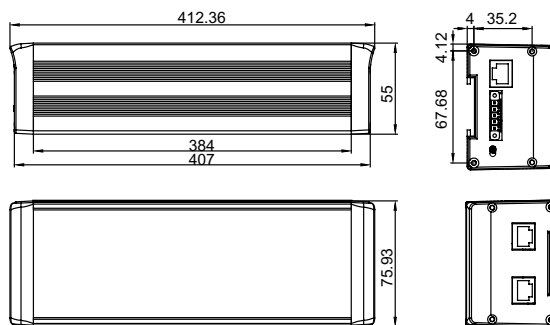
We provide Dlite EKAN display. The Dlite SDK is designed for those customers looking to customize their version of our display control software.

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Block Diagram



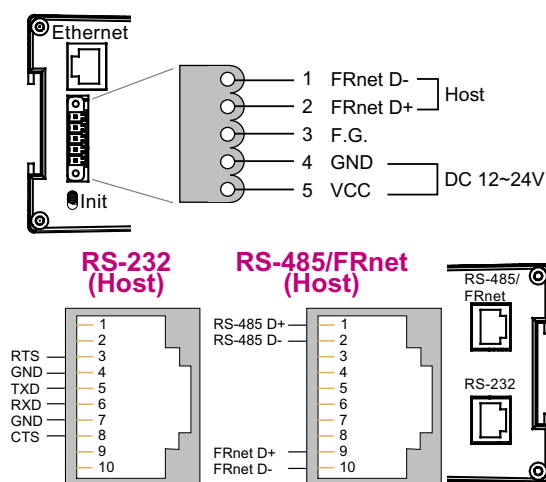
Dimensions (EKAN-ME122)



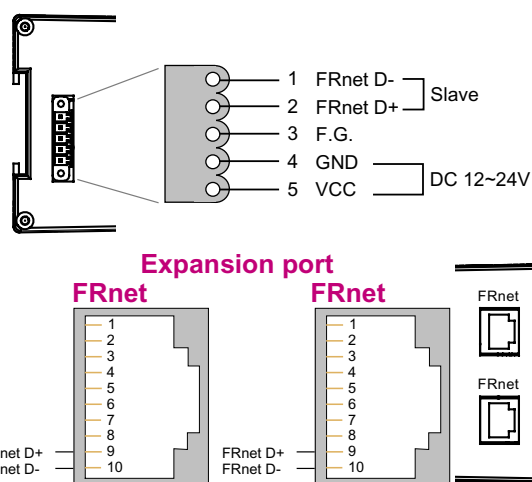
Dimensions (mm x mm)

Pin Assignment

EKAN-MEXXX series Master type



EKAN-SFXXX series Slave type



Ordering Information

Master Type with Dilite SDK software

Model Name	Pixel Matrix	Display(mm) Dimensions	Dots of Char	Max Chars (8x6)	Power Consumption (max)
EKAN-ME122	16 x 96	6.4 x 384	English 8 x 6 or 16 x 8	2 x 16	48W@24VDC
EKAN-ME124	16 x 192	6.4 x 768		2 x 32	90W@24VDC

Slave Type (Expansion)

Model Name	Pixel Matrix	Display(mm) Dimensions	Dots of Char	Max Chars (8x6)	Power Consumption (max)
EKAN-SF121	16 x 48	6.4 x 192	English 8 x 6 or 16 x 8	2 x 8	22W@24VDC
EKAN-SF122	16 x 96	6.4 x 384		2 x 16	45W@24VDC
EKAN-SF124	16 x 192	6.4 x 768		2 x 32	85W@24VDC

Note: Call manufacturer for Custom design

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DLite Message Software for EKAN LED Display

DLite Message Software V1.5 is a easy-to-use but powerful message tool. It includes 5 modules:

- Message Editor
- Web Message Editor
- Script Language Editor
- Utility
- DLite SDK

Message Editor



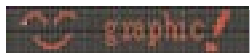
DLite Message Editor supports the single EKAN display application. It provides easy-to-use interface to help user to edit marquee type message. User can upload these messages by TCP/IP network after editing finished. With DLite, you can program you LED message from PC, including:

- Create message with color, font, and layout
- Define message attributes such as entering effect (scroll-up/down/right/ left) & speed, leaving effect & Speed, idle time
- Create basic animation



User friendly interface

DLite provides a user friendly interface to help user upload their messages to LED display. User could edit their messages, preview the scrolling effects, change LED configurations. DLite message editor also support graphic files (like BMP), user could display graphic images on the LED display.



Built-in LED emulator for preview

DLite provides a preview window and let user could see the effects before messages uploaded. User could easily make sure the WYSIWYG (What you see is what you get) on the LED display.

Message storage support

EKAN use flash memory to store messages. Once messages finished download from PC, it will be there until you erase it, and no extra power was needed. DLite support 100+ messages for display.



Animation capability

DLite Message Editor can let you create several BMP graphic files and build an animation application. So you can easily let you EKAN having animation capability.



Web Message Editor



DLite Web Message Editor let you create message with browser, so you always can post message to EKAN no matter where you are only if you can connect to the Internet. Using DLite Web Message Editor, you can create almost 10 messages simultaneously with its attributes & effect such as entering / leaving, font color, background color, speed and delay times.



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DLite Message Software for EKAN LED Display

Script Editor

DLite Script Editor is a handy tool to edit DLite message script file. Script language is the fundamental of EKAN Series. Every EKAN has a script interpreter built-in on its firmware, through this interpreter DLite message script file will be transformed to the display action on EKAN.



Edit Script files

DLite Script is a simple but powerful language. Using Script Editor, you can edit script files to get more precise and variety effect on the EKAN LED display.

```
IN GO-LEFT 2 50
TEXT 0 0 ORANGE BLACK "testing ←.."
DELAY 1000
OUT GO-LEFT 2 50

IN GO-RIGHT 2 50
TEXT 0 0 RED BLACK "testing →.."
DELAY 1000
OUT GO-DOWN 2 50
```

A sample of DLite Script Language

Script Emulator

After edit the script, user could preview the script execution result on the LED emulator comes with editor.

Upload & Download

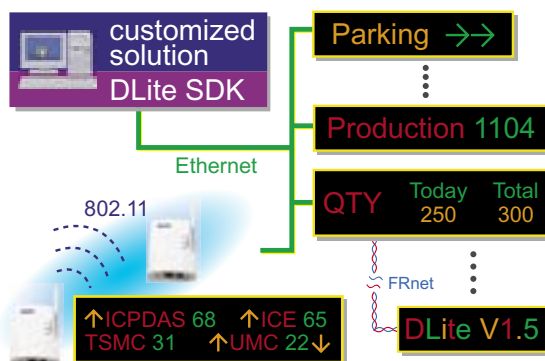
Script Editor provides upload & download ability. When you have seen the display result with emulator, you can upload the message script file to the EKAN and execute this application. You also can download message files originally existed on the EKAN. With the help of DLite Script Editor, it will greatly expand the flexibility and application of EKAN LED display.

Utility

DLite Utility can let you configure and modify EKAN system variables like communication setting, display matrix configuration, access control setting and so on. Also, you can use DLite Utility to do files management on EKAN.

DLite SDK

DLite SDK is designed for the customers who want to build their own display application. DLite SDK brings the real-time message transmission ability into traditional LED display.



User can update the data in real-time on the LED display anywhere, anytime, by TCP/IP network. Using DLite SDK, system integrators and users can easily integrate LED display into their solution and let it be able to send real-time data to EKAN Series display to fulfill lots of application such as.

Production line and warehousing

With DLite SDK, user could easily display dynamic data and static data at same time. It could be used on real-time production line quantities and accomplish percentage display.

Production 1104

Facility Monitoring

By using the active lighting LED to show real-time message, EKAN makes facility or equipment monitoring become a easy job. DLite SDK let distribute I/O module (like ICPDAS i7000 series) or PC Based PLC (for example: ICPDAS WinCon-8000) can deliver their real-time data to LED display.

Tanks Gas Temp
32% 50°C

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DLite Message Software for EKAN LED Display

LED bulletin board

LED provides better visibility and let user could see bulletin board content from a distance. Applications like bus or train station's schedule list, movie theaters' play list...etc

Toy Story	PG13	12:00
Sex City	NC11	11:30
Top Gun	NC21	12:30
King	NC	14:30
Beatles	PG	15:00
B.B King	PG12	12:00

Real-time message direction

For public place with mass moving traffic, like airport or convention center, it need real-time and dynamic direction ability. DLite helps management group real-time change direction message from control center, provide dynamic direction for people or car.



Dynamic marquee

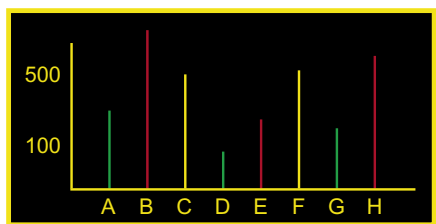
Using DLite SDK could let LED real-time display new information, and could dynamic change content on scrolling marquee. This application fits large information with variety, such as :

- Stock Quote
- Real-time news
- Multiple I/O real-time monitor

↑ICPDAS 68	↑ICE 65
TSMC 31	↑UMC 22↓

Real-time Graphic display

EKAN hardware LED control ability With DLite SDK, bring real-time graphic ability into tradition LED. By sing EKAN built-in graphic with DLite SDK real-time linking transmission, let EKAN become a HMI like graphic display. Combining data and graphic, EKAN enrich LED display for nowadays application.



Game machine



Using DLite SDK, every single pixel on EKAN LED could operate independence, so it provides very flexible display ability. For game machine need complex real-time graphic control, it is an excellent choice.

With DLite SDK built-in ActiveX controls , any application supports ActiveX can easily communicate with EKAN , including:

- HMI/SCADA like Wonderware, Intellution, GE Cimplicity, etc.
- Any customized application using EXCEL, VB, VC++, MS .NET and DHTML

Features

- Real-time message for LED display
- Custom message refresh rate (0.01 sec~)
- Support TCP/IP network (LAN, Wireless LAN, WAN)
- User authentication, authorization
- Secure transmission
- Message could be put in any position on LED display
- Support graphic library for drawing pixel & line in real-time
- Maintain connection state
- ActiveX component
- .NET Ready