



iKAN Wired Series Modbus LED Display User Manual

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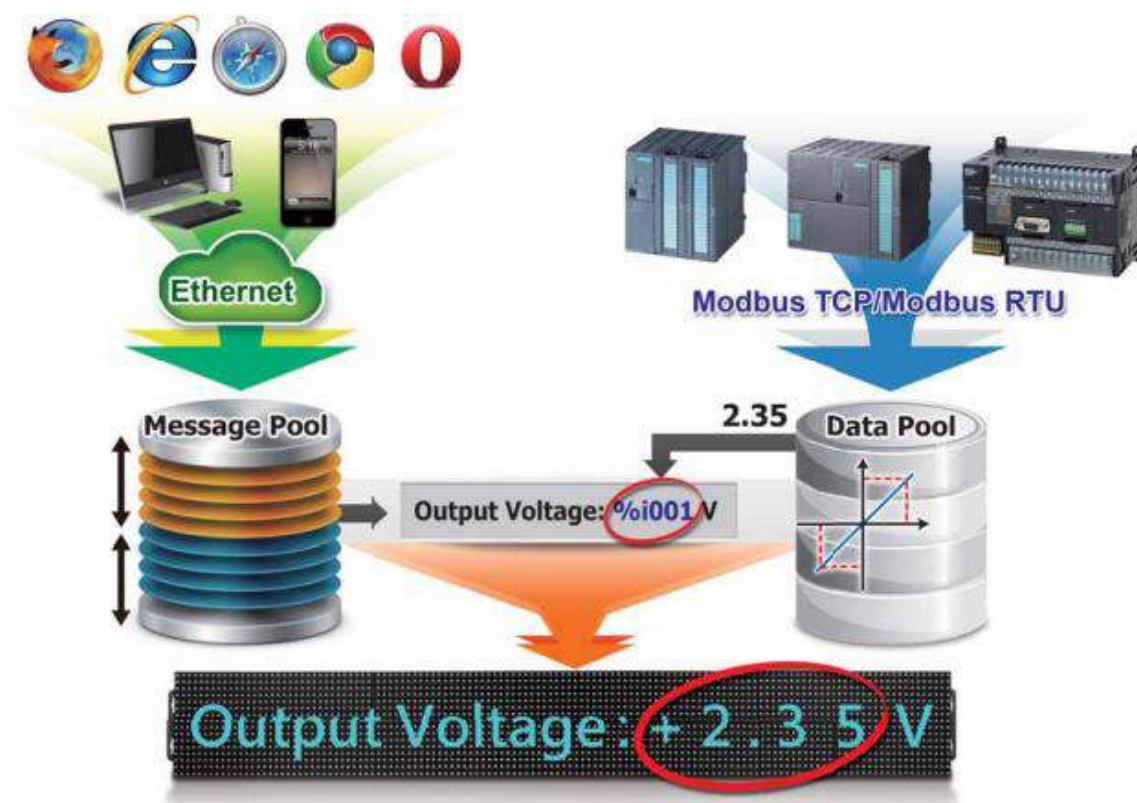
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1. Introduction

The iKAN series is a family of industrial Modbus LED display devices that deliver industrial-grade anti-noise capabilities, as well as reliability and stability. ASCII characters and Unicode characters, which can be used to display multiple languages like Thai, Arabic, Hebrew, Hindi or Japanese, are supported for presenting formatted messages. Support for the popular Modbus industrial protocol is provided meaning that the iKAN display can be easily integrated into existing PLC and SCADA environments.

Messages can be edited using a standard web browser, such as Google Chrome, Firefox, or IE on a PC, mobile device, or smartphone without any limitations related to specific control tools or programs. Each iKAN LED display provides storage space for up to 128 messages with user-defined priority. In addition, 168/600 variables allow data on a PC, PLC or other controller to be automatically integrated into a message and then displayed. With an open user interface and the ability to display real-time data from other devices, the iKAN series LED displays can be applied in shopping malls, railway stations, industrial areas, or in situations where visual display is the easiest way of delivering your message.

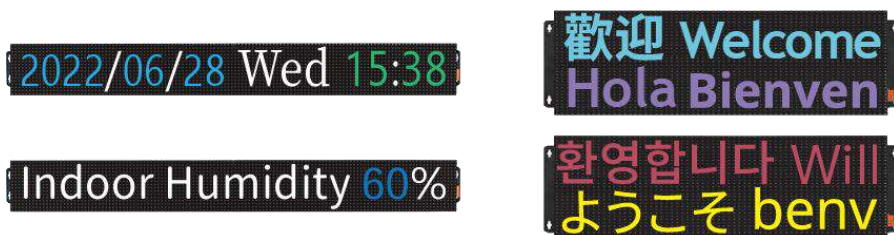


1.1. Features

This section lists the core features of the iKAN series, including display control, data handling, communication options, and user interface accessibility.

Industrial-Grade Large Display Interface

Real-time data from PLCs can be visualized on high-brightness LED panels in seven text colors, improving field visibility and operational clarity.



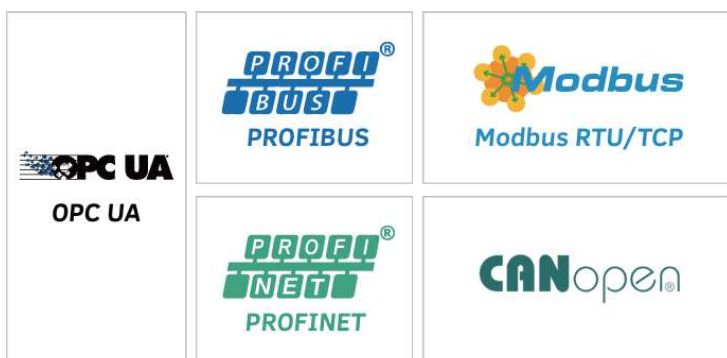
Multilingual Display Capability

Supports Unicode and custom fonts to display multilingual content including Japanese, Arabic, and more, ensuring readability and localization.



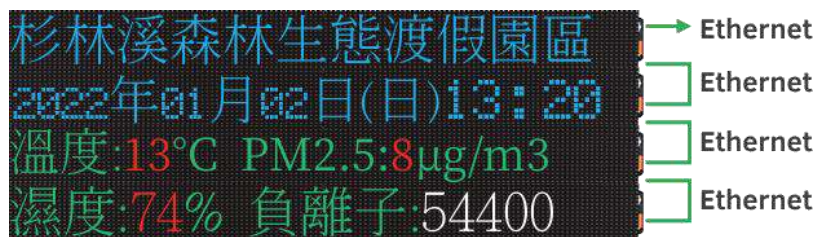
Modbus & Multi-Protocol Support

Compatible with Modbus RTU/TCP and other protocols such as PROFIBUS, CANopen, and OPC UA for seamless system integration.



Multi-Node Ethernet Switch

A dual-port Ethernet switch simplifies wiring and supports daisy-chaining of multiple units.



High-Capacity Message and Variable Storage

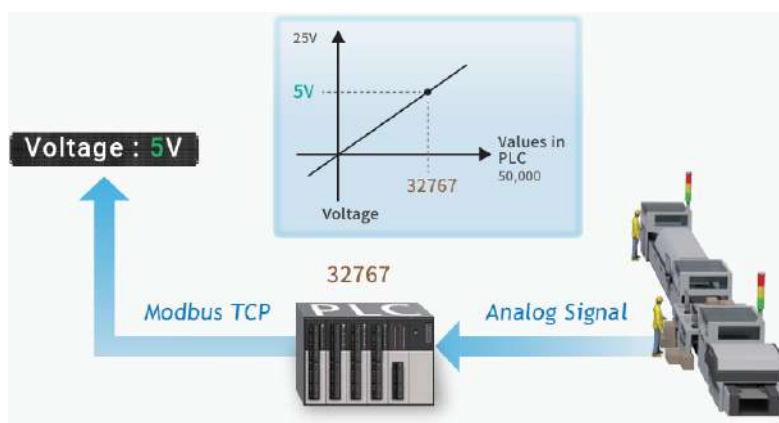
Stores up to 128 messages and 168 variables with priority settings, supporting efficient preset management.

Emergency Message Interrupt

Urgent messages can override normal content to deliver critical alerts instantly.

Auto Data Conversion to Physical Units

Transforms raw Modbus integer values into readable units such as temperature and voltage via configurable formulas.



Configuration Export & Multi-Device Deployment

Export/import settings to rapidly configure and replicate setups across multiple devices.

Mobile-Friendly Web Control Interface

Manage messages via browser-based interface on mobile devices—no additional software required.



IP65 Waterproof and Dustproof (iKAN IP65 Series Only)

IP65-rated design ensures reliable operation in harsh or outdoor environments.



1.2. Specification

This section describes the hardware specifications of iKAN models, including display size, communication ports, memory capacity, and environmental conditions.

1.2.1. iKAN-1xx(S)

The "S" suffix denotes a compact version, suitable for limited-space applications.

Model		iKAN-116	iKAN-116S	iKAN-124	iKAN-124S
Display					
Color		Red, Blue, Yellow, Green, Light Blue, Purple or White			
Character Sets		16 x 16 Unicode or 8 x 16 ASCII			
Display Size	Row	1			
	ASCII	16 characters		24 characters	
	Unicode	8 characters		12 characters	
Message Pool		128 common messages with user-defined priority levels Up to 20 Unicode characters or 50 ASCII characters each			
Data Pool		40 Coil values, 64 Float values, and 64 Integer values			
RTC (Real-time Clock)		Date and time, 24 hour format, including hours, minutes, seconds, day of the week, date, month, year			
Ethernet					
Port		2 x RJ-45, 10/100 Base-TX			
Protocol		Modbus TCP Master/Slave, Max. 8/8 connections			
Configuration		Web-based User Interface			
COM Port					
Interface		2 x RS-485			
Baud rate (bps)		1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200			
Data Format		N81, E81, O81			
Protocol		Modbus RTU Master/Slave			

Model	iKAN-116	iKAN-116S	iKAN-124	iKAN-124S
Mechanical				
Dimensions (W x H x D, unit: mm)	1347 x 160 x 73	834 x 130 x 54	1987 x 160 x 73	1218 x 130 x 54
Weight	4.0 Kg	2.0 Kg	4.6 Kg	2.5 Kg
Installation	Wall mounting			
Casing	Aluminum			
Power				
Input Range	100 to 240 VAC			
Consumption	0.3A @ AC 120V		0.35A @ AC 120V	
Environment				
Operating Temperature	0 to 60°C			
Storage Temperature	-10 to 75°C			
Humidity	10 to 90% RH, Non-condensing			

1.2.2. iKAN-2xx

Model		iKAN-208	iKAN-216	iKAN-224
Display				
Color		Red, Blue, Yellow, Green, Light Blue, Purple or White		
Character Sets		16 x 16 Unicode or 8 x 16 ASCII		
Display Size	Line	2		
	ASCII	16 characters	32 characters	48 characters
	Unicode	8 characters	16 characters	24 characters
Message Pool		600 common messages with user-defined priority Up to 20 Unicode characters or 50 ASCII characters each		
Data Pool		100 Coil variables, 128 Float variables, 128 Integer variables and 64 Double variables		
RTC (Real-time Clock)		Date and time, 24 hour format, including hours, minutes, seconds, day of the week, date, month, year		
Ethernet				
Port		2 x RJ-45, 10/100 Base-TX		
Protocol		Modbus TCP Master/Slave, Max. 8/8 connections		
Configuration		Web-based User Interface		
COM Port				
Interface		2 x RS-485		
Baud rate (bps)		1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200		
Data Format		N81, E81, O81		
Protocol		Modbus RTU Master/Slave		
Mechanical				
Dimensions (W x H x D, unit: mm)		707 x 320 x 53	1347 x 320 x 53	1987 x 320 x 53
Weight		4 Kg	8 Kg	12 Kg
Installation		Wall mounting		
Housing Material		Aluminum		
Power				
Input Range		100 to 240 VAC		
Consumption		0.5A @ AC 120V	0.6A @ AC 120V	0.7A @ AC 120V

Model	iKAN-208	iKAN-216	iKAN-224
Environment			
Operating Temperature	0 to 60°C		
Storage Temperature	-10 to 75°C		
Humidity	10 to 90% RH, Non-condensing		

1.2.3. iKAN-1xxA

The "A" suffix denotes a Non-RoHS version, suitable for specific industry applications.

Model		iKAN-116A	iKAN-124A
Display			
Color		Red, Blue, Yellow, Green, Light Blue, Purple or White	
Character Sets		16 x 16 Unicode or 8 x 16 ASCII	
Display Size	Row	1	
	ASCII	16 characters	24 characters
	Unicode	8 characters	12 characters
Message Pool		128 common messages with user-defined priority levels Up to 20 Unicode characters or 50 ASCII characters each	
Data Pool		40 Coil values, 64 Float values, and 64 Integer values	
RTC (Real-time Clock)		Date and time, 24 hour format, including hours, minutes, seconds, day of the week, date, month, year	
Ethernet			
Port		2 x RJ-45, 10/100 Base-TX	
Protocol		Modbus TCP Master/Slave, Max. 8/8 connections	
Configuration		Web-based User Interface	
COM Port			
Interface		2 x RS-485	
Baud rate (bps)		1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	
Data Format		N81, E81, O81	
Protocol		Modbus RTU Master/Slave	
Mechanical			
Dimensions (W x H x D)		1347 mm x 160 mm x 73 mm	1987 mm x 160 mm x 73 mm
Weight		4.0 Kg	4.6 Kg
Installation		Wall mounting	
Casing		Aluminum	

Model	iKAN-116A	iKAN-124A
Power		
Input Range	DC 5V	
Consumption	20A @ DC 5V (100W)	30A @ DC 5V (150W)
Environment		
Operating Temperature	0 to 60°C	
Storage Temperature	-10 to 75°C	
Humidity	10 to 90% RH, Non-condensing	

1.2.4. iKAN-2xxA

The "A" suffix denotes a Non-RoHS version, suitable for specific industry applications.

Model		iKAN-208A	iKAN-216A	iKAN-224A
Display				
Color		Red, Blue, Yellow, Green, Light Blue, Purple or White		
Character Sets		16 x 16 Unicode or 8 x 16 ASCII		
Display Size	Line	2		
	ASCII	16 characters	32 characters	48 characters
	Unicode	8 characters	16 characters	24 characters
Message Pool		600 common messages with user-defined priority Up to 20 Unicode characters or 50 ASCII characters each		
Data Pool		100 Coil variables, 128 Float variables, 128 Integer variables and 64 Double variables		
RTC (Real-time Clock)		Date and time, 24 hour format, including hours, minutes, seconds, day of the week, date, month, year		
Ethernet				
Port		2 x RJ-45, 10/100 Base-TX		
Protocol		Modbus TCP Master/Slave, Max. 8/8 connections		
Configuration		Web-based User Interface		
COM Port				
Interface		2 x RS-485		
Baud rate (bps)		1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200		
Data Format		N81, E81, O81		
Protocol		Modbus RTU Master/Slave		
Mechanical				
Dimensions (W x H x D, unit: mm)		707 x 320 x 53	1347 x 320 x 53	1987 x 320 x 53
Weight		4 Kg	8 Kg	12 Kg
Installation		Wall mounting		
Housing Material		Aluminum		

Model	iKAN-208A	iKAN-216A	iKAN-224A
Power			
Input Range	DC 5V		
Consumption	20A @ DC 5V (100W)	40A @ DC 5V (200W)	60A @ DC 5V (300W)
Environment			
Operating Temperature	0 to 60°C		
Storage Temperature	-10 to 75°C		
Humidity	10 to 90% RH, Non-condensing		

1.2.5. iKAN-1xx(S)-IP65

The "S" suffix denotes a compact version, suitable for limited-space applications.

IP65-rated protection ensures reliable operation in harsh environments, making it ideal for outdoor and industrial applications.

Model		iKAN-116-IP65	iKAN-116S-IP65	iKAN-124-IP65	iKAN-124S-IP65
Display					
Color		Red, Blue, Yellow, Green, Light Blue, Purple or White			
Character Sets		16 x 16 Unicode or 8 x 16 ASCII			
Display Size	Row	1			
	ASCII	16 characters		24 characters	
	Unicode	8 characters		12 characters	
Message Pool		128 common messages with user-defined priority levels Up to 20 Unicode characters or 50 ASCII characters each			
Data Pool		40 Coil values, 64 Float values, and 64 Integer values			
RTC (Real-time Clock)		Date and time, 24 hour format, including hours, minutes, seconds, day of the week, date, month, year			
Ethernet					
Port		2 x RJ-45, 10/100 Base-TX			
Protocol		Modbus TCP Master/Slave, Max. 8/8 connections			
Configuration		Web-based User Interface			
COM Port					
Interface		2 x RS-485			
Baud rate (bps)		1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200			
Data Format		N81, E81, O81			
Protocol		Modbus RTU Master/Slave			
Mechanical					
Dimensions (W x H x D, unit: mm)		1347 x 160 x 81	834 x 130 x 54	1987 x 160 x 73	1218 x 130 x 54
Weight		4.6 Kg	2.0 Kg	5.4 Kg	2.5 Kg
Installation		Wall mounting			
Casing		Aluminum			

Model	iKAN-116-IP65	iKAN-116S-IP65	iKAN-124-IP65	iKAN-124S-IP65
Power				
Input Range	100 to 240 VAC			
Consumption	0.3A @ AC 120V		0.35A @ AC 120V	
Environment				
Operating Temperature	0 to 60°C			
Storage Temperature	-10 to 75°C			
Humidity	10 to 90% RH, Non-condensing			

1.2.6. iKAN-2xx-IP65

IP65-rated protection ensures reliable operation in harsh environments, making it ideal for outdoor and industrial applications.

Model		iKAN-208-IP65	iKAN-216-IP65	iKAN-224-IP65
Display				
Color		Red, Blue, Yellow, Green, Light Blue, Purple or White		
Character Sets		16 x 16 Unicode or 8 x 16 ASCII		
Display Size	Line	2		
	ASCII	16 characters	32 characters	48 characters
	Unicode	8 characters	16 characters	24 characters
Message Pool		600 common messages with user-defined priority Up to 20 Unicode characters or 50 ASCII characters each		
Data Pool		100 Coil variables, 128 Float variables, 128 Integer variables and 64 Double variables		
RTC (Real-time Clock)		Date and time, 24 hour format, including hours, minutes, seconds, day of the week, date, month, year		
Ethernet				
Port		2 x RJ-45, 10/100 Base-TX		
Protocol		Modbus TCP Master/Slave, Max. 8/8 connections		
Configuration		Web-based User Interface		
COM Port				
Interface		2 x RS-485		
Baud rate (bps)		1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200		
Data Format		N81, E81, O81		
Protocol		Modbus RTU Master/Slave		
Mechanical				
Dimensions (W x H x D, unit: mm)		708 x 320 x 91	1348 x 320 x 91	1988 x 320 x 91
Weight		4 Kg	8 Kg	12 Kg
Installation		Wall mounting		
Housing Material		Aluminum		

Model	iKAN-208-IP65	iKAN-216-IP65	iKAN-224-IP65
Power			
Input Range	100 to 240 VAC		
Consumption	0.5A @ AC 120V	0.6A @ AC 120V	0.7A @ AC 120V
Environment			
Operating Temperature	0 to 60°C		
Storage Temperature	-10 to 75°C		
Humidity	10 to 90% RH, Non-condensing		

1.2.7. iKAN-1xxA-IP65

The "A" suffix denotes a Non-RoHS version, suitable for specific industry applications.

IP65-rated protection ensures reliable operation in harsh environments, making it ideal for outdoor and industrial applications.

Model		iKAN-116A-IP65	iKAN-124A-IP65
Display			
Color		Red, Blue, Yellow, Green, Light Blue, Purple or White	
Character Sets		16 x 16 Unicode or 8 x 16 ASCII	
Display Size	Row	1	
	ASCII	16 characters	24 characters
	Unicode	8 characters	12 characters
Message Pool		128 common messages with user-defined priority levels Up to 20 Unicode characters or 50 ASCII characters each	
Data Pool		40 Coil values, 64 Float values, and 64 Integer values	
RTC (Real-time Clock)		Date and time, 24 hour format, including hours, minutes, seconds, day of the week, date, month, year	
Ethernet			
Port		2 x RJ-45, 10/100 Base-TX	
Protocol		Modbus TCP Master/Slave, Max. 8/8 connections	
Configuration		Web-based User Interface	
COM Port			
Interface		2 x RS-485	
Baud rate (bps)		1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	
Data Format		N81, E81, O81	
Protocol		Modbus RTU Master/Slave	
Mechanical			
Dimensions (W x H x D)		1347 mm x 160 mm x 73 mm	1987 mm x 160 mm x 73 mm
Weight		4.6 Kg	5.4 Kg
Installation		Wall mounting	
Casing		Aluminum	

Model	iKAN-116A-IP65	iKAN-124A-IP65
Power		
Input Range	DC 5V	
Consumption	20A @ DC 5V (100W)	30A @ DC 5V (150W)
Environment		
Operating Temperature	0 to 60°C	
Storage Temperature	-10 to 75°C	
Humidity	10 to 90% RH, Non-condensing	

1.2.8. iKAN-2xxA-IP65

The "A" suffix denotes a Non-RoHS version, suitable for specific industry applications.

IP65-rated protection ensures reliable operation in harsh environments, making it ideal for outdoor and industrial applications.

Model		iKAN-208A-IP65	iKAN-216A-IP65	iKAN-224A-IP65
Display				
Color		Red, Blue, Yellow, Green, Light Blue, Purple or White		
Character Sets		16 x 16 Unicode or 8 x 16 ASCII		
Display Size	Line	2		
	ASCII	16 characters	32 characters	48 characters
	Unicode	8 characters	16 characters	24 characters
Message Pool		600 common messages with user-defined priority Up to 20 Unicode characters or 50 ASCII characters each		
Data Pool		100 Coil variables, 128 Float variables, 128 Integer variables and 64 Double variables		
RTC (Real-time Clock)		Date and time, 24 hour format, including hours, minutes, seconds, day of the week, date, month, year		
Ethernet				
Port		2 x RJ-45, 10/100 Base-TX		
Protocol		Modbus TCP Master/Slave, Max. 8/8 connections		
Configuration		Web-based User Interface		
COM Port				
Interface		2 x RS-485		
Baud rate (bps)		1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200		
Data Format		N81, E81, O81		
Protocol		Modbus RTU Master/Slave		

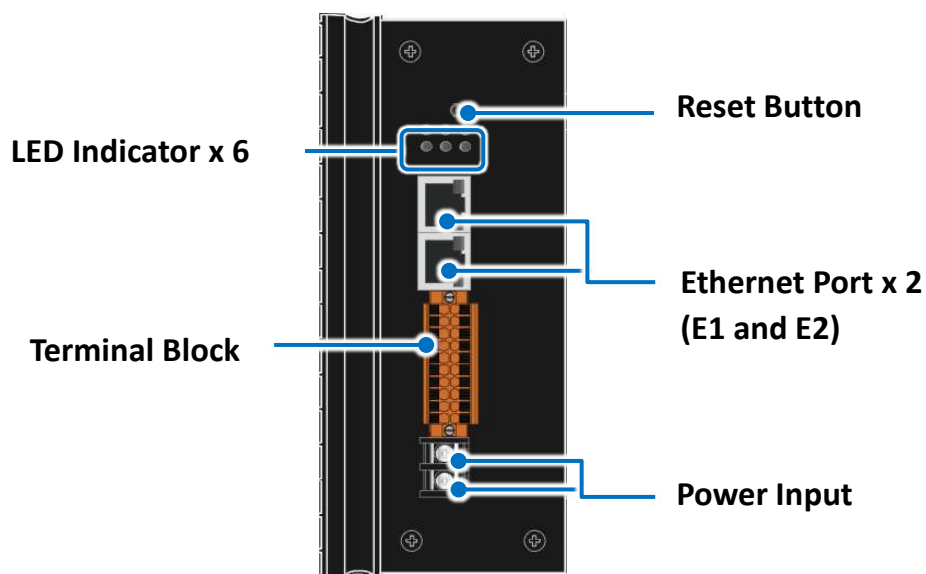
Model	iKAN-208A-IP65	iKAN-216A-IP65	iKAN-224A-IP65
Mechanical			
Dimensions (W x H x D, unit: mm)	708 x 320 x 91	1348 x 320 x 91	1988 x 320 x 91
Weight	4 Kg	8 Kg	12 Kg
Installation	Wall mounting		
Housing Material	Aluminum		
Power			
Input Range	DC 5V		
Consumption	20A @ DC 5V (100W)	40A @ DC 5V (200W)	60A @ DC 5V (300W)
Environment			
Operating Temperature	0 to 60°C		
Storage Temperature	-10 to 75°C		
Humidity	10 to 90% RH, Non-condensing		

1.3. Appearance

This section introduces the physical interfaces of the iKAN, including power terminals, communication ports, and LED indicators, helping users install and troubleshoot the unit effectively.

1.3.1. iKAN-xxx(S)

The section provides a brief introduction to the components of the iKAN-xxx(S) series display.



Reset Button

The reset button is used to check the IP address and restore all settings to the factory default.

- Press and hold for 5 seconds: Display IP address (useful when IP is forgotten).
- Press and hold for 8 seconds: Restore factory settings.

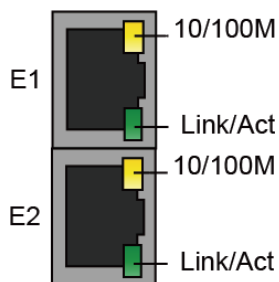
LED Indicator

The iKAN series display contains six LED indicators that display the status of the iKAN series display.

LED Indicator	State	Description
PWR	Red	Power is ON.
	Red-Blinking	OS is functioning.
Reset	Red	Reset button is activated.
DI1, DO1	Orange	Digital I/O Status.
DI0, DO0	Green	Digital I/O Status.

Ethernet Port (E1 and E2)

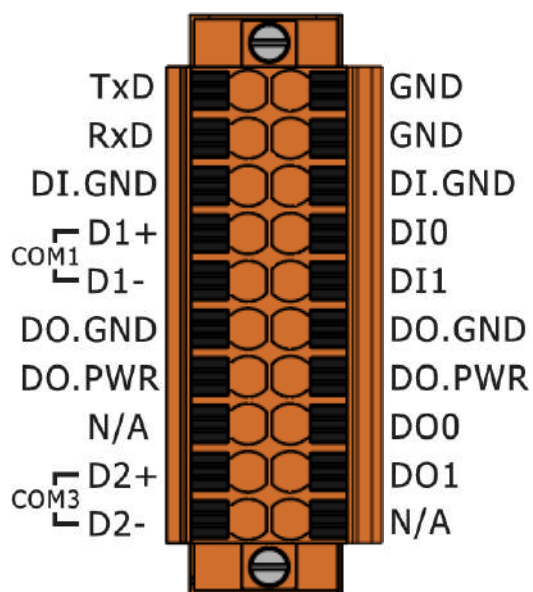
The Ethernet ports can be used to connect a router to the Internet, or to other devices. Each Ethernet port provides two LED indicators that display the connection status.



Label	State	Description
10/100M	Orange	A 10/100 Mbps device is connected.
	-	No device is connected.
Link/Act	Green	Link is active.
	-	Link is inactive.
	Green-Blinking	Network activity.

Terminal Block

The iKAN series display contains a terminal block with 20 poles, as illustrated below. For more information related to the identification of the wiring connections, refer to Section 1.4. Wire Connection.



COM Ports

COM1: RS-485	D1+ and D1-
COM2: RS-232	TxD, RxD and GND
COM3: RS-485	D2+ and D2-

Digital Input/Digital Output

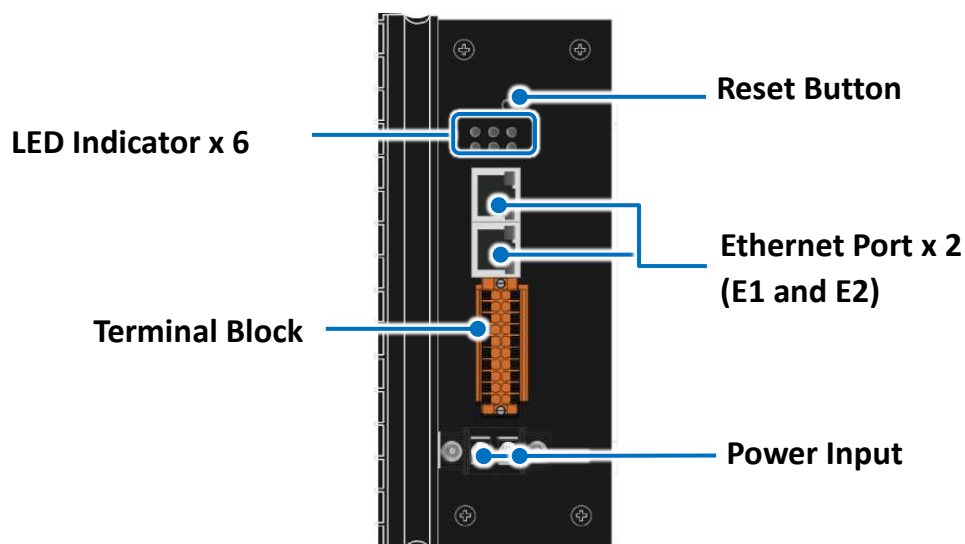
Digital Input 1	DI0 and DI.GND
Digital Input 2	DI1 and DI. GND
Digital Output 1	DO.PWR, DO0 and DO.GND
Digital Output 2	DO.PWR, DO1 and DO.GND

Power Input

The power input terminal provides two points, N and L, which accept a wide input voltage range of 100 to 240 VAC.

1.3.2. iKAN-xxxA

The diagram below shows the components of the iKAN-xxxA series display.



Reset Button

The reset button is used to check the IP address and restore all settings to the factory default.

- Press and hold for 5 seconds: Display IP address (useful when IP is forgotten).
- Press and hold for 8 seconds: Restore factory settings.

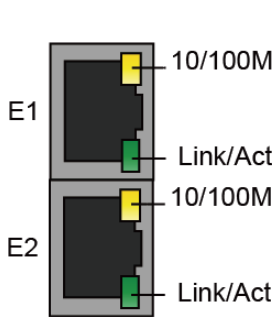
LED Indicator

The iKAN series display contains six LED indicators that display the status of the iKAN series display.

LED Indicator	State	Description
PWR	Red	Power is ON.
	Red-Blinking	OS is functioning.
Reset	Red	Reset button is activated.
DI1, DO1	Orange	Digital I/O Status.
DI0, DO0	Green	Digital I/O Status.

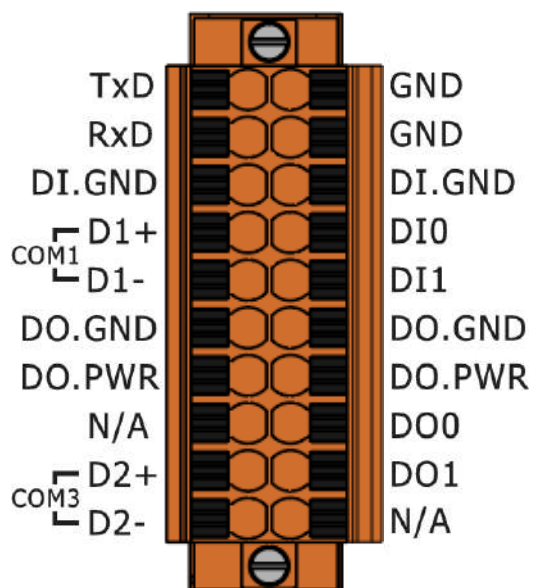
Ethernet Port (E1 and E2)

The Ethernet ports can be used to connect a router to the Internet, or to other devices. Each Ethernet port provides two LED indicators that display the connection status.

	Label	State	Description
	10/100M	Orange	A 10/100 Mbps device is connected.
		-	No device is connected.
	Link/Act	Green	Link is active.
		-	Link is inactive.
		Green-Blinking	Network activity.

Terminal Block

The iKAN series display contains a terminal block with 20 poles, as illustrated below. For more information related to the identification of the wiring connections, refer to Section 1.4. Wire Connection.



COM Ports	
COM1: RS-485	D1+ and D1-
COM2: RS-232	TxD, RxD and GND
COM3: RS-485	D2+ and D2-

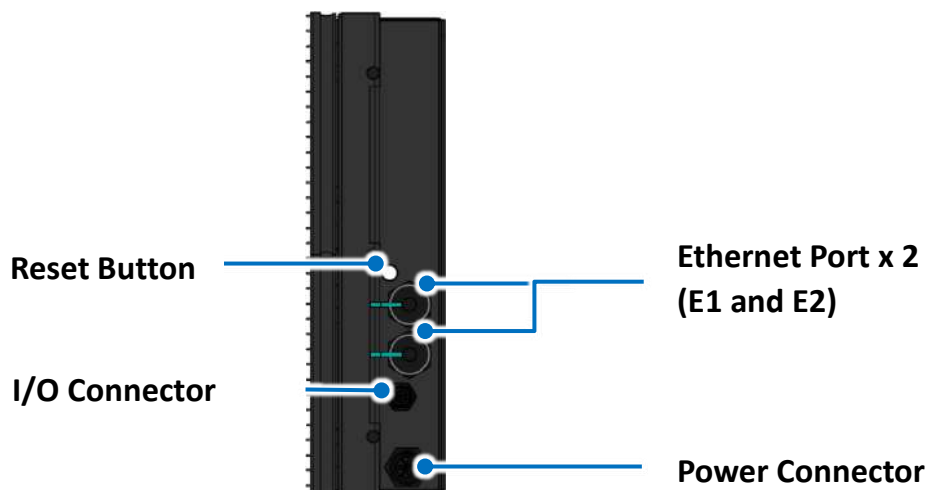
Digital Input/Digital Output	
Digital Input 1	DI0 and DI.GND
Digital Input 2	DI1 and DI. GND
Digital Output 1	DO.PWR, DO0 and DO.GND
Digital Output 2	DO.PWR, DO1 and DO.GND

Power Input

The power input terminal provides two points, DC+5V and GND, that require a stable 5V power supply.

1.3.3. iKAN-xxx(S)-IP65

The section provides a brief introduction to the components of the iKAN-xxx(S)-IP65 series display.



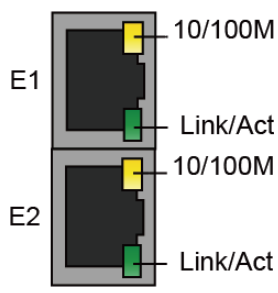
Reset Button

The reset button is used to check the IP address and restore all settings to the factory default.

- Press and hold for 5 seconds: Display IP address (useful when IP is forgotten).
- Press and hold for 8 seconds: Restore factory settings.

Ethernet Port (E1 and E2)

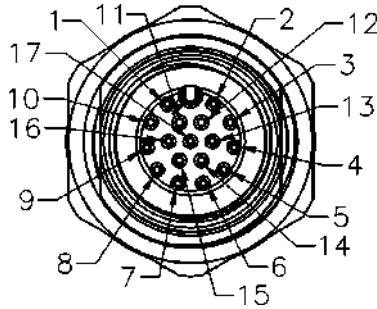
The Ethernet ports can be used to connect a router to the Internet, or to other devices. Each Ethernet port provides two LED indicators that display the connection status.

	Label	State	Description
	10/100M	Orange	A 10/100 Mbps device is connected.
		-	No device is connected.
	Link/Act	Green	Link is active.
		-	Link is inactive.
		Green-Blinking	Network activity.

I/O Connector

The I/O connector is a 17-pins connector. The pin for the I/O connector is outlined in the table below.

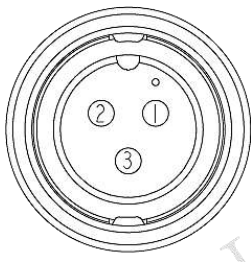
No.	Pin-out
1	TxD
2	DI1
3	N/A
4	D2-
5	D2+
6	DO.PWR
7	DO.GND
8	D1-
9	D1+



No.	Pin-out
10	RxD
11	DI.GND
12	DO0
13	DO1
14	DI0
15	GND
16	RxD
17	N/A

Power Connector

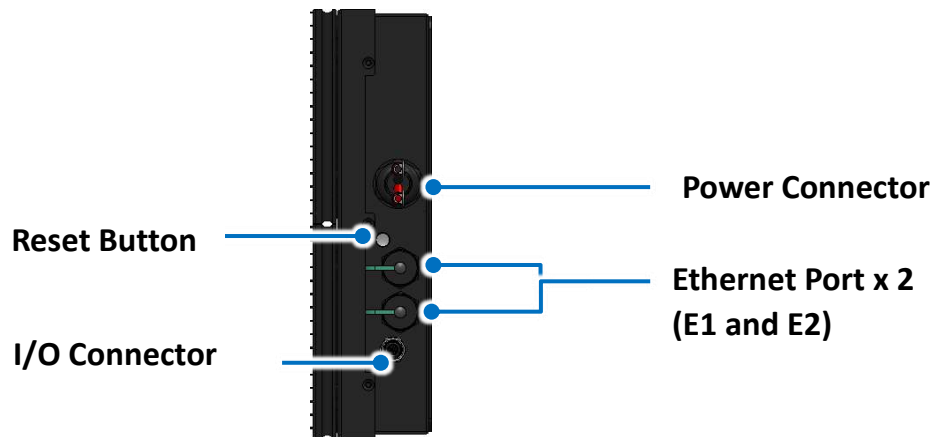
The power connector is a 3-pins connector. The pin for the power connector is outlined in the table below.



No.	Pin-out
1	AC
2	AC
3	-

1.3.4. iKAN-xxxA-IP65

The section provides a brief introduction to the components of the iKAN-xxxA-IP65 series display.



Power Connector

The power connector is a 2-wires connector. The pin for the power connector is outlined in the table below.

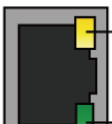
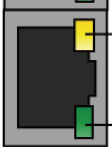
Reset Button

The reset button is used to check the IP address and restore all settings to the factory default.

- Press and hold for 5 seconds: Display IP address (useful when IP is forgotten).
- Press and hold for 8 seconds: Restore factory settings.

Ethernet Port (E1 and E2)

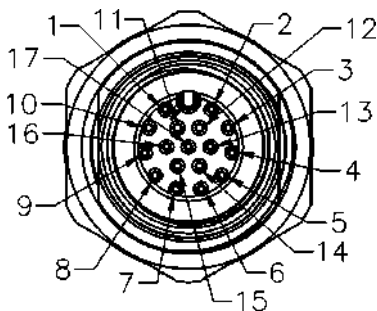
The Ethernet ports can be used to connect a router to the Internet, or to other devices. Each Ethernet port provides two LED indicators that display the connection status.

E1		10/100M	10/100M	Orange	A 10/100 Mbps device is connected.
		Link/Act	-	-	No device is connected.
E2		10/100M	Link/Act	Green	Link is active.
		Link/Act	-	-	Link is inactive.
		Link/Act	Green-Blinking	Green-Blinking	Network activity.

I/O Connector

The I/O connector is a 17-pins connector. The pin for the I/O connector is outlined in the table below.

No.	Pin-out
1	TxD
2	DI1
3	N/A
4	D2-
5	D2+
6	DO.PWR
7	DO.GND
8	D1-
9	D1+

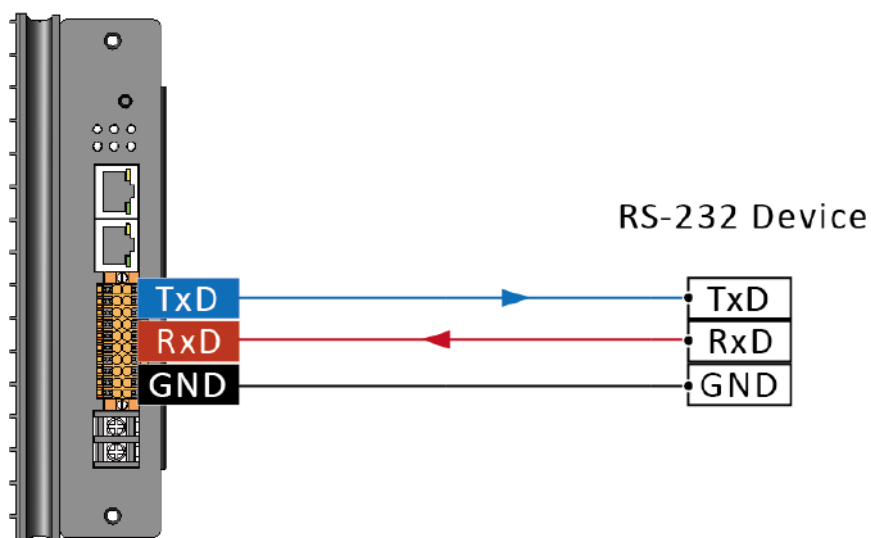


No.	Pin-out
10	RxD
11	DI.GND
12	DO0
13	DO1
14	DI0
15	GND
16	RxD
17	N/A

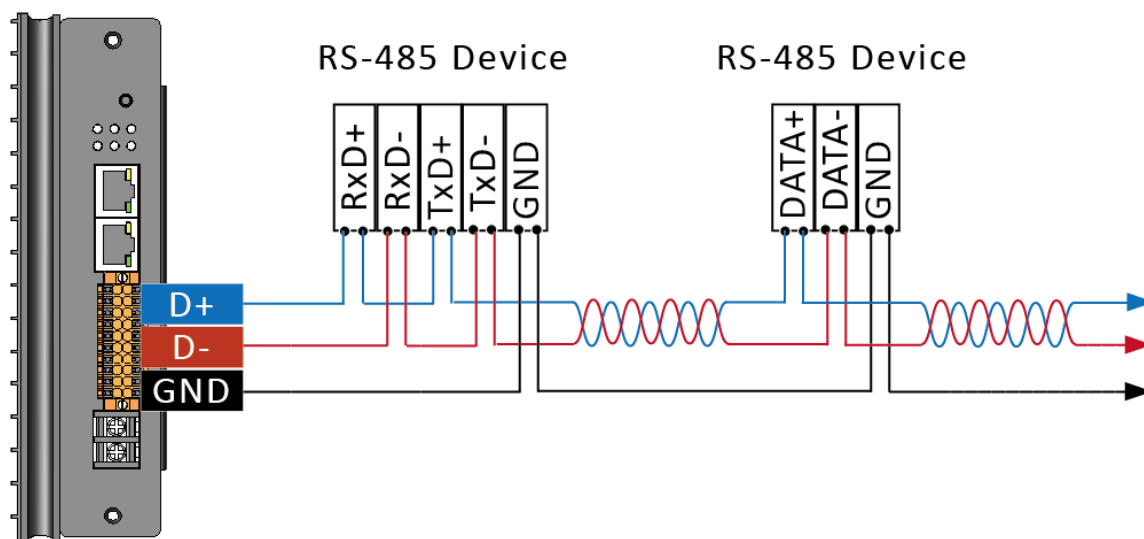
1.4. Wiring Connection

The iKAN contains a terminal block which provides access to a number of communication formats. The following illustrates the wiring information for the terminal block.

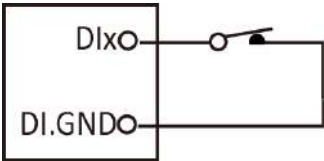
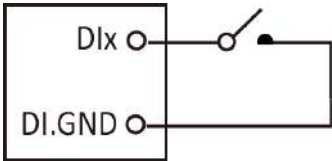
RS-232 Wiring



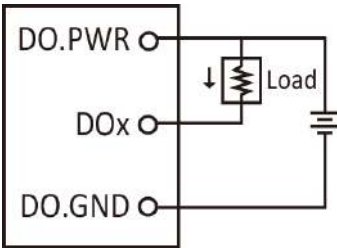
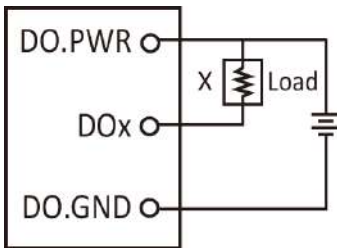
RS-485 Wiring



DI Wiring

Type	ON (Readbackas 0)	OFF (Readbackas 1)
Dry Contact	Close to GND	Open
		

DO Wiring

Type	ON (Readbackas 1)	OFF (Readbackas 0)
DO (Sink, NPN)	+5 to +24 VDC	Open
		

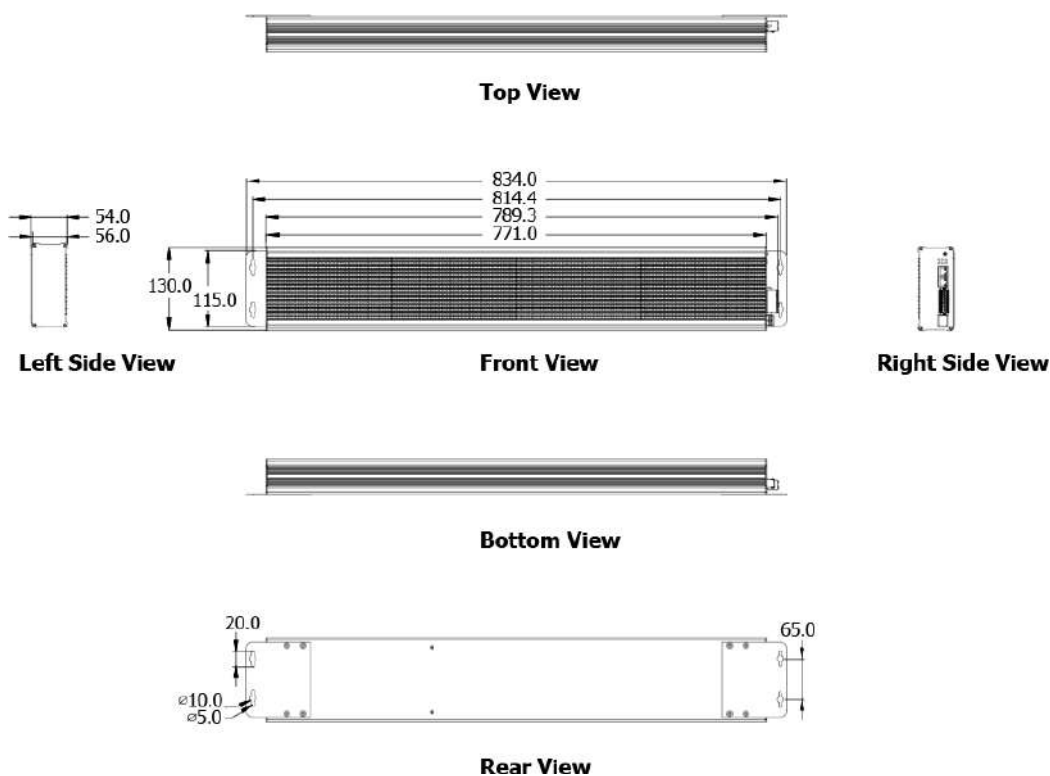
1.5. Dimension

This section provides details of the dimensions for the iKAN series LED displays that can be used when defining the specifications for any enclosures to be installed.

1.5.1. iKAN-116S

This section provides the dimensions of the iKAN-116S.

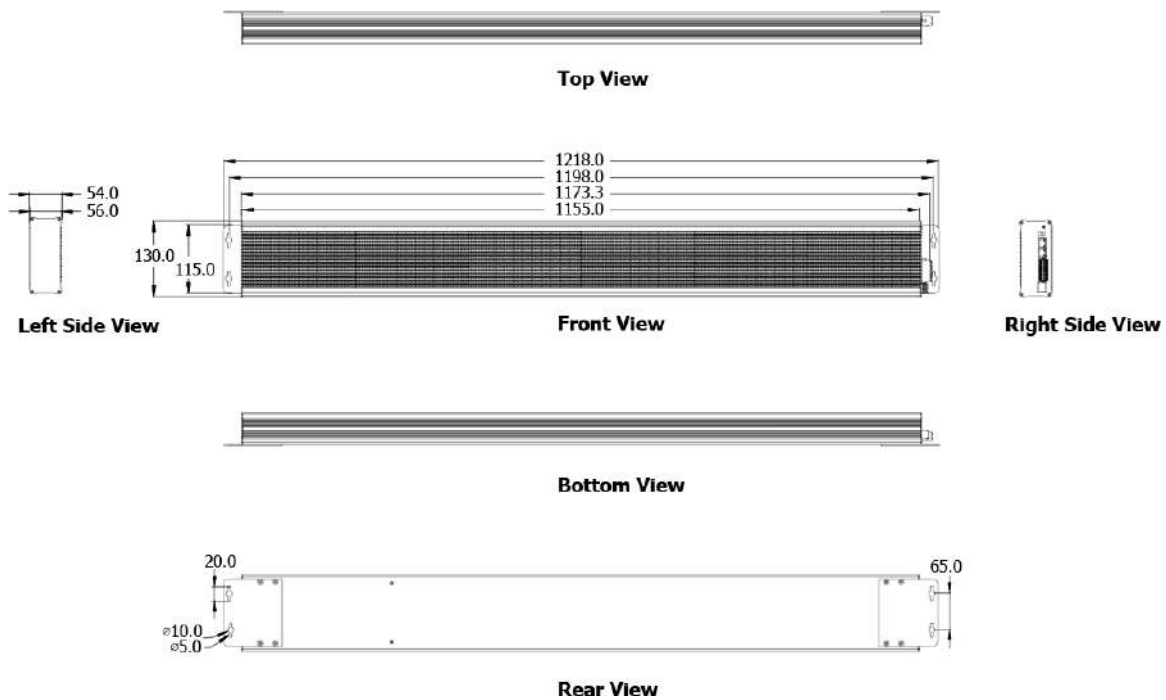
All dimensions are in millimeters.



1.5.2. iKAN-124S

This section provides the dimensions of the iKAN-124S.

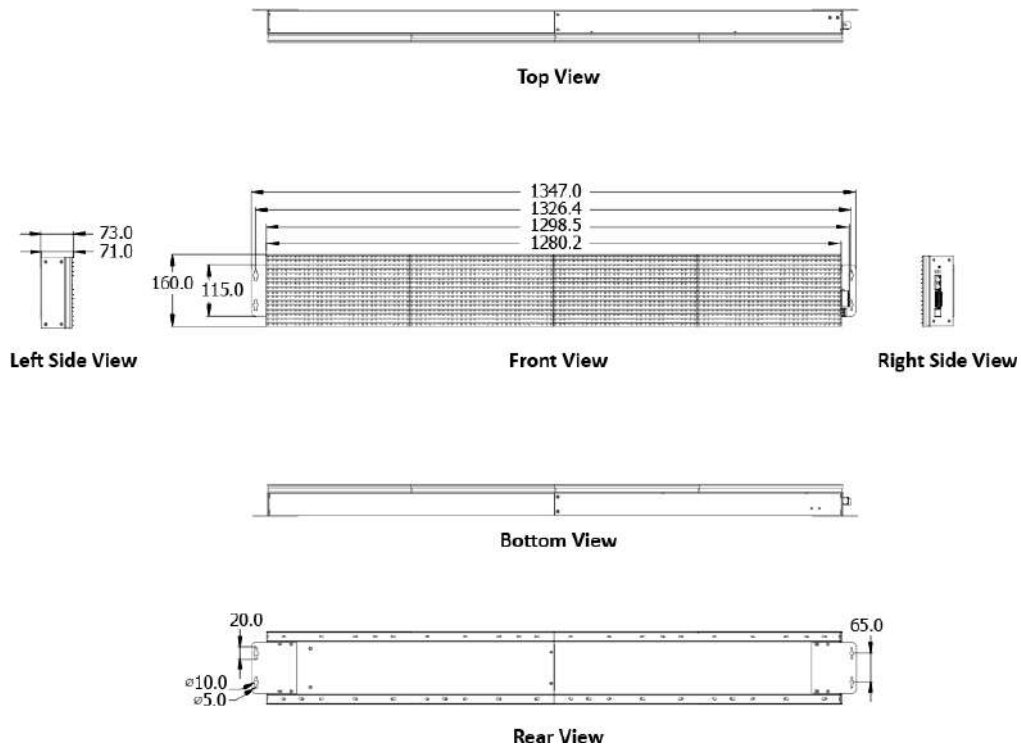
All dimensions are in millimeters.



1.5.3. iKAN-116(A)

This section provides the dimensions of the iKAN-116(A).

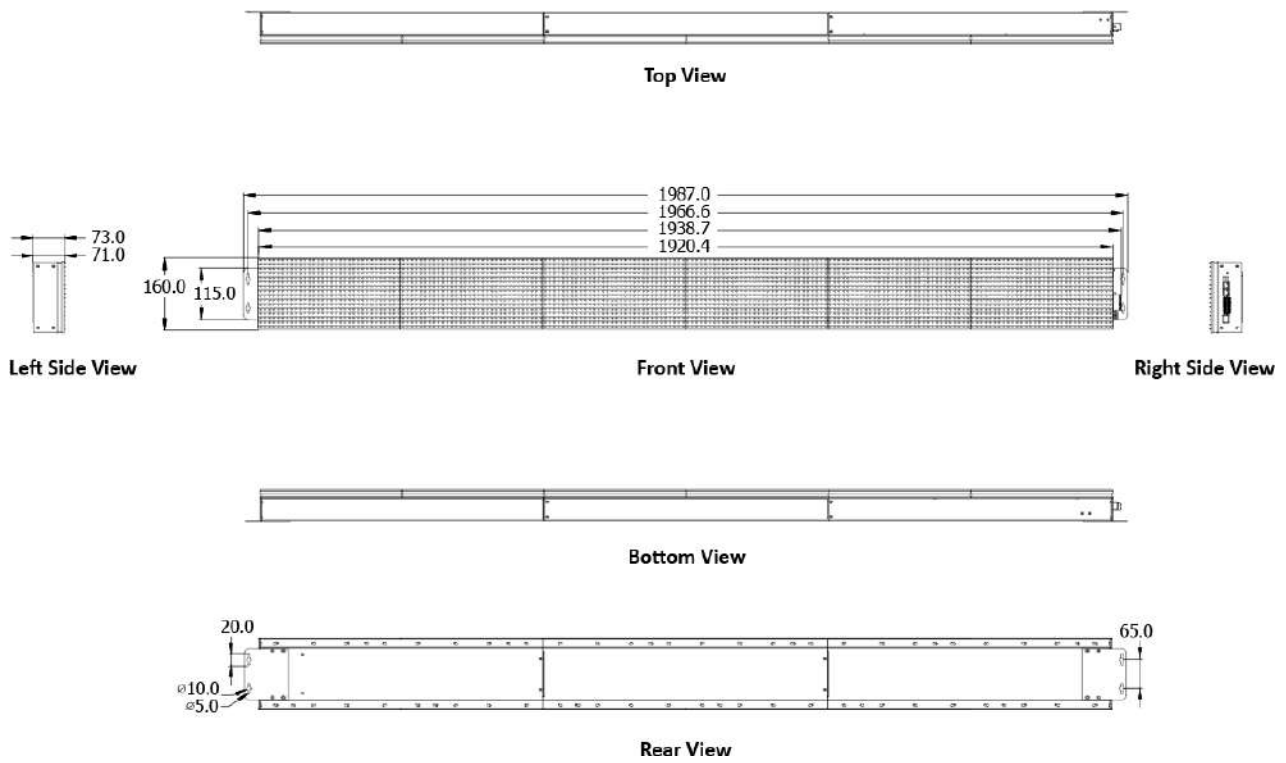
All dimensions are in millimeters.



1.5.4. iKAN-124(A)

This section provides the dimensions of the iKAN-124(A).

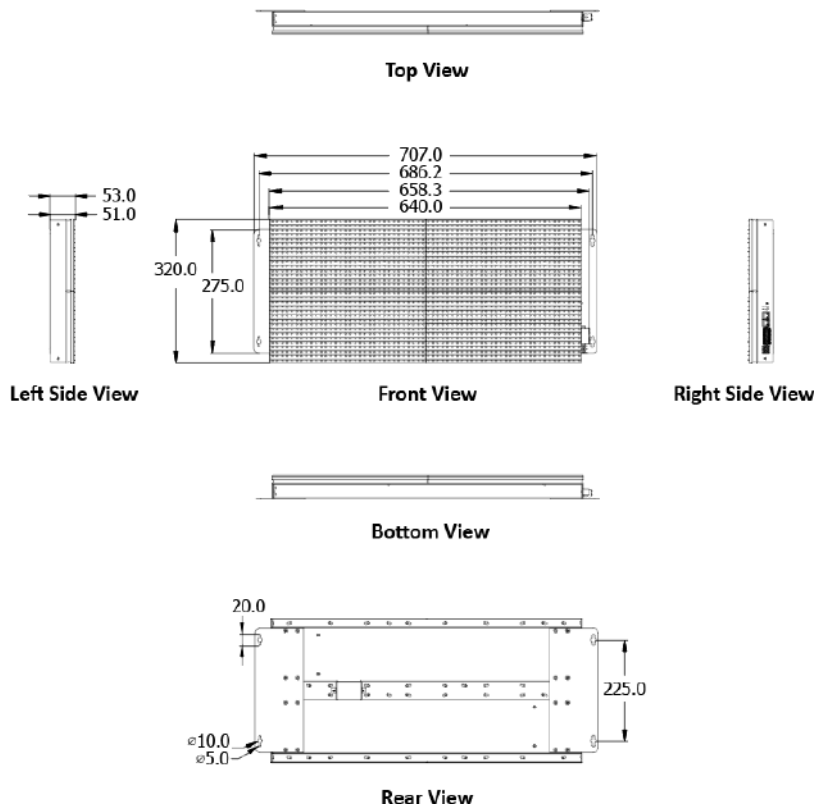
All dimensions are in millimeters.



1.5.5. iKAN-208(A)

This section provides the dimensions of the iKAN-208(A).

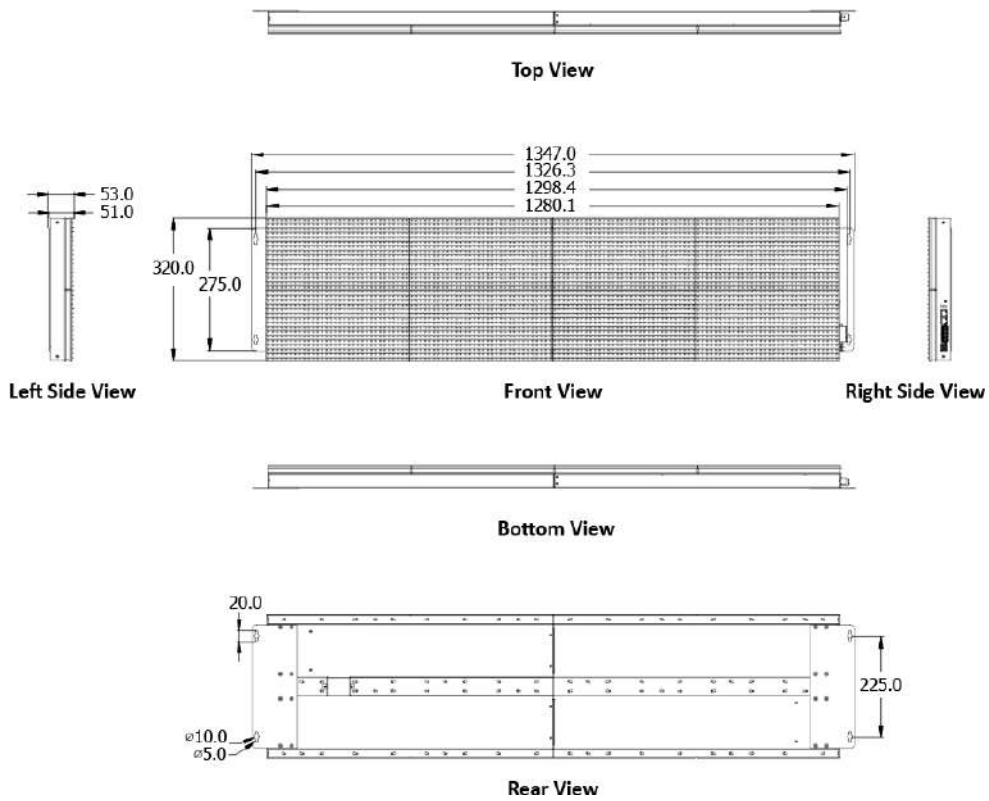
All dimensions are in millimeters.



1.5.6. iKAN-216(A)

This section provides the dimensions of the iKAN-216(A).

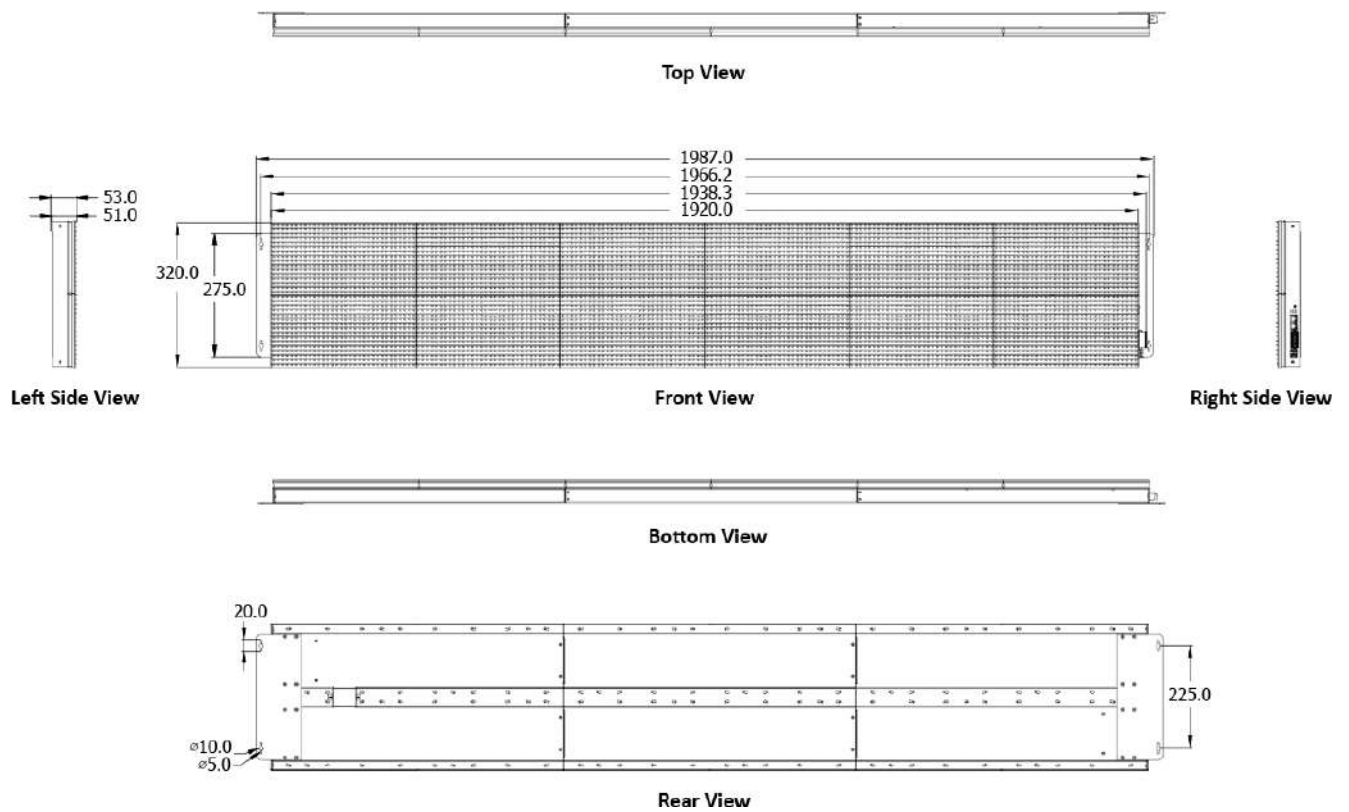
All dimensions are in millimeters.



1.5.7. iKAN-224(A)

This section provides the dimensions of the iKAN-224(A).

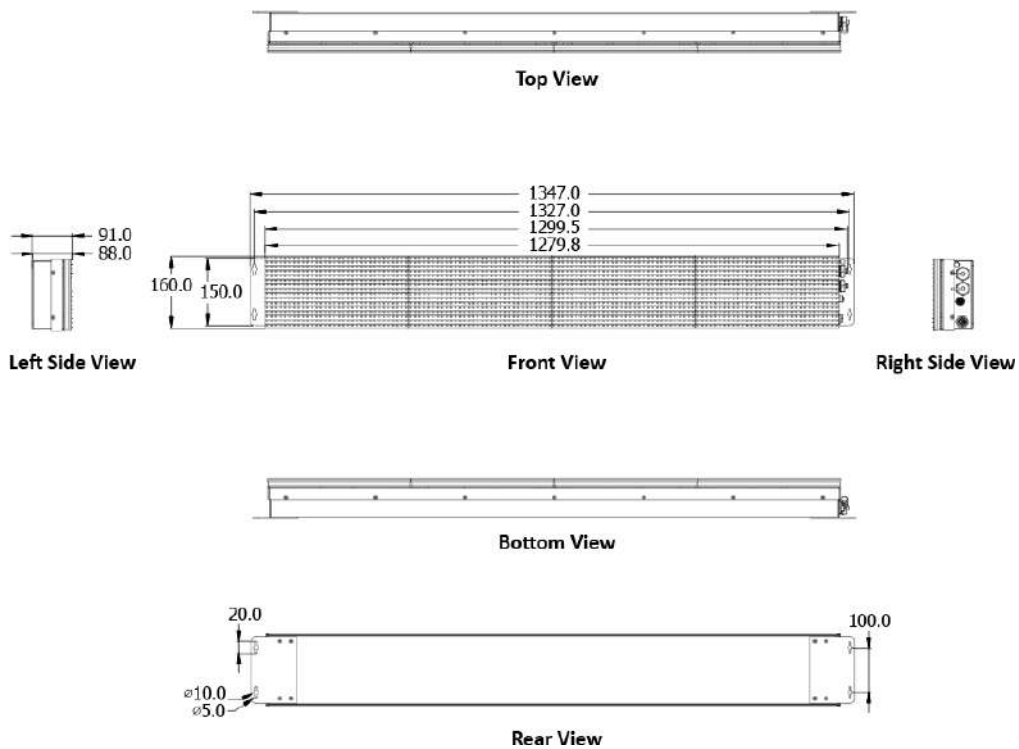
All dimensions are in millimeters.



1.5.8. iKAN-116(A)-IP65

This section provides the dimensions of the iKAN-116(A)-IP65.

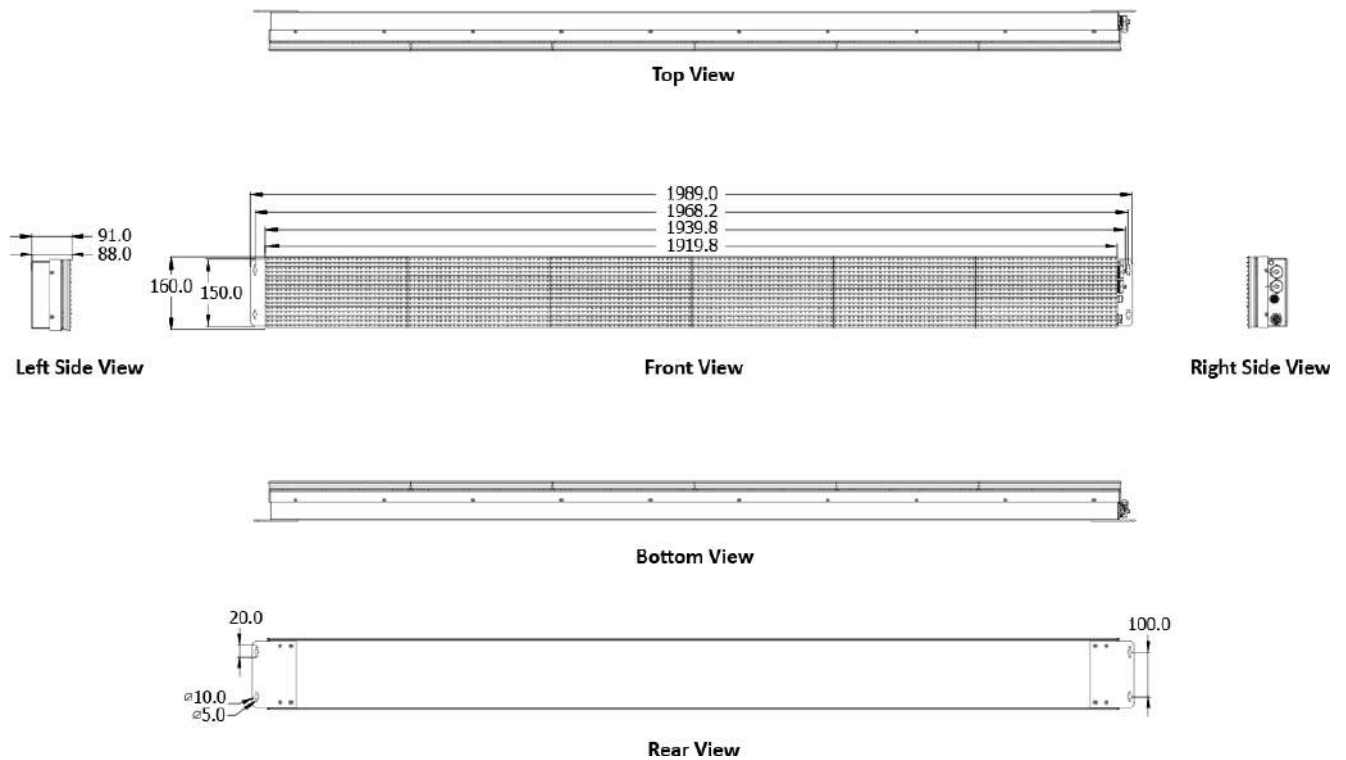
All dimensions are in millimeters.



1.5.9. iKAN-124(A)-IP65

This section provides the dimensions of the iKAN-124(A)-IP65.

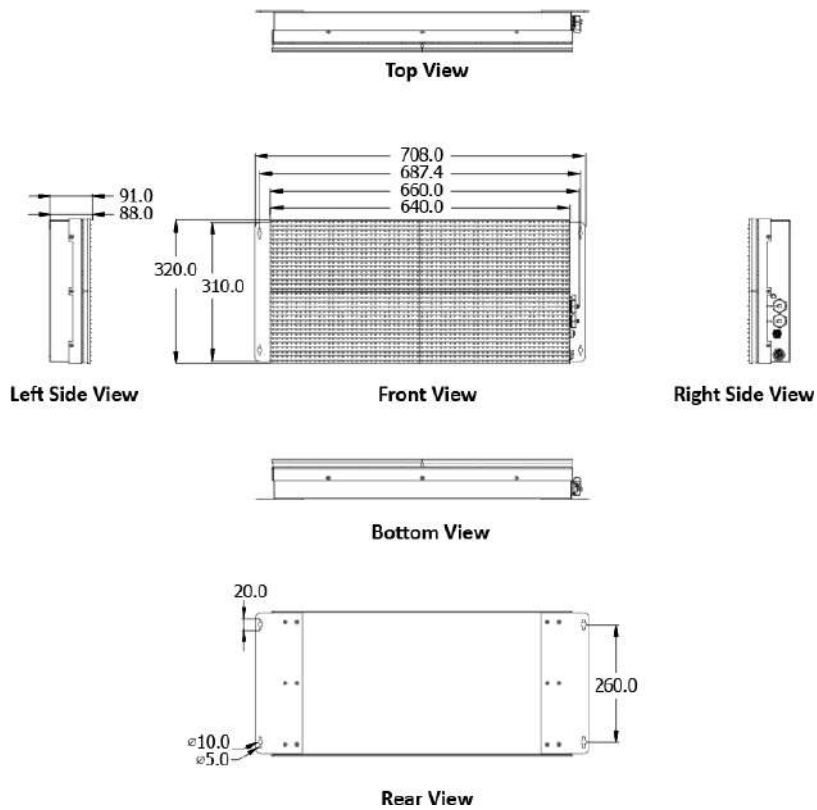
All dimensions are in millimeters.



1.5.10. iKAN-208(A)-IP65

This section provides the dimensions of the iKAN-208(A)-IP65.

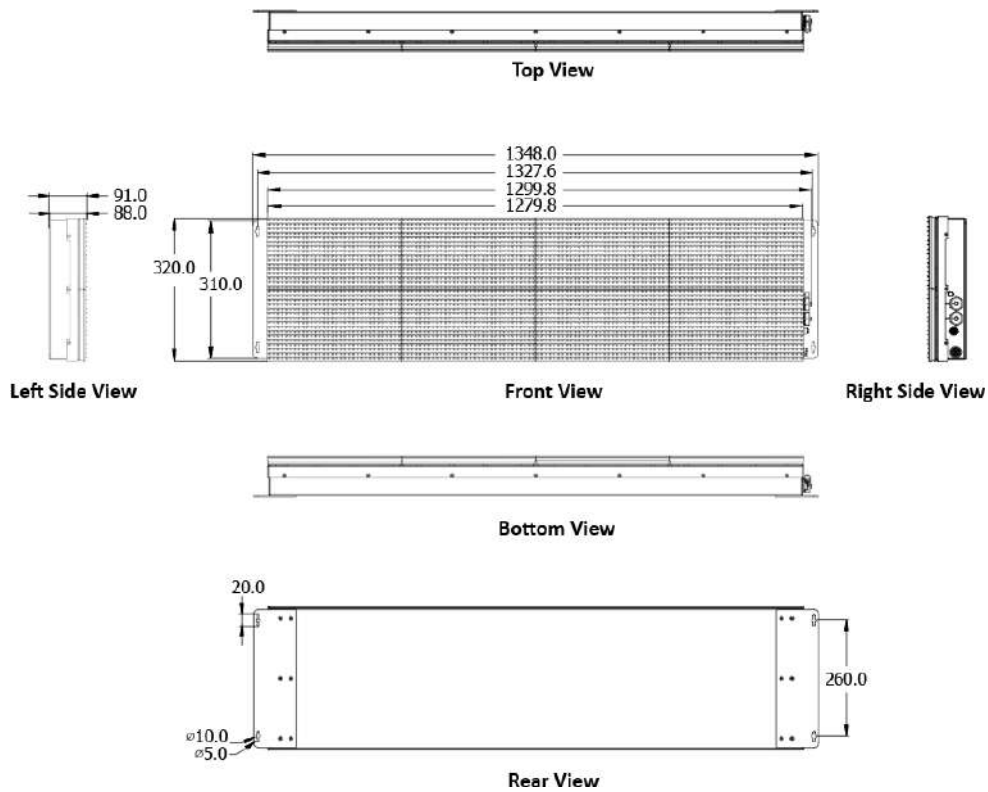
All dimensions are in millimeters.



1.5.11. iKAN-216(A)-IP65

This section provides the dimensions of the iKAN-216(A)-IP65.

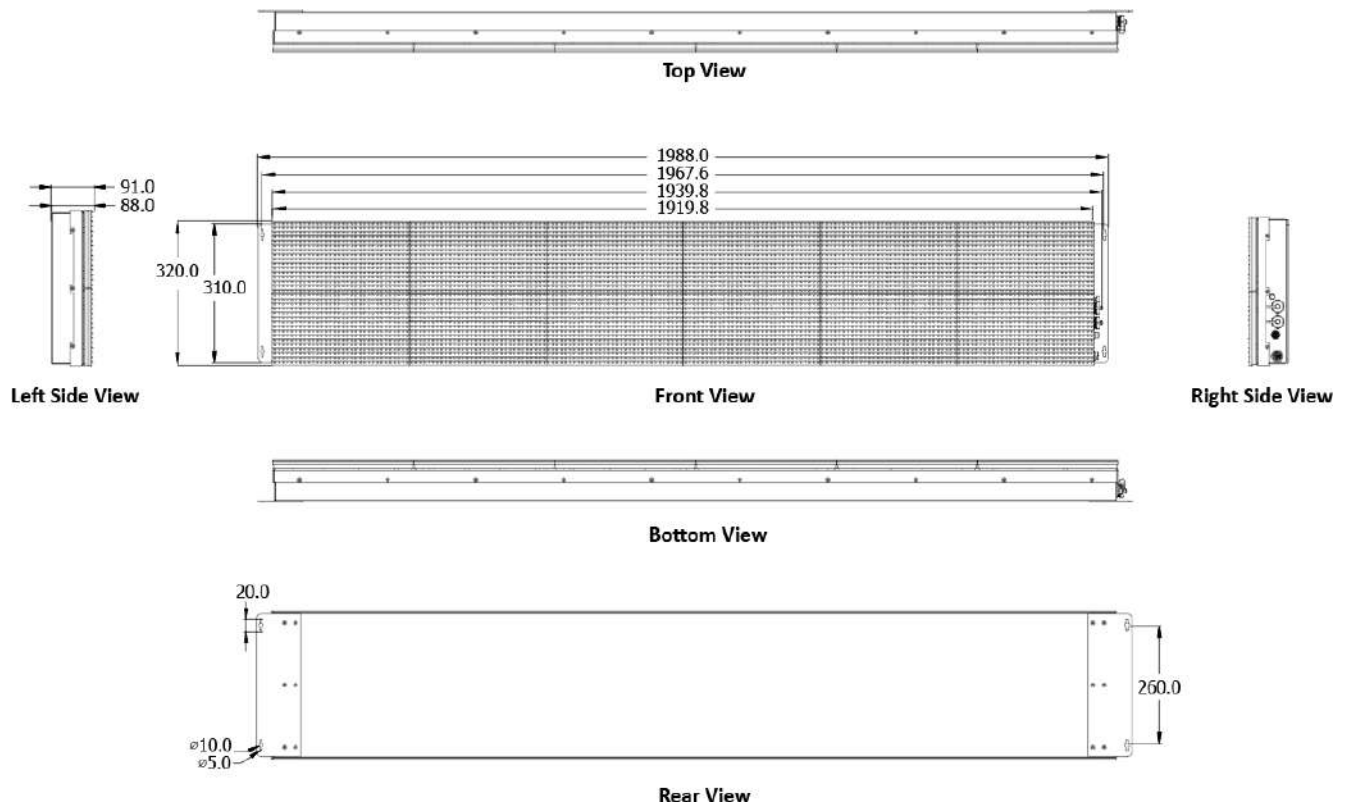
All dimensions are in millimeters.



1.5.12. iKAN-224(A)-IP65

This section provides the dimensions of the iKAN-224(A)-IP65.

All dimensions are in millimeters.



2. Getting Started

If you are new to iKAN, you should read this chapter first, as it provides a description of the basic procedures that need to be followed when installing, configuring, and activating the iKAN system, before operating the iKAN for the first time.

2.1. Checking the Packages

Before starting any installation task, please inspect the contents of the shipping package carefully. Ensure that all components listed in the following sections are included and undamaged. If any item is missing or damaged, please contact your dealer or distributor for assistance.

2.1.1. iKAN-1xxS

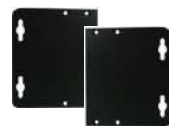
This section lists the package contents for iKAN-1xxS series displays.



iKAN-116S/iKAN-124S LED Display



Quick Start Guide



Wall Mounting Bracket * 2



Wall Mounting Screw
(M4 x 6L) * 8



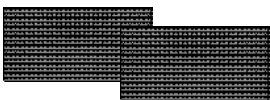
RS-232 Cable (CA-0910-1)



Screw Driver

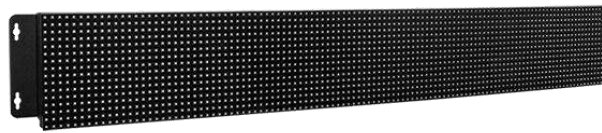
2.1.2. iKAN-xxx(A)

This section lists the package contents for iKAN-1xx(A) and iKAN-2xx(A) series displays. Please check the quantity of each item as shown in the table.

Item	iKAN-116(A)	iKAN-124	iKAN-208(A)	iKAN-216(A)	iKAN-224(A)
No. of Display Panels 	2	3	1	2	3
No. of Panel Mounting Screws 	6	6	8	8	8
No. of Panel Mounting Screws 	8	8	16	16	16
No. of Wall Mounting Bracket 	2	2	2	2	2
Quick Start Guide 	1	1	1	1	1
RS-232 Cable 	1	1	1	1	1
Screw Driver 	1	1	1	1	1

2.1.3. iKAN-xxx(S)-IP65

This section lists the package contents for iKAN-1xx(S)-IP65 series displays.



iKAN-116(S)-IP65/iKAN-124(S)-IP65/iKAN-208-IP65/iKAN-216-IP65/iKAN-224-IP65 LED Display



Quick Start Guide



Wall Mounting Bracket * 2



Wall Mounting Screw
(M4 x 6L) * 8



RJ-45 Connector * 2
Waterproof Assembly



CA-M12-02-A
Power Cable



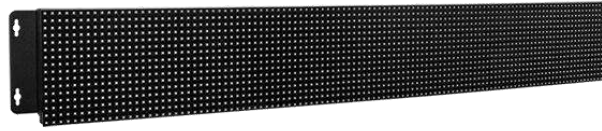
CA-039 I/O Cable



Screw Driver

2.1.4. iKAN-1xxA-IP65 and iKAN-208A-IP65

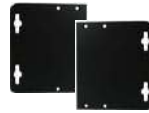
This section lists the package contents for iKAN-1xxA-IP65 and iKAN-208A-IP65 series displays.



iKAN-116A-IP65/iKAN-124A-IP65/iKAN-208-IP65 LED Display



Quick Start Guide



Wall Mounting Bracket * 2



**Wall Mounting Screw
(M4 x 6L) * 8**



**RJ-45 Connector * 2
Waterproof Assembly**



**CA-M12-02-A
Power Cable**



CA-039 I/O Cable



Screw Driver

2.1.5. iKAN-216A-IP65 and iKAN-224A-IP65

This section lists the package contents for iKAN-216A-IP65 and iKAN-224A-IP65 series displays.



iKAN-216A-IP65/iKAN-224A-IP65 LED Display



Quick Start Guide



Wall Mounting Bracket * 2



Wall Mounting Screw
(M4 x 6L) * 8



RJ-45 Connector * 2
Waterproof Assembly



CA-039 I/O Cable



Screw Driver

2.2. Assembling the iKAN

This section describes the proper installation procedures for the iKAN-xxx(A) series display panels. Depending on the model, the system may use a single, double, or triple LED module. Ensure that the mounting surface can support the device's weight and avoid surfaces like polystyrene foam, mineral wool, plaster board, or wood panels under 30 mm thick.

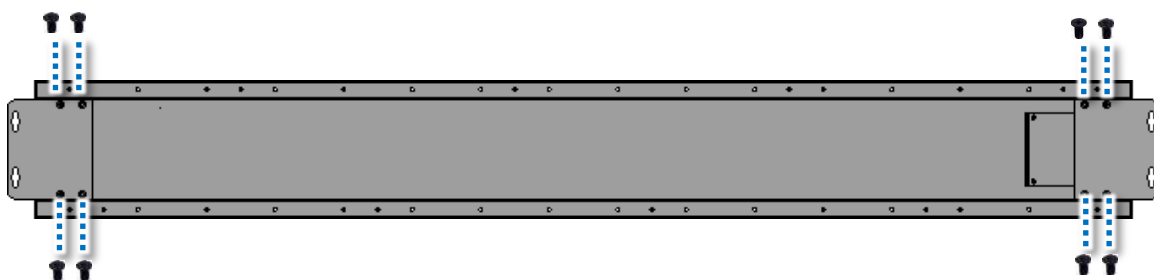
2.2.1. Installing the Single-Panel iKAN Display

Single-panel displays like the iKAN-116S, iKAN-124S, iKAN-1xx(A)-IP65, and iKAN-208 only require mounting one LED module for installation.

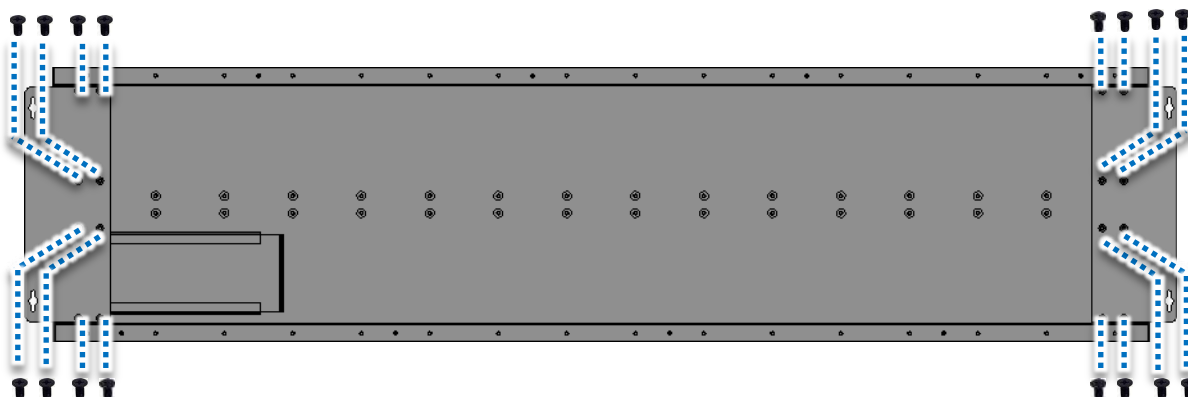
Installation Procedure

Attach the wall-mount brackets to both sides of the iKAN, and then secure the brackets using the included screws.

iKAN-116S/iKAN-124S/iKAN-1xx(A)-IP65



iKAN-208/iKAN-2xx(A)-IP65

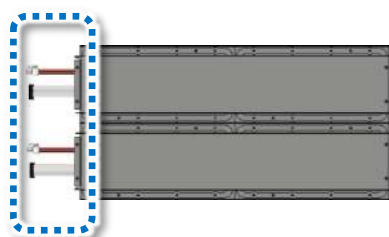


2.2.2. Installing the Dual-Panel iKAN Display

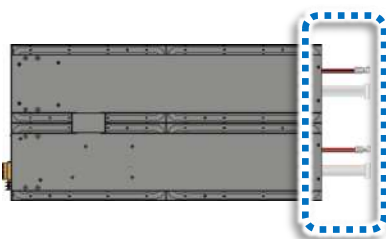
Dual-panel displays like the iKAN-116(A) and iKAN-216(A) consist of left and right panels. Communication and power cables must be connected in order before assembly.

Installation Procedure

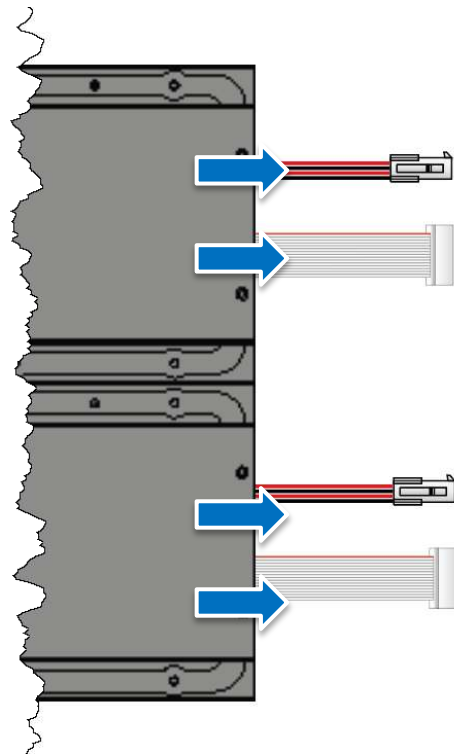
- 1) Pull out the power and communication cables from the opening on the side of the module.



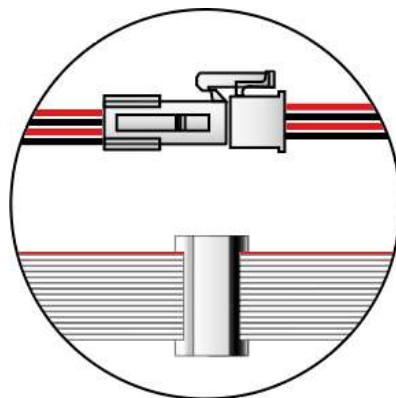
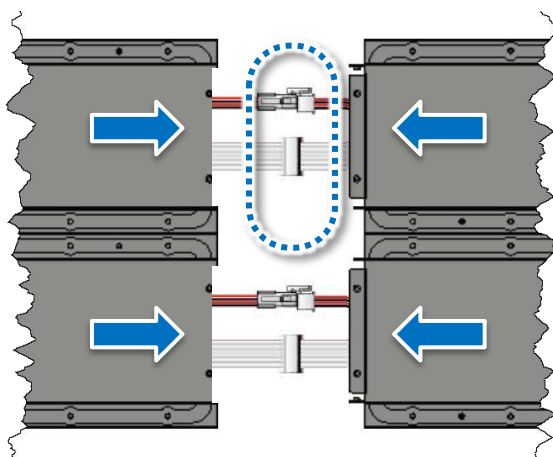
Left Panel (Rear View)



Right Panel (Rear View)

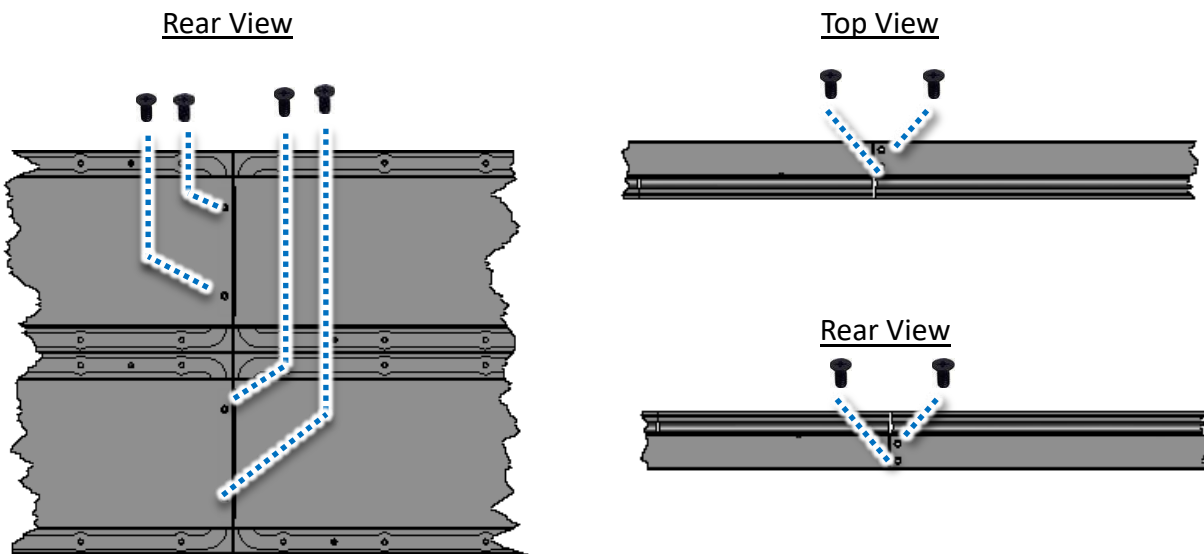


- 2) Connect the power and communication cables between the left and right panels.



3) Use M3×6L screws to fasten the two panels together.

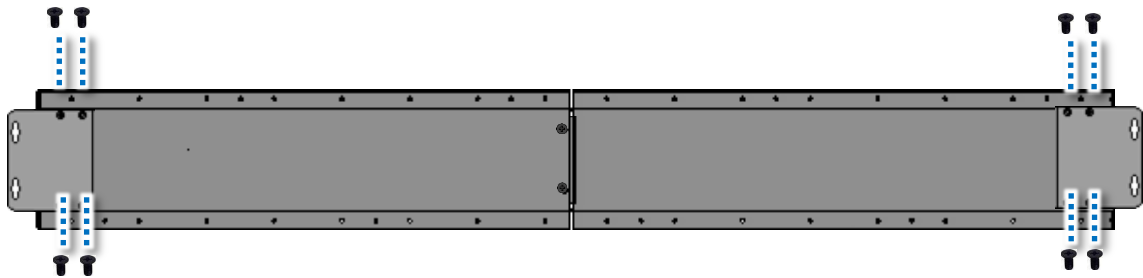
(6 pcs for iKAN-116(A); 8 pcs for iKAN-216(A))



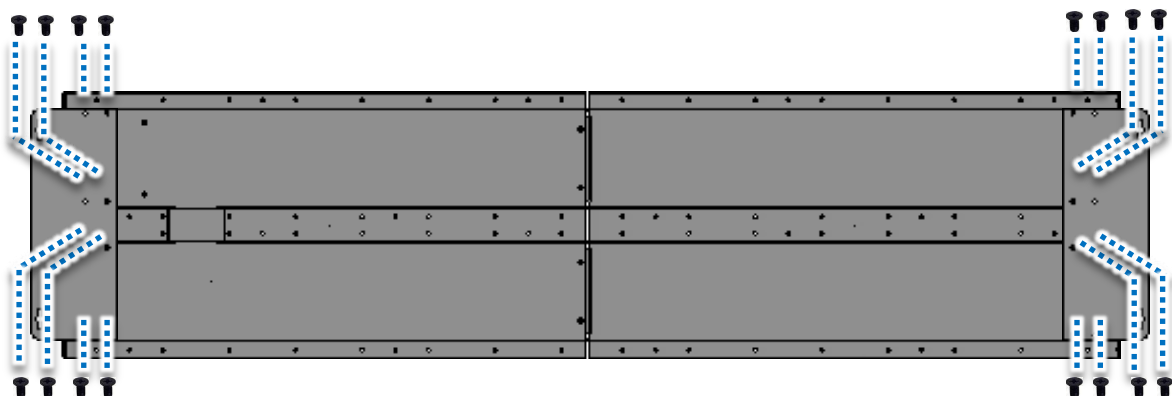
4) Use M4×6L screws to mount the wall brackets on the outer edges

(8 pcs for iKAN-116(A); 16 pcs for iKAN-216(A))

iKAN-116(A)



iKAN-216(A)

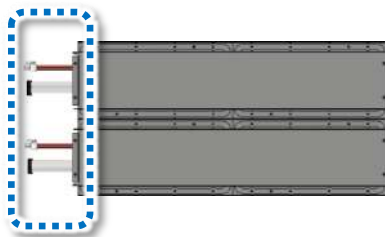


2.2.3. Installing the Triple-Panel iKAN Display

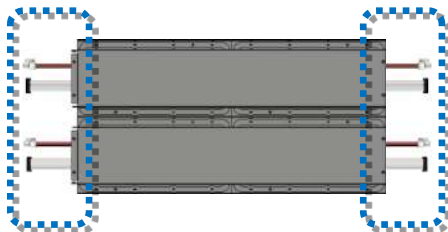
Triple-panel displays like the iKAN-124 and iKAN-224 consist of left, center, and right panels. Communication and power cables must be connected in order before assembly.

Installation Procedure

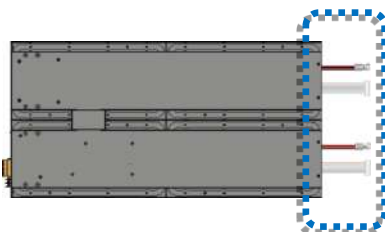
- 1) Pull out the power and communication cables from the opening on the side of the module.



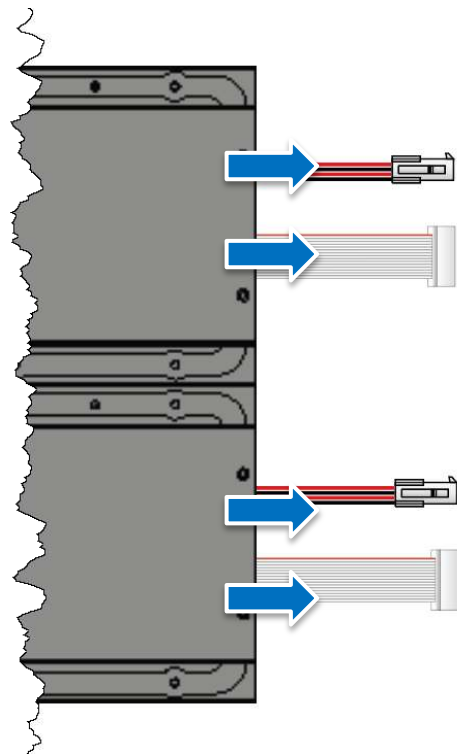
Left Panel (Rear View)



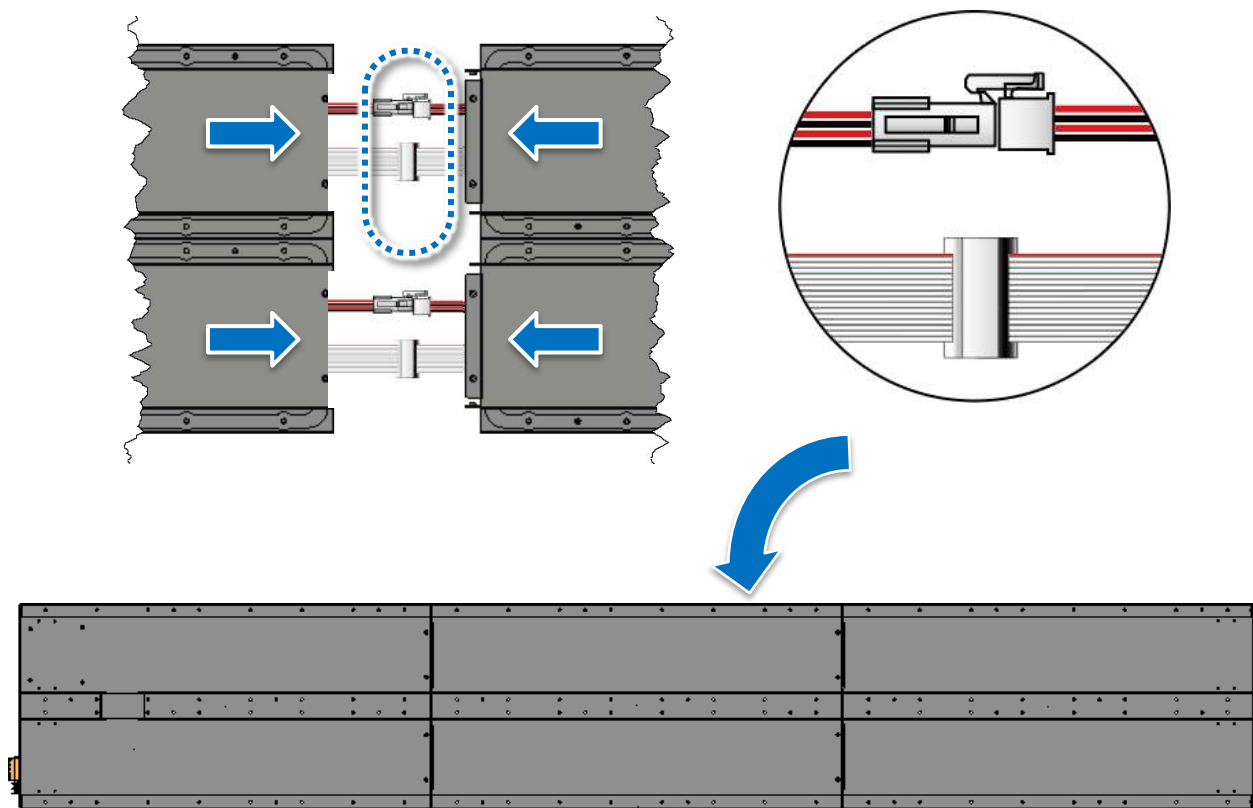
Middle Panel (Rear View)



Right Panel (Rear View)

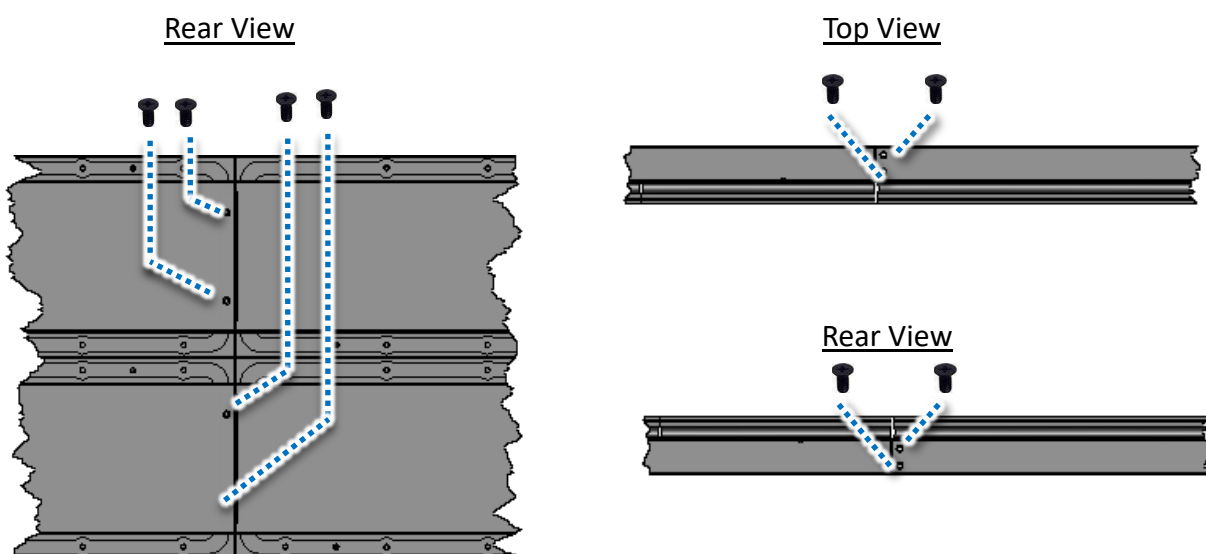


2) Connect the power and communication cables between the left, center, and right panels.



3) Use M3×6L screws to fasten the two panels together.

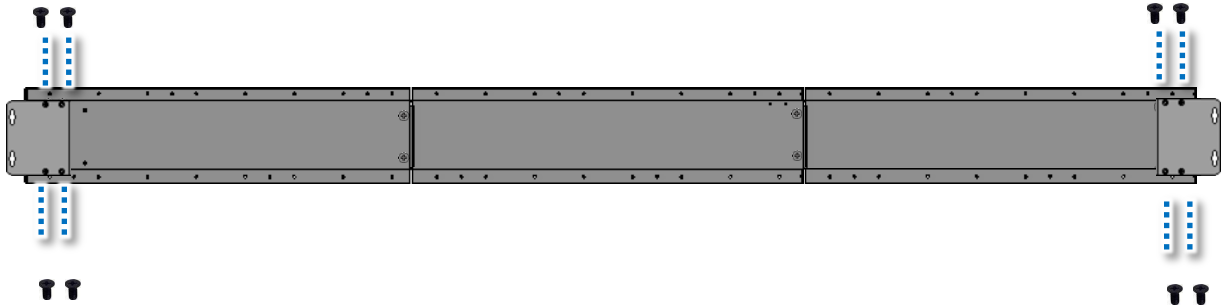
(12 pcs for iKAN-124(A); 16 pcs for iKAN-224(A))



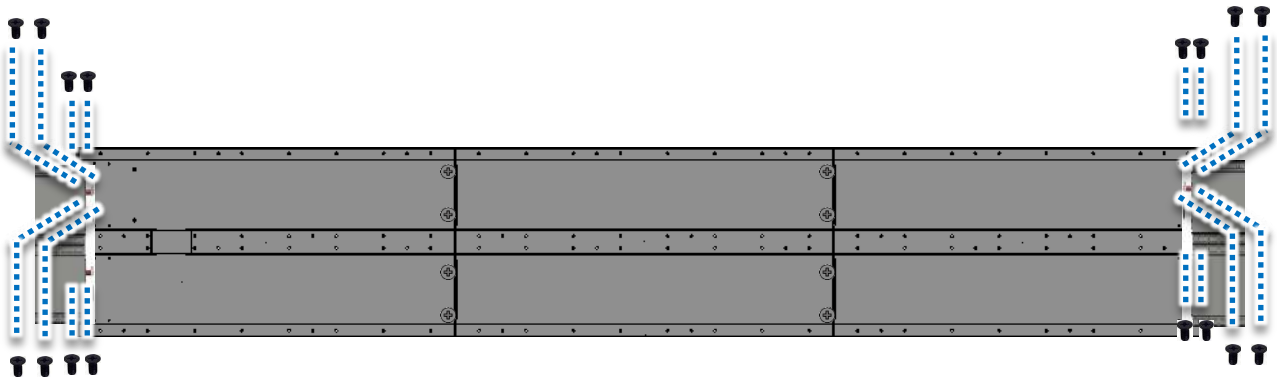
4) Use M4×6L screws to mount the wall brackets on the outer edges

(8 pcs for iKAN-124(A); 16 pcs for iKAN-224(A))

iKAN-124(A)



iKAN-224(A)



2.3. Assembling the Waterproof Assembly (For IP65 Series Only)

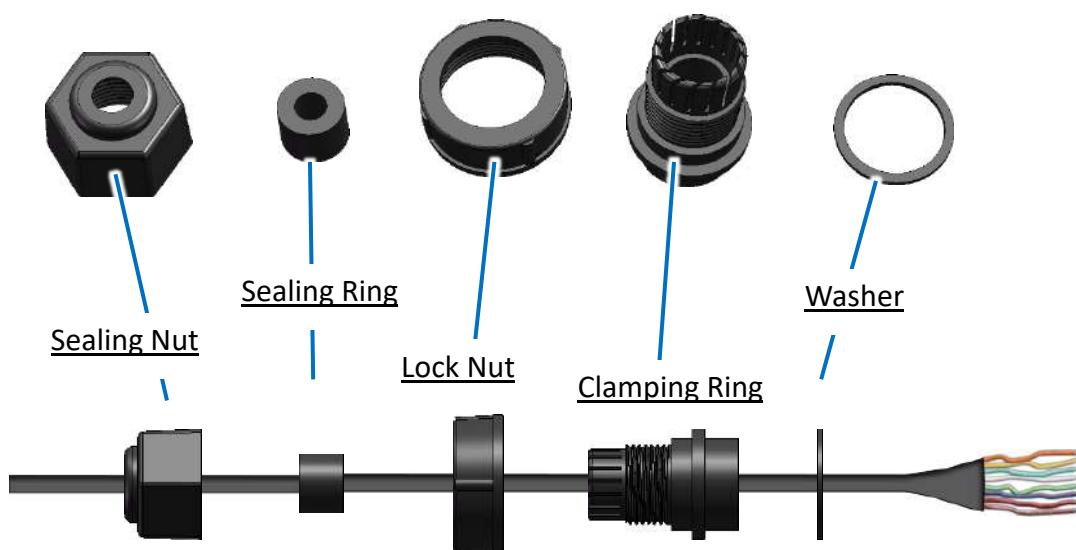
To ensure stable operation of the iKAN series in harsh environments such as outdoor or high-humidity areas, the IP65 waterproof model includes two RJ-45 waterproof kits. These kits effectively protect the Ethernet ports (E1/E2) from moisture and dust, ensuring long-term stability and safety of the device. The following instructions describe the complete installation procedure of the waterproof components.

Installation Procedure

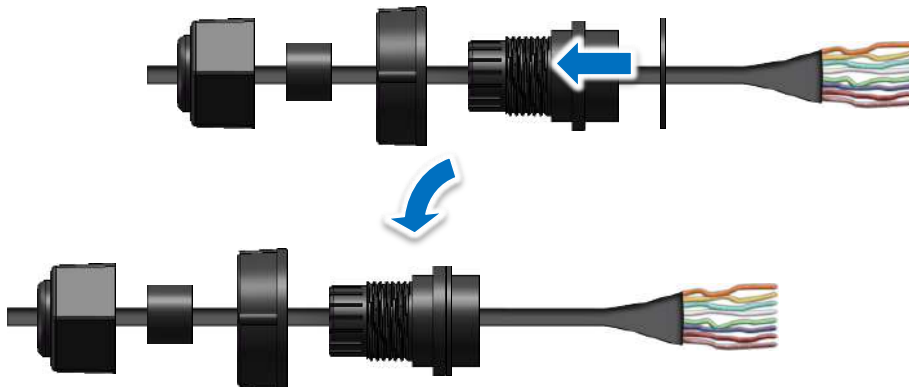
- 1) Remove the RJ-45 connector from the Ethernet cable.



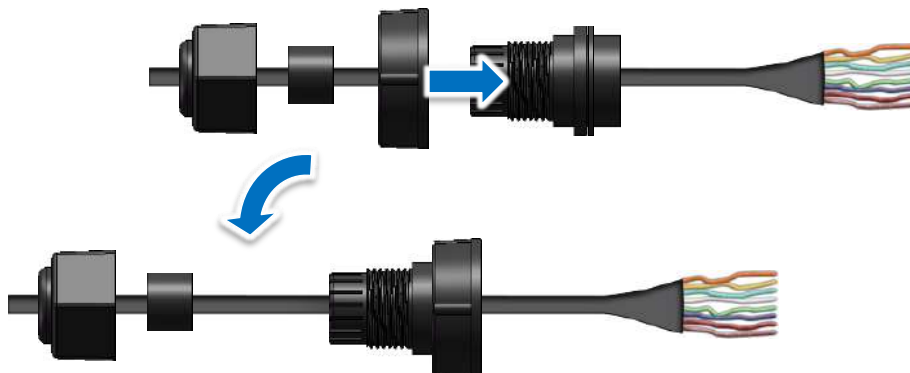
- 2) Sequentially insert the following parts onto the Ethernet cable from the end



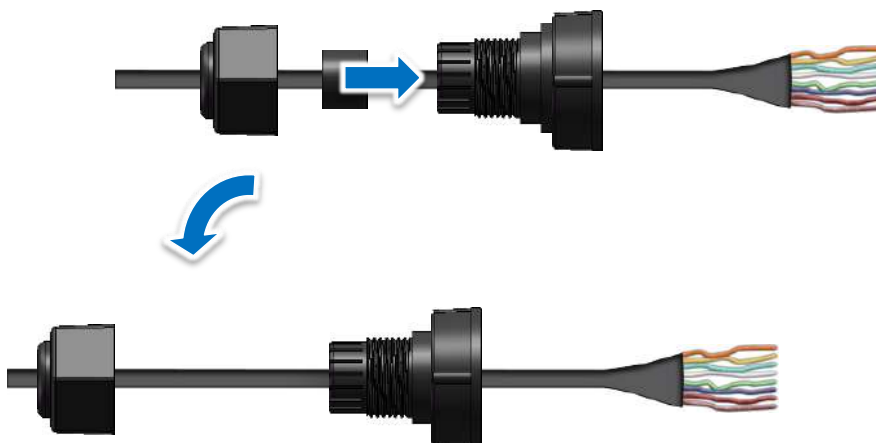
3) Wrap the washer around the clamp ring.



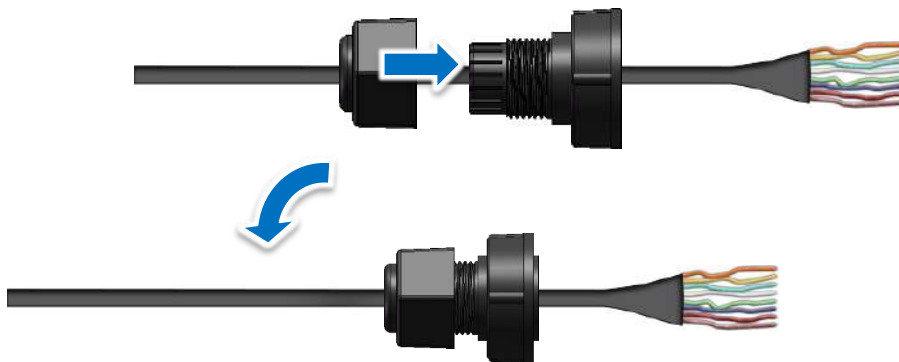
4) Screw the lock nut around the clamp ring.



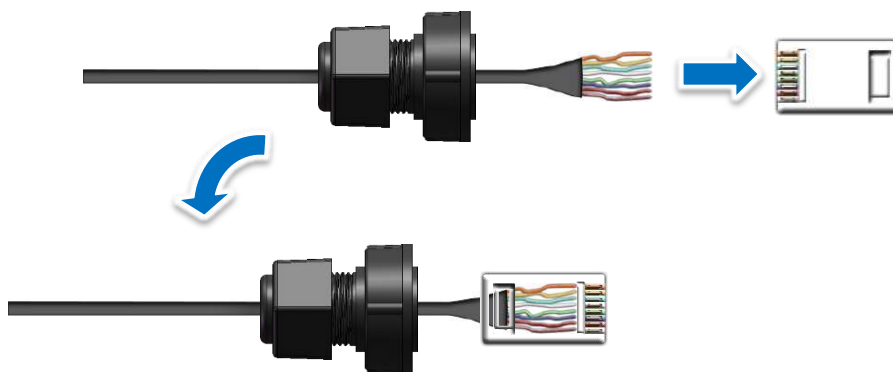
5) Insert the sealing ring into the clamp ring.



6) Push the sealing nut forward and screw the entire assembly tightly to ensure waterproof.



7) Insert the RJ-45 cable into the RJ-45 connector housing.



2.4. Connecting the Power, Ethernet, and PC

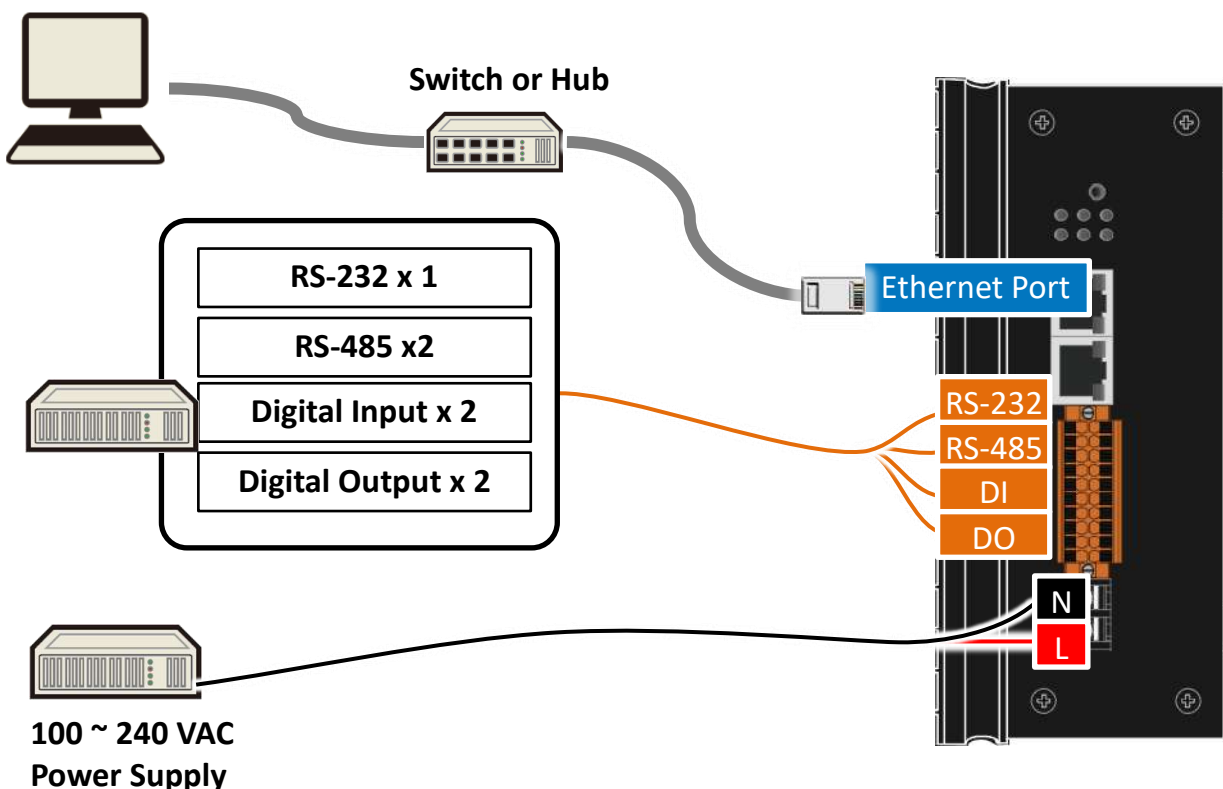
In order to ensure stable operation of the iKAN display, it is essential to connect the power supply, network, and control devices properly. This section provides detailed connection instructions based on model types, including AC/DC power setup, Ethernet cabling, and wiring for RS-232, RS-485, DI, and DO terminals.

2.4.1. iKAN-1xx(S) and iKAN-2xx

This section describes basic hardware connection for iKAN-1xx(S) and iKAN-2xx, including AC power wiring, Ethernet connection, and I/O wiring for RS-232, RS-485, DI, and DO devices. Proper setup ensures stable operation and reliable communication.

Steps

- 1) Connect the power connector to 100–240V AC.
- 2) Use an RJ-45 cable to connect the iKAN to a switch or hub.
- 3) Wire the I/O terminals to external controllers or devices that support RS-232, RS-485, DI, or DO.

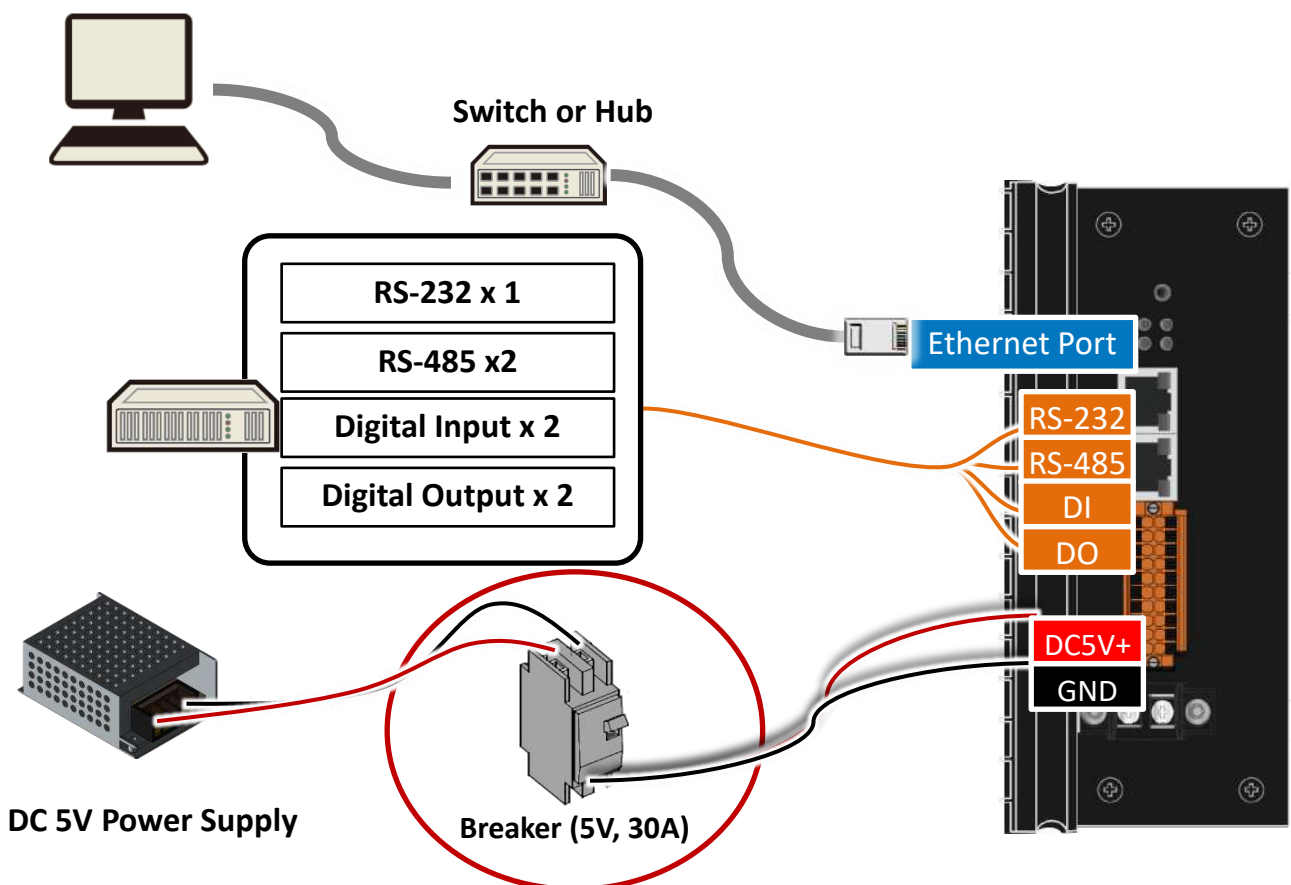


2.4.2. iKAN-1xxA and iKAN-2xxA

This section describes basic hardware connection for iKAN-1xxA and iKAN-2xxA, including 5V DC power wiring, Ethernet connection, and I/O wiring for RS-232, RS-485, DI, and DO devices. These models use a 5V DC power source, and it is recommended to install a circuit breaker to prevent overcurrent damage.

Steps

- 1) Connect a DC 5V power source to a circuit breaker (5V, 30A), then to the iKAN's DC5V+ and GND.
- 2) Use an RJ-45 cable to connect the iKAN to a switch or hub.
- 3) Wire the I/O terminals to external controllers or devices that support RS-232, RS-485, DI, or DO.



Tips & Warnings



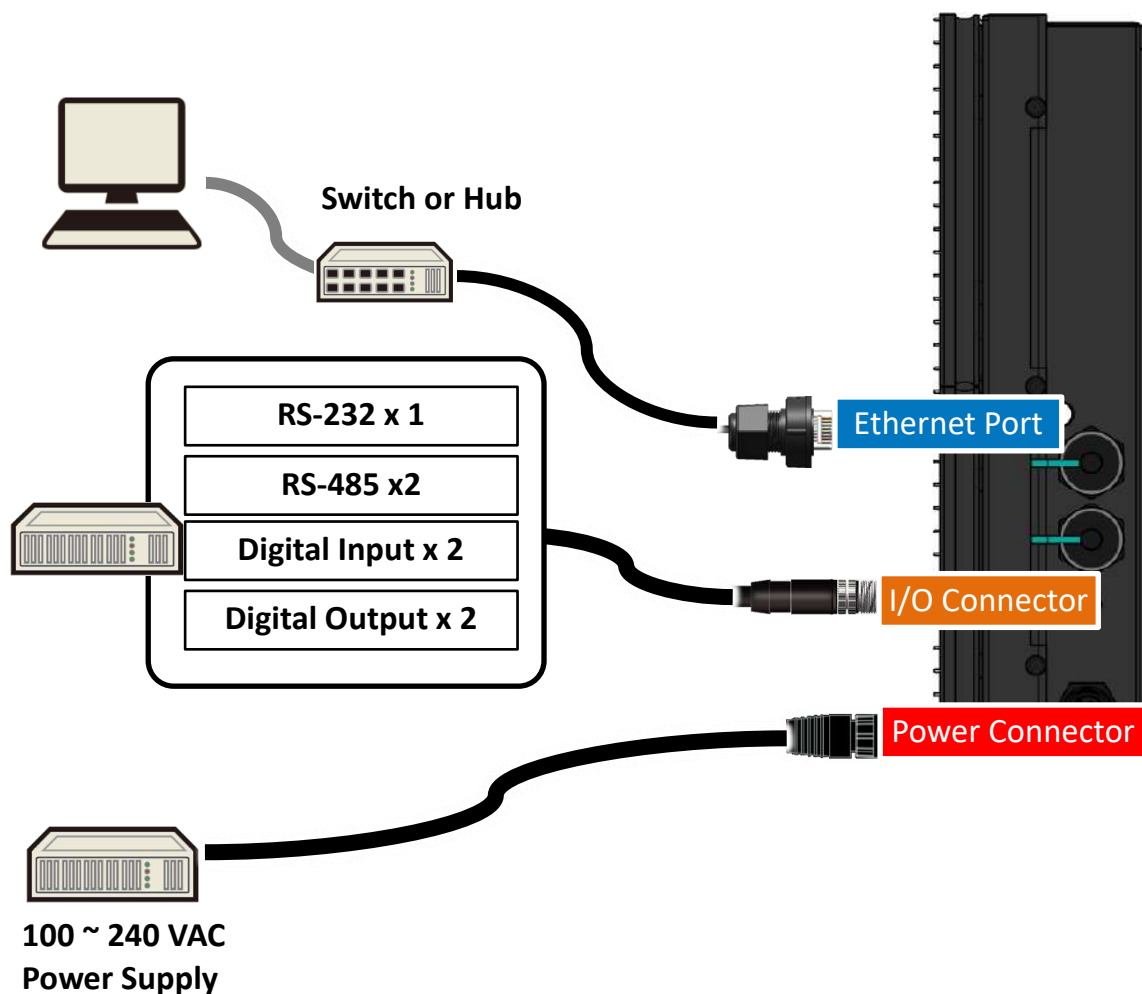
To prevent overcurrent damage, it is recommended to install a 5V/30A breaker between power and iKAN.

2.4.3. iKAN-xxx(S)-IP65 and iKAN-208A-IP65

This section describes basic hardware connection for iKAN-xxx(S)-IP65 and iKAN-208A-IP65, including AC power wiring, Ethernet connection, and I/O wiring for RS-232, RS-485, DI, and DO devices. These devices are designed for outdoor or humid environments and require special waterproof kits for Ethernet and I/O connections to ensure protection.

Steps

- 1) Connect the power connector to 100–240V AC.
- 2) Install the waterproof RJ-45 kit and connect the iKAN to a switch or hub.
- 3) Use the included I/O cable to connect to RS-232, RS-485, DI, or DO controllers or devices.

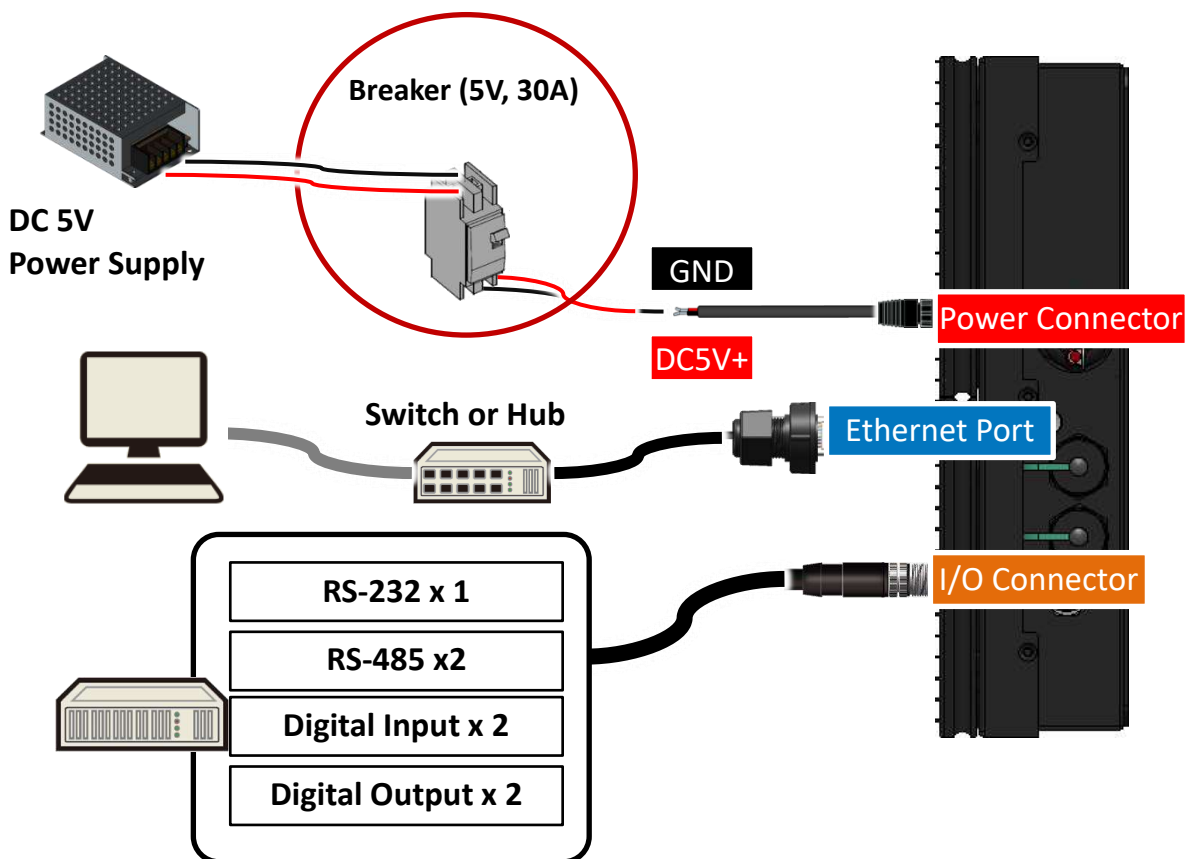


2.4.4. iKAN-216A-IP65 and iKAN-224A-IP65

This section describes basic hardware connection for iKAN-216A-IP65 and iKAN-224A-IP6, including 5V DC power wiring, Ethernet connection, and I/O wiring for RS-232, RS-485, DI, and DO devices. These models use a 5V DC power source, and it is recommended to install a circuit breaker to prevent overcurrent damage, and designed for outdoor or humid environments and require special waterproof kits for Ethernet and I/O connections to ensure protection.

Steps

- 1) Connect a DC 5V power source to a circuit breaker (5V, 30A), then to the iKAN's DC5V+ and GND.
- 2) Install the waterproof RJ-45 kit and connect the iKAN to a switch or hub.
- 3) Use the included I/O cable to connect to RS-232, RS-485, DI, or DO controllers or devices.



Tips & Warnings



To prevent overcurrent damage, it is recommended to install a 5V/30A breaker between power and iKAN.

2.5. Connecting iKAN to a Network

The default IP address of iKAN is 192.168.255.1. In order to integrate the iKAN display into a local network environment, users must configure its IP address, subnet mask, and default gateway.

The eSearch Utility is a useful tool that provides a quick and easy way to configure the Ethernet settings to the iKAN from a PC. This utility supports both Windows and Linux platforms and enables easy discovery and configuration of Ethernet-connected ICP DAS devices.

Steps

- 1) Download the latest version of the eSearch Utility

Visit the ICP DAS - Download Center <https://www.icpdas.com/en/download/index.php> and search for eSearch to download the latest version. Follow the installation wizard to complete setup.

Download Center

Search for Subjects ▼

File Category1 :

Product/Model :

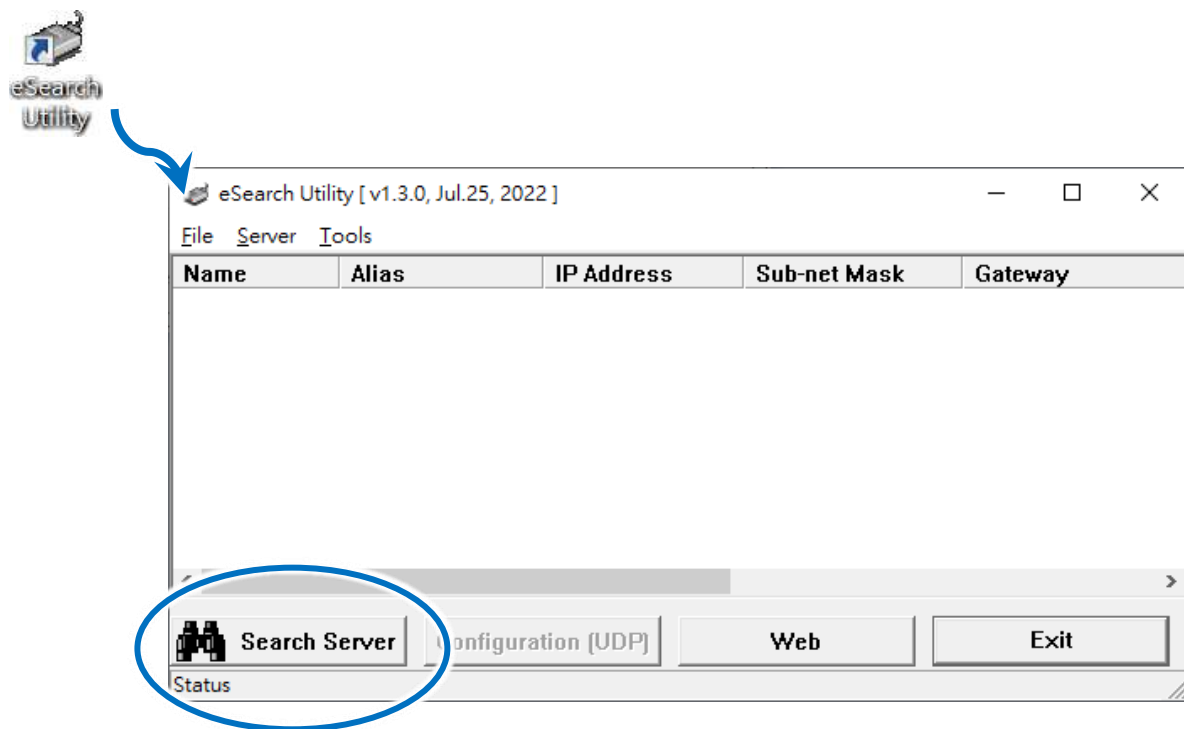
Keywords :

eSearch

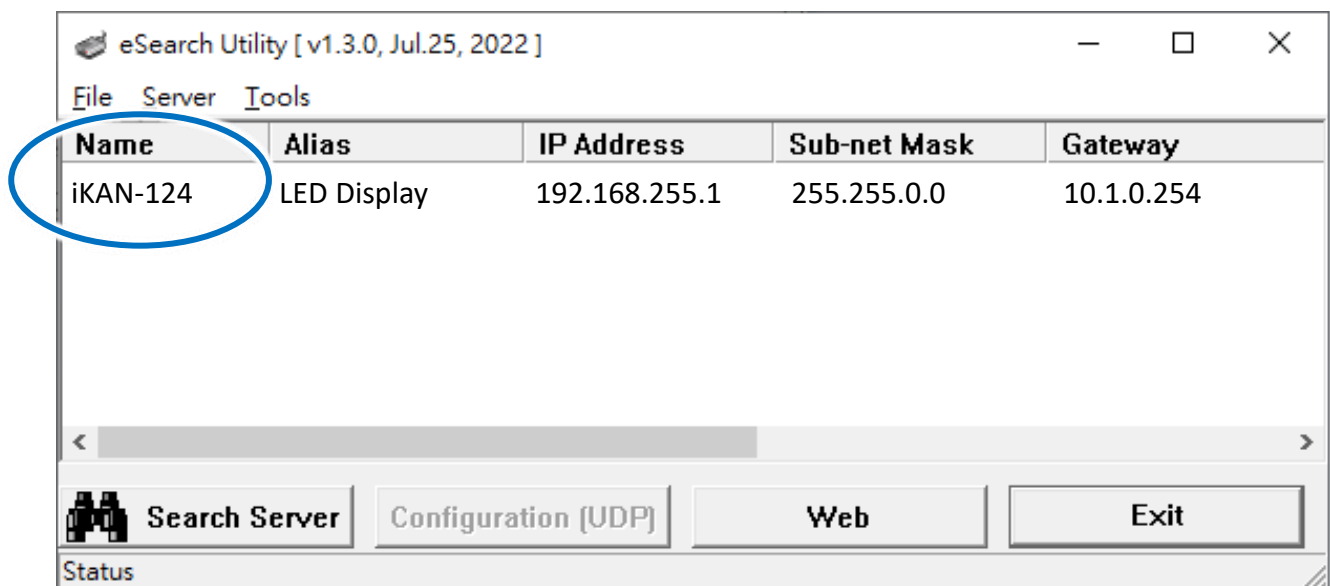
Please enter any search criteria:

Search

2) Run eSearch.exe (default path: C:\ICPDAS\eSearch) and click the 「Search Server」 button.



3) Double-click the detected iKAN display in the list to open the configuration window.



4) Enter a valid IP address, sub-net mask, and gateway, then click 「OK」 button. The device will automatically reboot and apply the new settings (takes about 2 seconds).

Configure Server (UDP)

Server Name : iKAN-124

DHCP: 0: OFF Sub-net Mask : 255.255.0.0 Alias: LED Display

IP Address : 10.1.0.120 Gateway : 10.1.0.254 MAC: 00:0d:e0:65:0b:23

Warning!!
Contact your Network Administrator to get correct configuration before any changing!

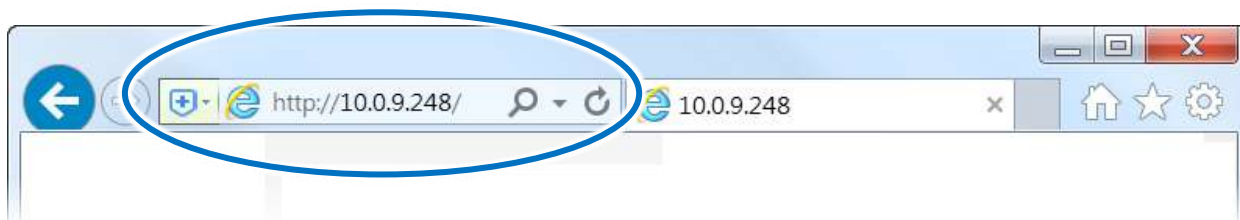
OK Cancel

2.6. Logging into the iKAN Web Interface

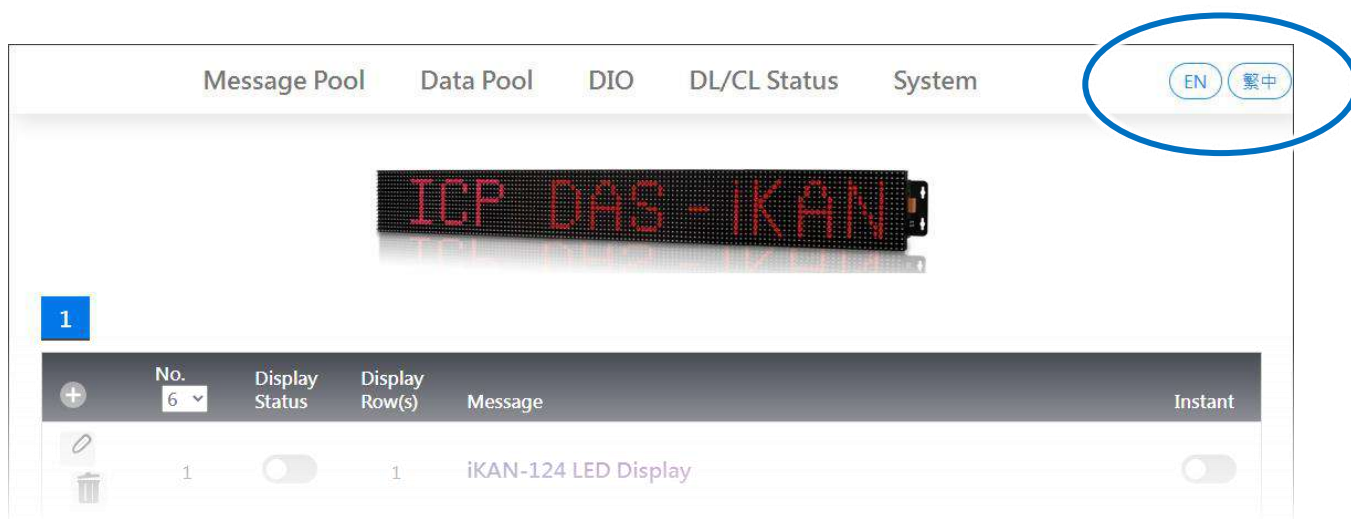
After completing network configuration, users can access the iKAN Web interface via a web browser to perform further setup and message editing. This section describes how to connect using standard browsers and select the interface language.

Steps

- 1) Open a web browser such as Google Chrome, Firefox or IE, etc.
- 2) Enter iKAN IP address in the address bar, and then press Enter.



- 3) After logging in, select the desired language from the top-right language dropdown.



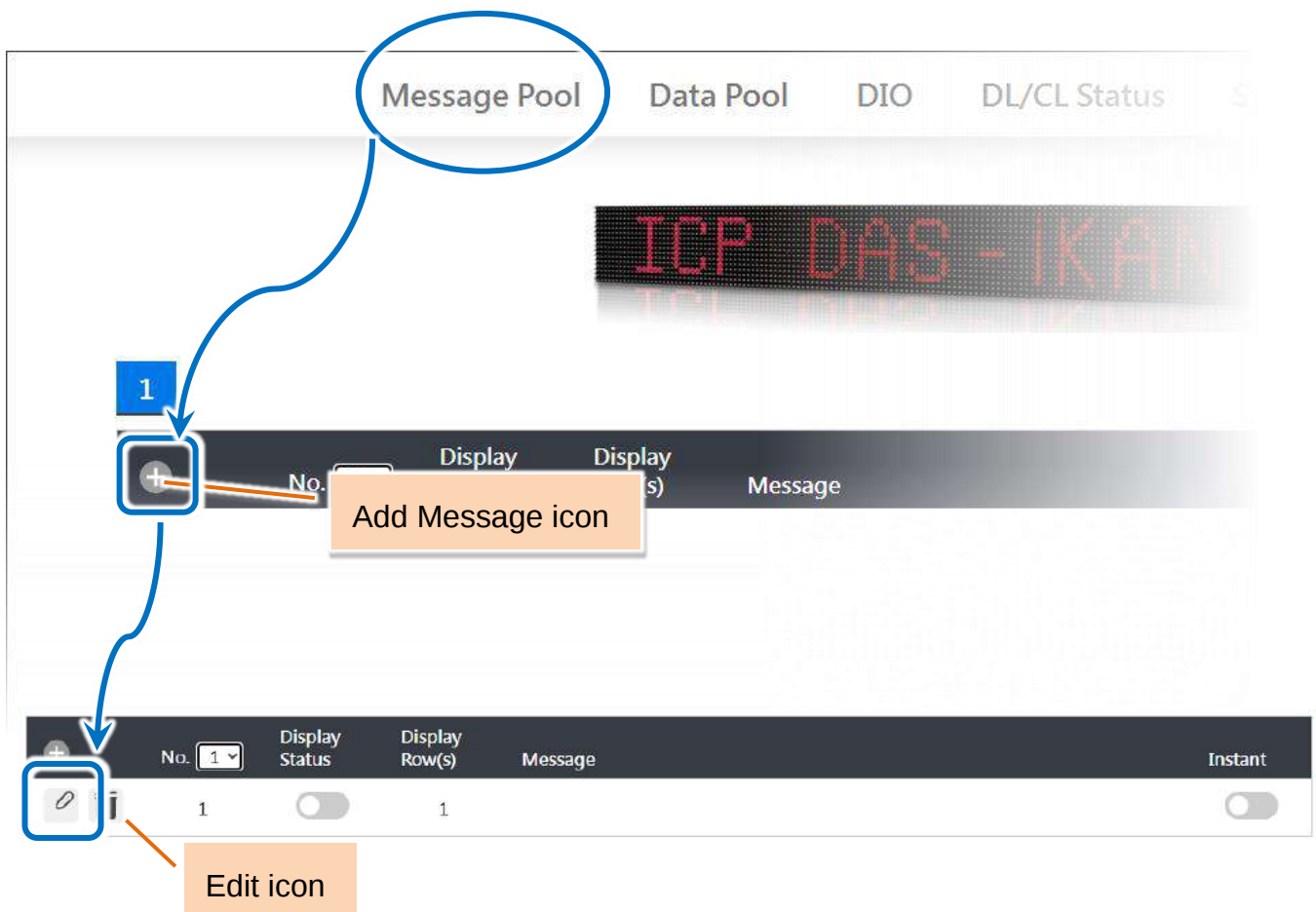
For more advanced configuration options, please refer to chapter [3. iKAN Web Interface](#).

2.7. Editing Your First iKAN Message

This section walks users through creating their first LED message—"Hello World!"—helping them become familiar with the message pool interface and editing flow. This is the fundamental operation before any message-based application.

Steps

- 1) Log in to the iKAN interface and click "Message Pool" from the top menu.
- 2) Click the 「Add Message icon (+)」
- 3) A blank message will appear in the list.
- 4) Click the 「Edit icon ()」 next to the message.



5) In the form for message No . 1, specify the following message parameters:

- i. Check the 「 Display 」 checkbox to enable the message.
- ii. Select the desired color from the 「 Color 」 drop-down menu
- iii. Enter the following string in the 「 Message 」 text field:

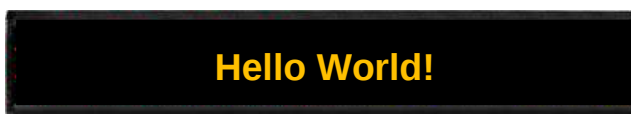
Hello World!
- iv. Click the 「 Update 」 button to save.



The screenshot shows a configuration window for message No. 1. It contains the following fields and controls:

- No. 1**: Label for the message.
- Display**: A checkbox that is checked, with the label "Instant" next to it.
- Message Moving Mode**: A dropdown menu showing "1".
- Row(s)**: A dropdown menu showing "1".
- Color**: A dropdown menu showing "Yellow".
- Message**: A text input field containing "Hello World!".
- Update**: A blue button with a yellow starburst icon and a mouse cursor pointing at it.
- Cancel**: A blue button.

6. The message will be shown immediately on the iKAN display.



For more detailed information on how to edit and manage the messages displayed, please refer to chapter 4. Message Management.

3. iKAN Web Interface

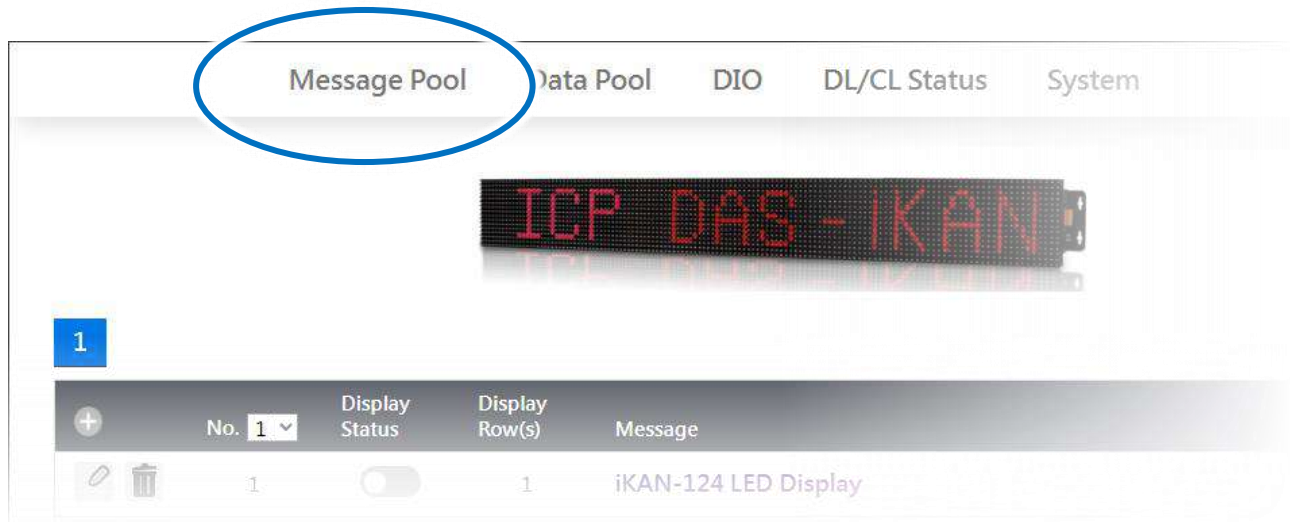
The iKAN series LED display can be accessed and configured through any standard web browser (such as Chrome, Firefox, IE, or Safari) or via network-capable mobile devices. The web-based interface is organized into five major functional areas: Message Pool, Data Pool, DIO, DL Real-time Info, and System Parameters. These pages enable quick deployment of display content, real-time variable monitoring, integration of DL/CL sensors, and full customization of system parameters and backup functions.

Menu	Sub-Menu	Functions	Refer to
MESSAGE POOL	-	Edit and manage messages.	3
DATA POOL	INTEGER	Map integer variables to engineering units.	5.1
	FLOAT	Set decimal places for flat variables.	5.2
	COIL	Map coil variables to custom text.	5.3
DIO	-	Control the DO and read the status of DI/DO channels	3.3
DL Status	-	Get the information regarding connection status, real-time data and Modbus address for measured substance on the DL/CL series module.	3.4 6
SYSTEM	IMPORT/EXPORT	Import/export pre-configured messages and variables.	3.5.1
	ETHERNET	Set the network address and add DL/CL series modules connected via Ethernet.	3.5.2
	COM1/COM3	Set the communication parameters for the serial port and add DL/CL series modules connected via RS-485.	3.5.3 錯誤! 找不到參照來源。
	MISC.	Adjust the brightness, moving speed, or check the module model.	3.5.4

The following sub-sections provide detailed guidance for each interface.

3.1. Message Pool

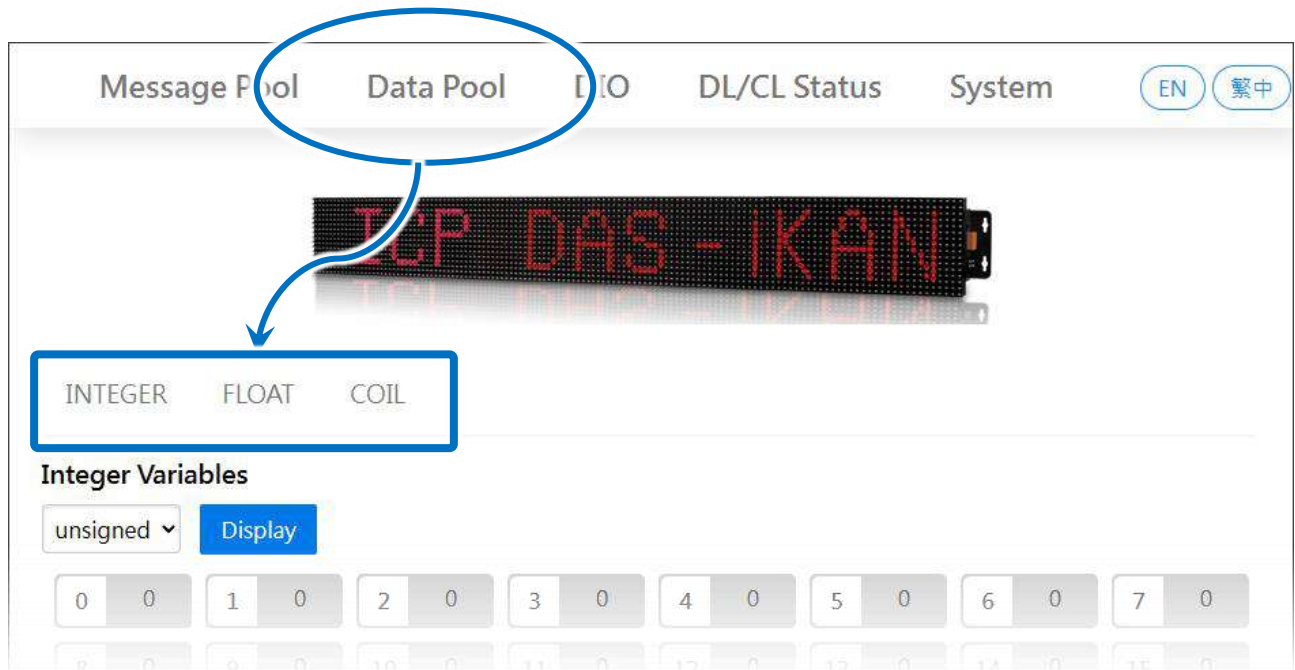
The「Message Pool」page is used to create, edit, and manage up to 128 stored messages. Messages can be prioritized and combined with variables to display real-time alerts or device status.



For more detailed information on how to edit and manage the messages displayed, please refer to chapter [4. Message Management](#).

3.2. Data Pool

The 「Data Pool」 page enables users to map data from external sources (e.g., sensors or PLCs) to internal variables, and define how these variables are represented in display messages.



Supported variable types include **Integer**, **Float**, and **Coil**. Custom formatting and color display options are available to ensure real-time, intuitive, and readable message rendering.

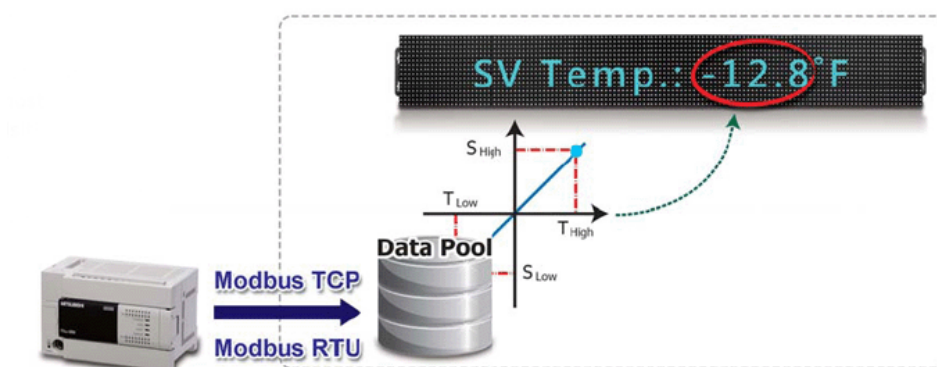
3.2.1. INTEGER

Many devices convert physical measurements (e.g., voltage, temperature, humidity) into 16-bit integer values for storage and transmission.

The 「INTEGER」 page offers a value mapping function that enables users to define a correspondence between raw and target values, ensuring intuitive and meaningful engineering data display.



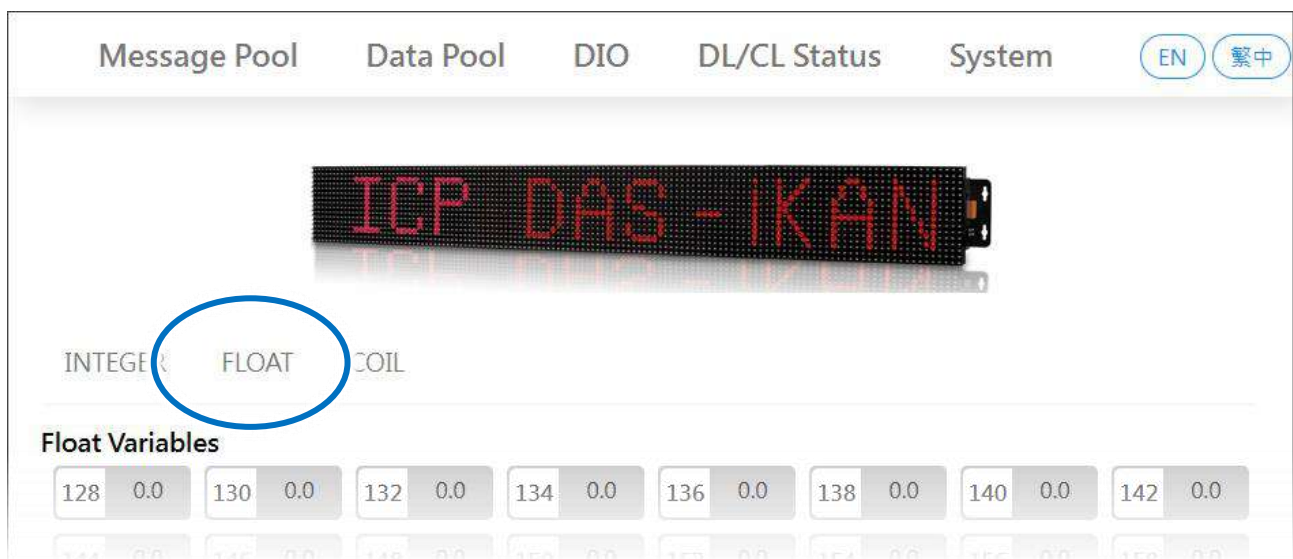
For configuration details, refer to section 5.1. Mapping Integer Values to Engineering Units.



3.2.2. FLOAT

FLOAT variables support up to three decimal places for improved precision in numerical display. Each float variable occupies two consecutive Modbus registers.

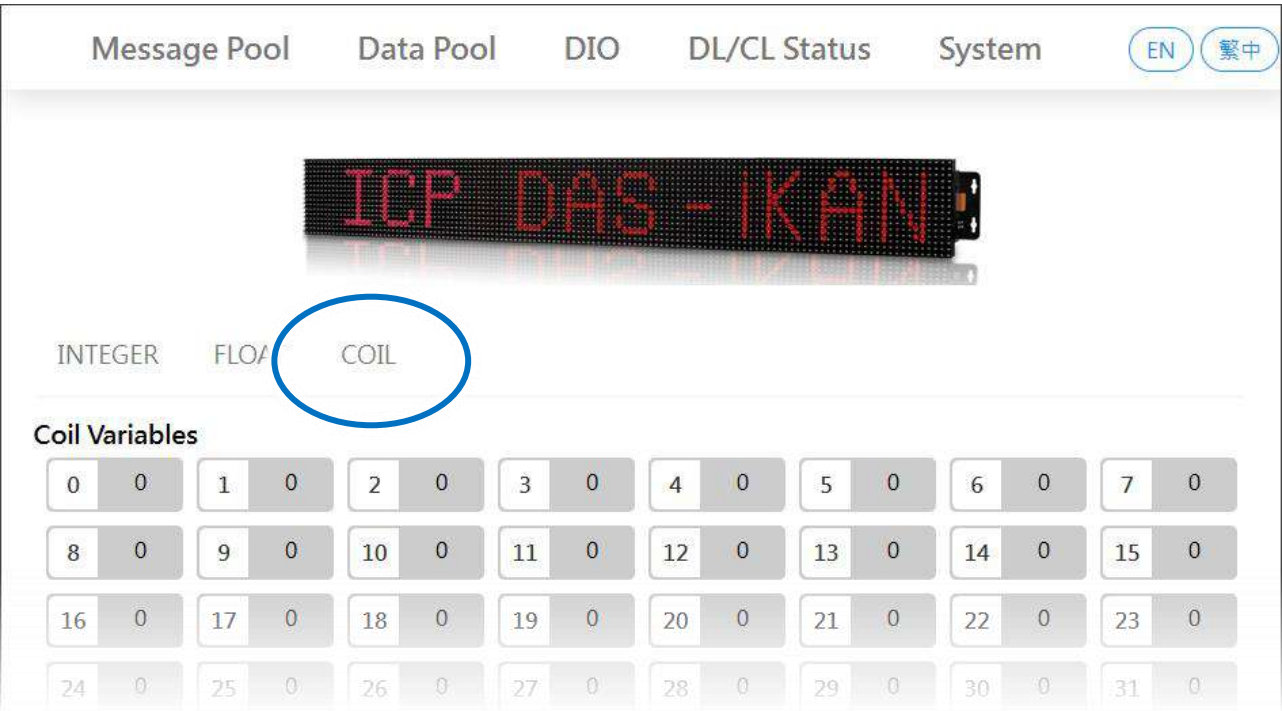
The 「FLOAT」 page can configure the number of decimal places to meet high-accuracy display requirements.



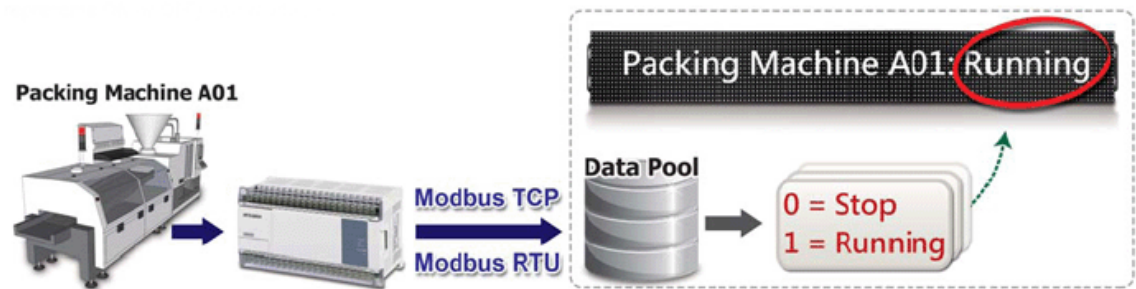
For configuration details, refer to section [5.2. Setting Decimal Places for Float Variables](#).

3.2.3. COIL

The 「COIL」 page includes a Substitute Text feature, allowing users to map raw values (0/1) to custom display text (e.g., “ON/OFF”, “START/STOP”), and enhancing message readability.

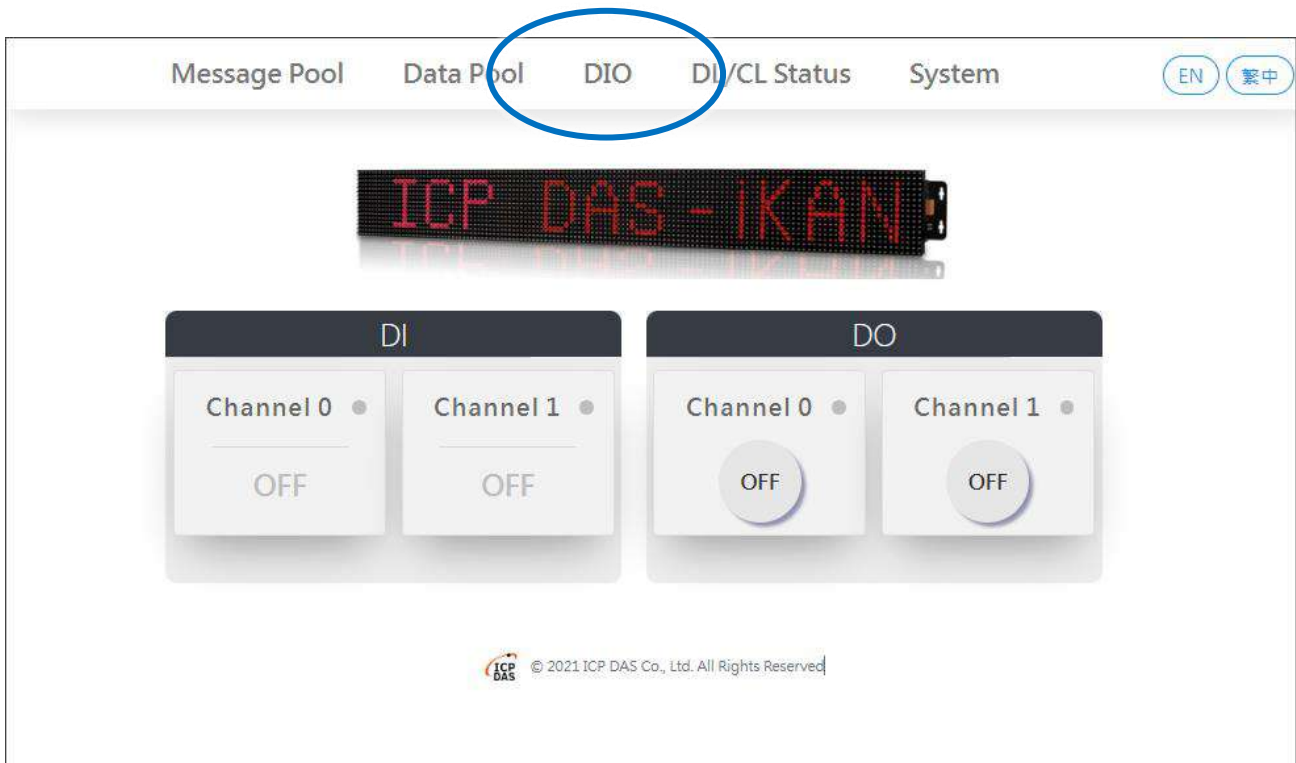


For configuration details, refer to section [5.3. Mapping Boolean \(Coil\) Values to Custom Text](#).



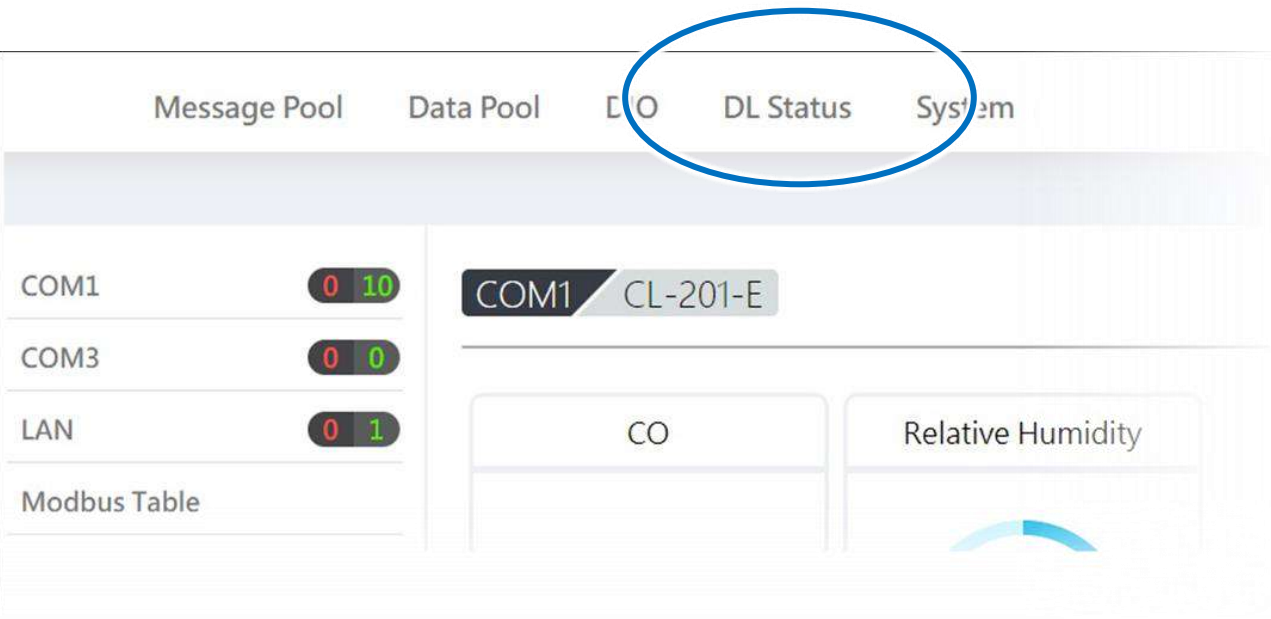
3.3. DIO

The 「DIO」 page provides real-time monitoring and operation settings for the Digital Inputs (DI) and Digital Outputs (DO) on the iKAN display. DI channels receive signals from field devices like buttons or switches, while DO channels can trigger external devices such as warning lights or buzzers, enabling event response and control.



3.4. DL Status

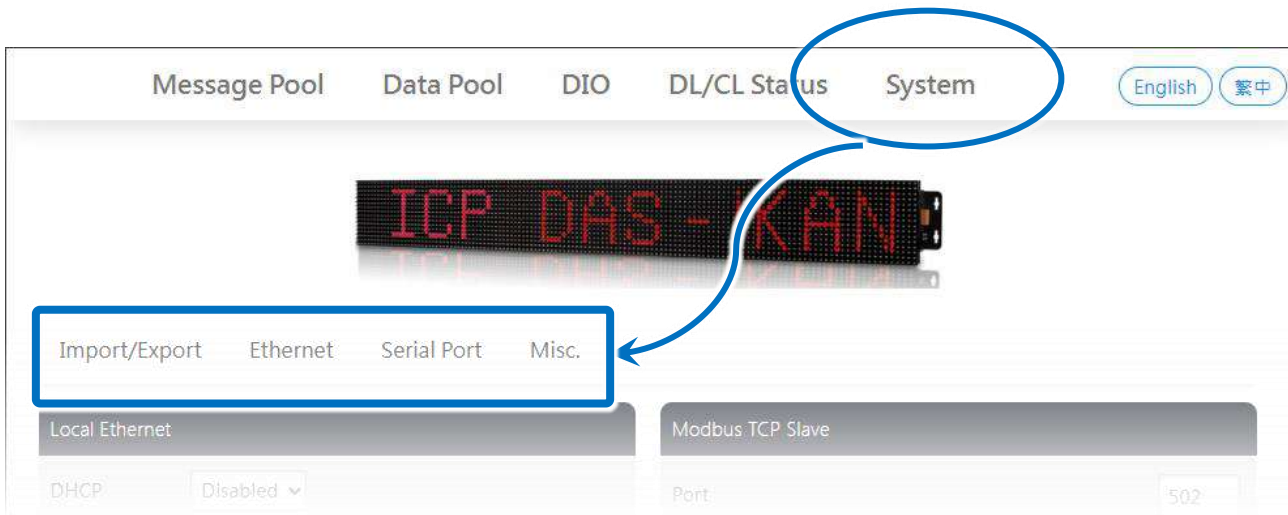
The 「DL Status」 page provides a fast monitoring interface showing communication status, real-time measurements, corresponding Modbus addresses, and variable codes from DL/CL modules connected via Ethernet or RS-485.



For more information on how to connect and set DL/CL modules and get the corresponding Modbus addresses and variables, please refer to chapter [6.DL/CL Modules Management](#).

3.5. System

The 「System」 page provides all essential configurations of the iKAN, including data import/export, network settings, serial communication settings, time synchronization, LED brightness and scroll speed adjustments, system recovery, and device information query.



3.5.1. Import/Export

This function allows users to back up or replicate message pool, variable pool, and DL/CL module settings in .csv format for efficient mass deployment and recovery.

The screenshot shows the iKAN software interface. At the top, there is a navigation bar with four tabs: "Import/Export", "Ethernet", "Serial Port", and "Misc.". The "Import/Export" tab is selected and highlighted with a blue circle. Below the navigation bar, there are two main panels: "Import" and "Export".

Import Panel:

- Import** (Section Header)
- Description: The import function allows you to load pre-configured message details as well as the variable information from an external file.
- Step 1: A text input field with the placeholder "select a msg_con.csv file for import ..." and a "Choose File" button.
- Step 2: An "Import" button.

Export Panel:

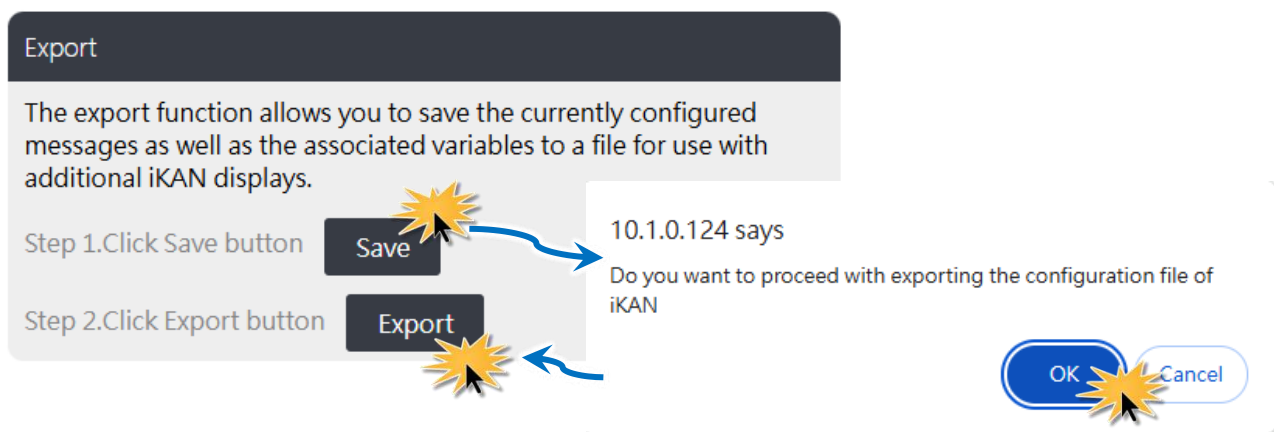
- Export** (Section Header)
- Description: The export function allows you to save the currently displayed messages as well as the associated variables to a file for additional iKAN displays.
- Step 1: A "Click Save button" instruction and a "Save" button.
- Step 2: A "Click Export button" instruction and an "Export" button.

3.5.1.1. Exporting Settings File

This section explains how to export the message pool, variable pool, and DL/CL module configurations as a .csv file. The export function allows users to back up current settings or quickly replicate configurations across other iKAN displays, enabling centralized deployment and management.

Steps

- 1) In 「Export」 section, click 「Save」 button, and then confirm the action by clicking 「OK」 button in the pop-up window.



- 2) Click 「Export」 button to download the configuration file.

The .csv file will be saved to the default download folder with the name msg_con.csv (the content is encoded and not directly editable).

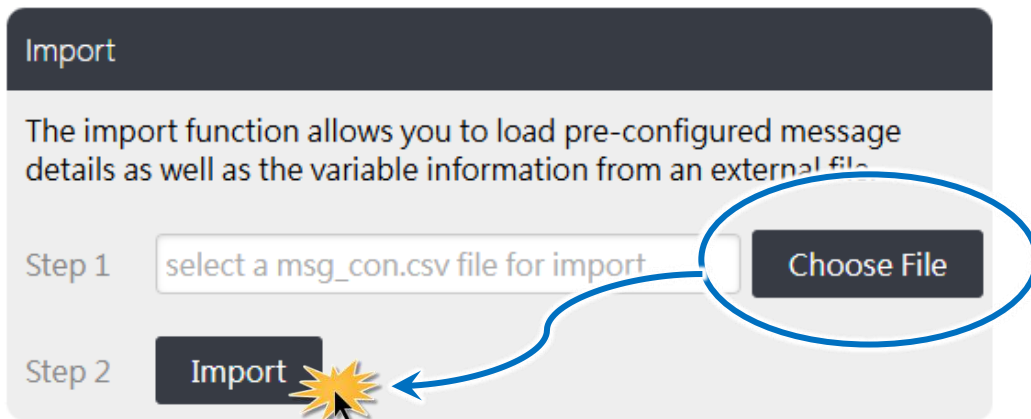
	A	B	C	D	E	F	G	H	I	J	K
1	iKAN LED Display Pre-Configuration file										
2	1	1	1	1	1	1	0	0	0	0	0
3	1	1	1	1	1	1	0	0	0	0	0
4	1	1	1	1	1	0	0	0	0	0	0
5	1	1	1	1	1	0	0	0	0	0	0
6	1	1	1	1	1	1	1	1	1	1	1
7	6	6	6	6	6	6	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0

3.5.1.2. Importing Settings File

This section describes how to use a .csv file to import existing iKAN settings into the device. This function is ideal for mass deployment scenarios, significantly reducing manual configuration time and minimizing the risk of errors while improving maintenance efficiency.

Steps

- 1) In 「 Import 」 section, click 「 Choose File 」 button to select the imported .csv file.
- 2) Click 「 Import 」 button to import the settings.



3.5.2. Ethernet

The 「 Ethernet 」 page allows configuration of IP address, subnet mask, gateway, Modbus TCP port, and NetID. Users may also enable Modbus TCP Master mode. To enable NTP synchronization, a valid DNS address must be configured.

The screenshot displays the Ethernet configuration interface. At the top, there are four tabs: 'Import/Export', 'Ethernet' (which is selected and circled in blue), 'Serial Port', and 'Misc.'. Below the tabs, the 'Local Ethernet' section contains the following settings:

- DHCP: Disabled (dropdown menu)
- IP Address: 10 . 0 . 30 . 182
- Mask: 255 . 255 . 255 . 0
- Gateway: 10 . 0 . 30 . 254
- DNS: 8 . 8 . 8 . 8

Below these settings is an 'Update Settings' button. To the right, the 'Modbus TCP Slave' section shows:

- Port: 502
- NetID: 1

Below that, the 'Modbus TCP Master' section has a 'Disable' dropdown menu.

3.5.2.1. Configuring IP Address

In order to ensure proper network connectivity, the iKAN must be configured with an IP address, subnet mask, and default gateway. Users can choose to enable DHCP for automatic configuration or manually assign static values. When using NTP, a valid DNS setting is also required.

Steps

- 1) In 「Local Ethernet」 section, enable 「DHCP」 to obtain IP automatically or disable 「DHCP」 to manually configure IP address, Subnet Mask, and gateway.
- 2) Click 「Update Settings」 button to save and activate the changes.

Local Ethernet

DHCP: Disabled

IP Address: 10 . 0 . 30 . 182

Mask: 255 . 255 . 255 . 0

Gateway: 10 . 0 . 30 . 254

DNS: 8 . 8 . 8 . 8

Update Settings

Tips & Warnings



If enabling NTP time synchronization, ensure a valid DNS server is configured to allow connection to the NTP server.

3.5.2.2. Configuring Modbus TCP Port and Station ID (NetID)

This function allows users to define the Modbus TCP port and station ID (NetID) when iKAN is operating as a Modbus TCP Slave. Proper settings ensure the device can be addressed and accessed by SCADA, PLC, or other control systems.

Steps

- 1) In 「 Modbus TCP Slave 」 section, enter the Modbus TCP port number (default is 502) and NetID.
- 2) Click 「 Update Settings 」 button to save the configuration.

The screenshot displays the configuration interface for the iKAN device. It is divided into two main sections: 'Local Ethernet' and 'Modbus TCP Slave'.

Local Ethernet Section:

- DHCP: Disabled (dropdown)
- IP Address: 10 . 0 . 30 . 182
- Mask: 255 . 255 . 255 . 0
- Gateway: 10 . 0 . 30 . 254
- DNS: 8 . 8 . 8 . 8

Modbus TCP Slave Section:

- Port: 502
- NetID: 1

Modbus TCP Master Section:

- Disable (dropdown)

Update Settings Button:

A blue arrow points from the 'Update Settings' button to the 'Modbus TCP Slave' section, indicating the next step in the configuration process.

3.5.2.3. Enabling Modbus TCP Master to Connect DL/CL Modules

The iKAN can operate as a Modbus TCP Master over the network, connecting to multiple DL/CL sensor modules for real-time data acquisition. After enabling this mode, modules can be added and configured for communication.

The screenshot displays the configuration interface for the iKAN device, divided into three main sections: Local Ethernet, Modbus TCP Slave, and Modbus TCP Master. The Local Ethernet section includes fields for DHCP (set to Disabled), IP Address (10.0.30.182), Mask (255.255.255.0), Gateway (10.0.30.254), and DNS (8.8.8.8). The Modbus TCP Slave section includes fields for Port (502) and NetID (1). The Modbus TCP Master section, highlighted with a blue border, includes a dropdown menu labeled 'Connect to DL/CL series module'. An 'Update Settings' button is located at the bottom left of the interface.

Local Ethernet				
DHCP	Disabled ▾			
IP Address	10	0	30	182
Mask	255	255	255	0
Gateway	10	0	30	254
DNS	8	8	8	8

Modbus TCP Slave	
Port	502
NetID	1

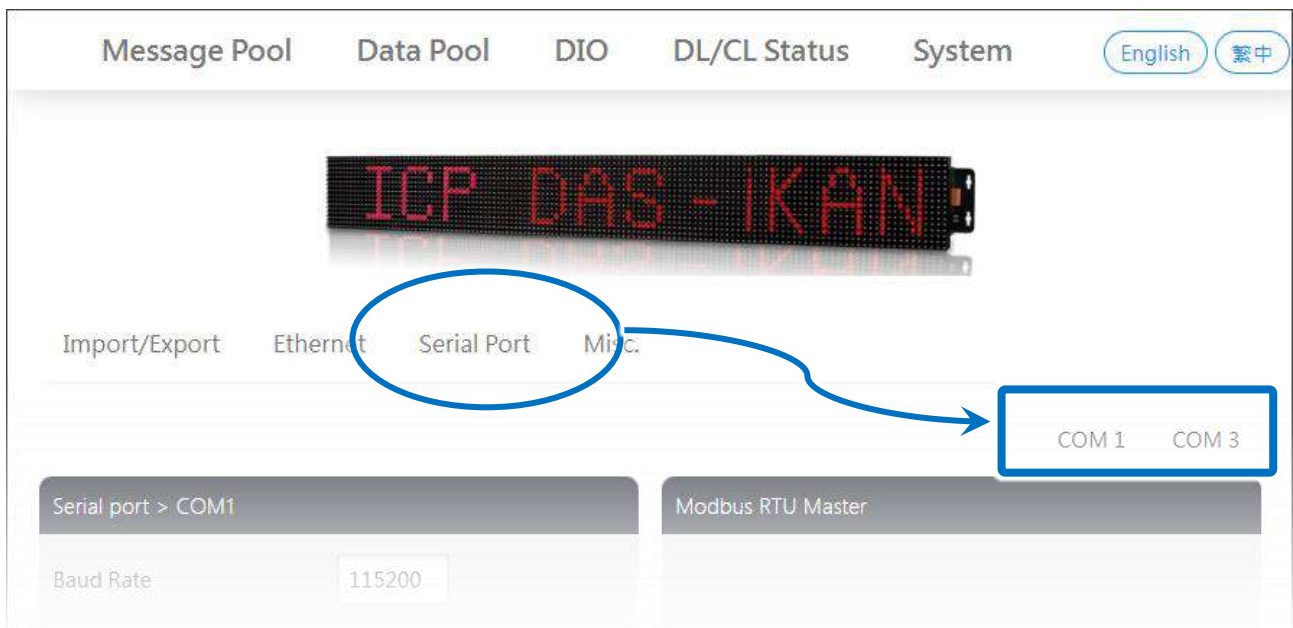
Modbus TCP Master	
Connect to DL/CL series module ▾	

Update Settings

For detailed module setup, please refer to section [6.1.1.Connecting via Ethernet](#).

3.5.3. Serial Port

The 「Serial Port」 page allows setting communication parameters for COM1 and COM3. The iKAN can communicate with PLCs, PCs, or DL/CL modules via RS-232 or RS-485 using the Modbus RTU protocol, supporting real-time data acquisition and control.



3.5.3.1. Configuring COM Port Communication Parameters

The COM1 and COM3 ports on the iKAN support RS-232/RS-485 communication using the Modbus RTU protocol. Proper configuration of serial parameters such as baud rate, data bits, stop bits, and parity is essential for reliable communication.

Steps

- 1) Select the desired serial port (**COM1** or **COM3**).
- 2) In 「Serial port > COMx」 section, configure the COM port parameters: Baud Rate, Data Bits, Stop Bits, and Parity.
- 3) Click 「Update Settings」 button to save the settings.

The screenshot shows the configuration interface for the iKAN device. The 'Serial Port' tab is selected, and the 'Serial port > COM1' section is highlighted with a blue box. The 'Modbus RTU Master' section is also visible. The 'COM1' and 'COM3' tabs are circled in blue. The 'Save Settings' button is highlighted with a blue arrow pointing to a yellow starburst icon.

Parameter	Value
Baud Rate	115200
Data Bits	8
Stop Bit(s)	1
Parity	None

Mode: Disable

Save Settings

3.5.3.2. Enabling Modbus RTU Master to Connect DL/CL Modules

The iKAN can operate as a Modbus RTU Master. When Modbus RTU Master mode is enabled, iKAN can poll multiple DL/CL modules via serial COM ports to collect sensor data. This enables real-time acquisition and display of analog or digital sensor data.

The screenshot displays the configuration interface for the iKAN device. At the top, there are four tabs: 'Import/Export', 'Ethernet', 'Serial Port', and 'Misc.'. The 'Serial Port' tab is selected, and within it, 'COM 1' is chosen. The interface is divided into two main sections: 'Serial port > COM1' on the left and 'Modbus RTU Master' on the right. The 'Serial port > COM1' section contains four settings: 'Baud Rate' (115200), 'Data Bits' (8), 'Stop Bit(s)' (1), and 'Parity' (None). The 'Modbus RTU Master' section contains a 'Mode' dropdown menu, which is highlighted with a blue box and set to 'Connect to DL/CL series modules'. Below these sections is a 'Save Settings' button. At the bottom of the interface, there is a copyright notice: '© 2021 ICP DAS Co., Ltd. All Rights Reserved'.

Serial port > COM1	Modbus RTU Master
Baud Rate: 115200	Mode: Connect to DL/CL series modules ▼
Data Bits: 8	
Stop Bit(s): 1	
Parity: None ▼	

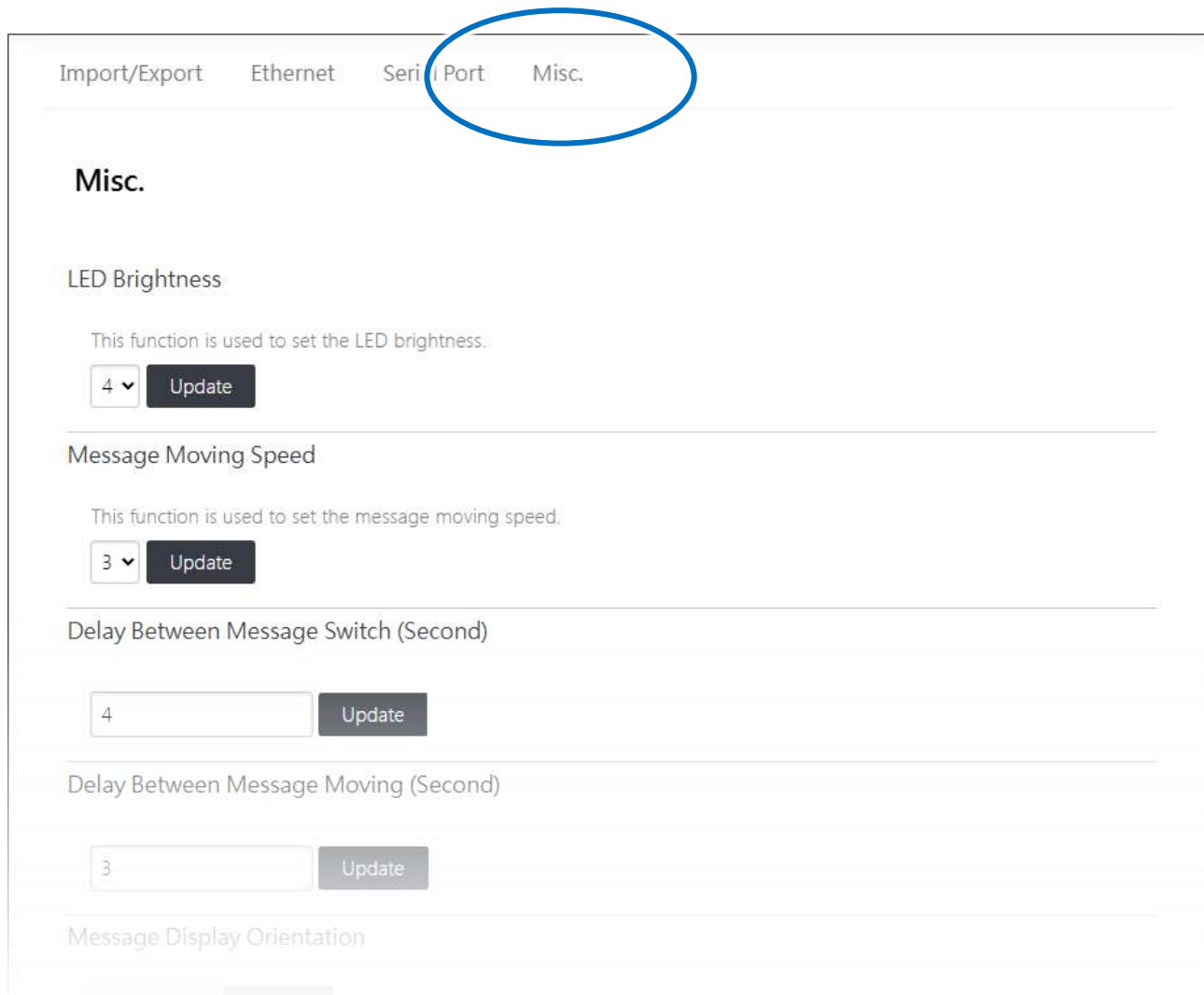
Save Settings

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For detailed module setup, please refer to section [6.1.2.Connecting via COM Port](#).

3.5.4. Misc

The 「 Misc 」 page provides functions such as display parameter adjustment, system time settings, network time synchronization, factory reset, device reboot, and querying the module name and firmware version. These settings help optimize the iKAN device's operation and facilitate maintenance.



Import/Export Ethernet Serial Port **Misc.**

Misc.

LED Brightness

This function is used to set the LED brightness.

4 ▼ Update

Message Moving Speed

This function is used to set the message moving speed.

3 ▼ Update

Delay Between Message Switch (Second)

4 Update

Delay Between Message Moving (Second)

3 Update

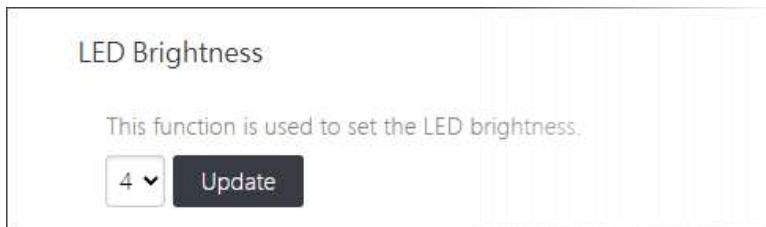
Message Display Orientation

3.5.4.1. LED Brightness

This function allows users to adjust the LED display brightness to match the lighting conditions of the installation environment. Higher brightness is recommended for outdoor or brightly lit areas, while lower levels suit indoor or nighttime use to reduce glare and power consumption.

Steps

- 1) In 「LED Brightness」 section, select the desired brightness level from the drop-down menu.
- 2) Click 「Update」 button to apply the setting.



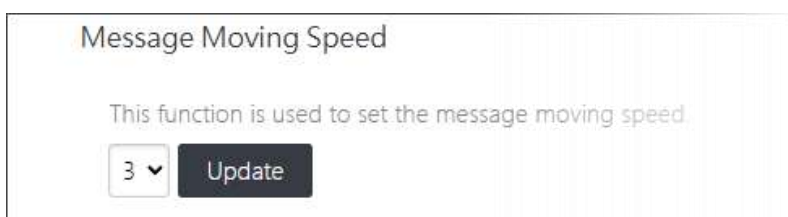
The screenshot shows a settings panel titled "LED Brightness". Below the title is a descriptive text: "This function is used to set the LED brightness." At the bottom of the panel, there is a dropdown menu currently showing the value "4" with a downward arrow, and a dark grey button labeled "Update" to its right.

3.5.4.2. Message Moving Speed

This parameter controls the horizontal scrolling speed of messages on the LED display. Selecting an appropriate speed ensures optimal readability depending on the viewer's distance and message length.

Steps

- 1) In 「Message Moving Speed」 section, select the desired moving speed level from the drop-down menu.
- 2) Click 「Update」 button to apply the setting.



The screenshot shows a settings panel titled "Message Moving Speed". Below the title is a descriptive text: "This function is used to set the message moving speed." At the bottom of the panel, there is a dropdown menu currently showing the value "3" with a downward arrow, and a dark grey button labeled "Update" to its right.

3.5.4.3. Delay Between Message Switch (Second)

Specifies the interval time between consecutive messages. This delay setting helps manage message playback timing to ensure each message is displayed long enough for effective viewing. The valid range is 1 to 32 seconds.

Steps

- 1) In 「 Delay Between Message Switch (Second) 」 section, enter a value between 1 ~ 32.
- 2) Click 「 Update 」 button to apply the setting.



Delay Between Message Switch (Second)

4 Update

3.5.4.4. Delay Between Message Moving (Second) Display

This setting determines how long a message remains static before starting to scroll, which improves readability for introductory or headline displays.

Steps

- 1) In 「 Delay Between Message Moving (Second) 」 section, enter a value between 1 ~ 32.
- 2) Click 「 Update 」 button to apply the setting.



Delay Between Message Moving (Second)

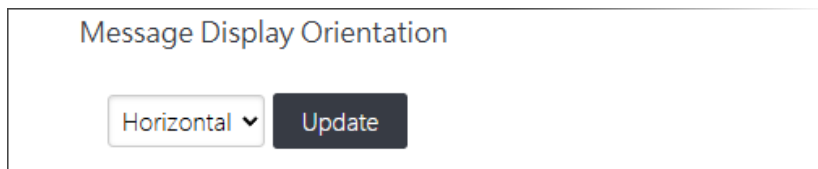
3 Update

3.5.4.5. Message Display Orientation

This feature allows users to set the display direction (e.g., Horizontal or Vertical) based on language reading habits or visual layout requirements.

Steps

- 1) In 「 Message Display Orientation 」 section, select the desired display direction from the drop-down menu.
- 2) Click 「 Update 」 button to apply the setting.



The screenshot shows a settings panel titled "Message Display Orientation". Inside the panel, there is a dropdown menu currently set to "Horizontal" and a dark grey "Update" button to its right.

3.5.4.6. Message Flash Time (Milliseconds)

This setting enables a blinking effect for messages and defines the duration in milliseconds. It is useful for highlighting warnings or high-priority content.

Steps

- 1) In 「 Message Flash Time (Milliseconds) 」 section, Enter the desired message flash time in milliseconds.
- 2) Click 「 Update 」 button to apply the setting.



The screenshot shows a settings panel titled "Message Flash Time (Milliseconds)". It contains two input fields: "ON:" with the value "500" and "OFF:" with the value "250". To the right of these fields is a dark grey "Update" button.

3.5.4.7. DI Trigger Message

This feature links specific messages to digital input pins (DI0/DI1). When an input signal is detected, the assigned message is immediately displayed, ideal for alarms or equipment status updates.

Steps

- 1) In 「 DI Trigger Message 」 section, assign a message number (e.g., Message #101) to be displayed when DI0 and/or DI1 is triggered.
- 2) Click 「 Update 」 button to apply the setting.



The screenshot shows a configuration window titled "DI Trigger Message". It contains two input fields for "DI0:" and "DI1:", both currently set to "0". Each input field is followed by a "Flashing Message" toggle switch, which is currently turned off. At the bottom left of the window is a dark "Update" button. The background of the window is a light gray grid.

3.5.4.8. Adjusting the System Date and Time

iKAN supports two methods for setting the system time: manual configuration or automatic synchronization using an SNTP server. Accurate system time ensures reliable timestamping and consistent message scheduling.

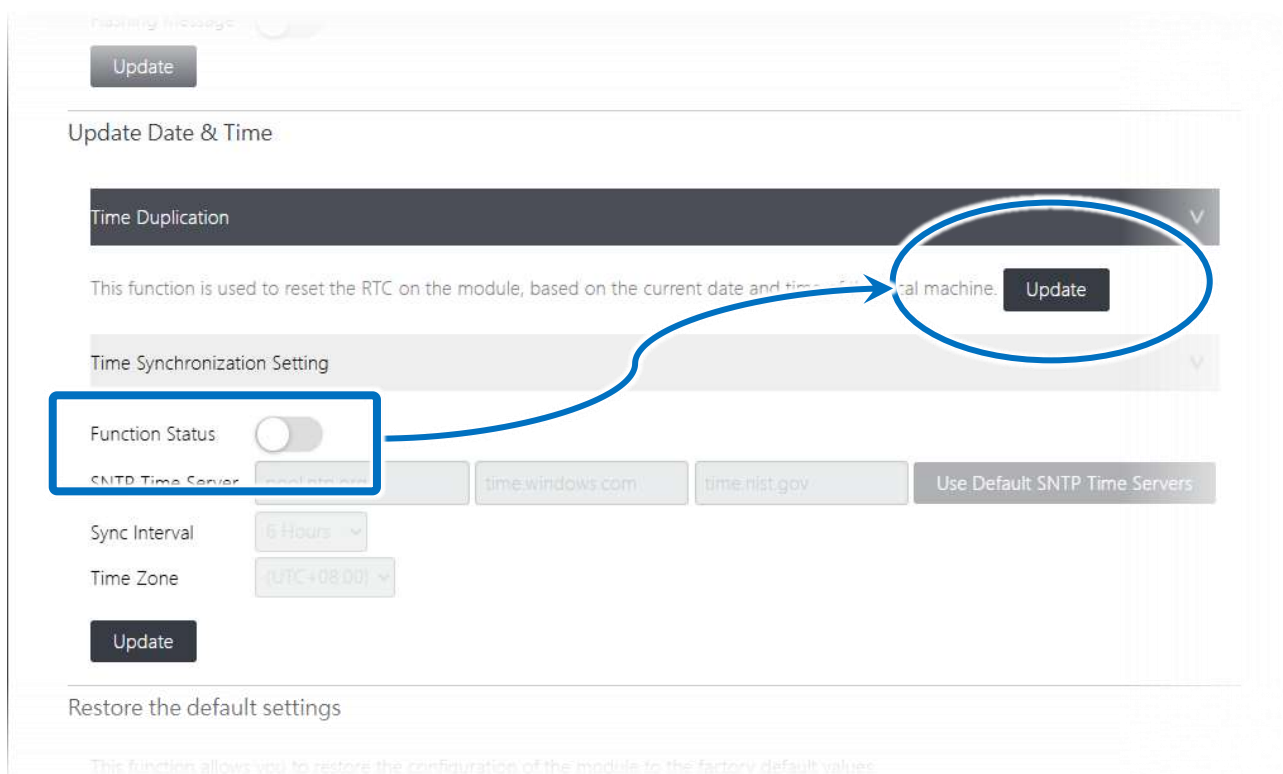
The screenshot shows a web-based configuration interface for adjusting the system date and time. At the top, there is an 'Update' button. Below it, the section is titled 'Update Date & Time'. A 'Time Duplication' dropdown menu is visible. A descriptive text states: 'This function is used to reset the RTC on the module, based on the current date and time of the local machine.' followed by an 'Update' button. The 'Time Synchronization Setting' section is expanded, showing a 'Function Status' toggle switch that is turned on. Below this, there are three input fields for 'SNTP Time Server' containing 'pool.ntp.org', 'time.windows.com', and 'time.nist.gov', along with a 'Use Default SNTP Time Servers' button. The 'Sync Interval' is set to '6 Hours' and the 'Time Zone' is set to '(UTC+08:00)'. An 'Update' button is located at the bottom of this section. The final section is 'Restore the default settings', with a descriptive text: 'This function allows you to restore the configuration of the module to the factory default values.'

3.5.4.8.1. Manually Input the System Time

If network time synchronization is not available in the operating environment, this section provides a method for manual time correction. Users can directly synchronize the iKAN's time with the host system time. This method is suitable for offline environments or when no NTP server is deployed.

Steps

- 1) In 「Update Date & Time」 section, disable 「Function Status」 option.
- 2) In 「Time Duplication」 field, click 「Update」 button to synchronize the host system time to the iKAN.



3.5.4.8.2. Configuring Network Time Synchronization

This function allows user to enable SNTP (Simple Network Time Protocol) to automatically synchronize the system time of the iKAN. By configuring the NTP server and time zone settings, the device can maintain accurate time, preventing display or event log discrepancies caused by time drift. Ensure the DNS server is configured before enabling NTP.

Steps

- 1) Go to 「Ethernet」 subpage and set the DNS server under 「Local Ethernet」 section
- 2) Click 「Update Settings」 button to apply the DNS configuration.

The screenshot shows the 'Local Ethernet' configuration interface. It includes fields for DHCP (set to Disabled), IP Address (10.0.30.182), Mask (255.255.255.0), Gateway (10.0.30.254), and DNS (8.8.8.8). The DNS field is highlighted with a blue border, and a blue arrow points from it to the 'Update Settings' button, which is also highlighted with a yellow starburst icon.

Local Ethernet				
DHCP	Disabled ▼			
IP Address	10	0	30	182
Mask	255	255	255	0
Gateway	10	0	30	254
DNS	8	8	8	8

Update Settings

- 3) Return to 「Misc」 subpage and enable 「Function Status」 option under 「Update Date & Time」 section
- 4) Configure the parameters: 「SNTP Time Server」, 「Sync Interval」 and 「Time Zone」
- 5) Click 「Update」 button to apply the setting.

Update

Update Date & Time

Time Duplication

This function is used to reset the RTC on the module, based on the current date and time of the local machine. Update

Time Synchronization Setting

Function Status ☒

SNTP Time Server Use Default SNTP Time Servers

Sync Interval

Time Zone

Update

Restore the default settings

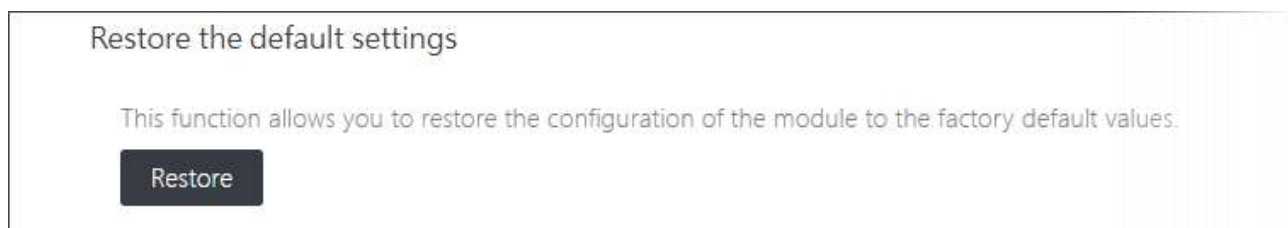
This function allows you to restore the configuration of the module to the factory default values.

3.5.4.9. Restore the Default Settings

This option resets all message pool, data pool, and DL/CL module settings to factory defaults, useful during redeployment or when troubleshooting configuration errors.

Steps

In 「Restore the default settings」 section, click 「Restore」 button to restore the configuration to factory default values.



3.5.4.10. Software Reset

Initiates a software-based system reboot via the web interface without requiring physical power cycling, useful for remote maintenance and updates.

Steps

In 「Software Reset」 section, click 「Reset」 button to reset the display.



3.5.4.11. Module Name

Allow user to view the module name for module identification and multi-device management.

Steps

Locate the 「Module Name」 section to view the module name.

Module Name
iKAN-124

3.5.4.12. Firmware Version

Displays the firmware version installed on the iKAN device, useful for version tracking and upgrade planning.

Steps

Locate the 「Firmware Version」 section to view the current firmware version.

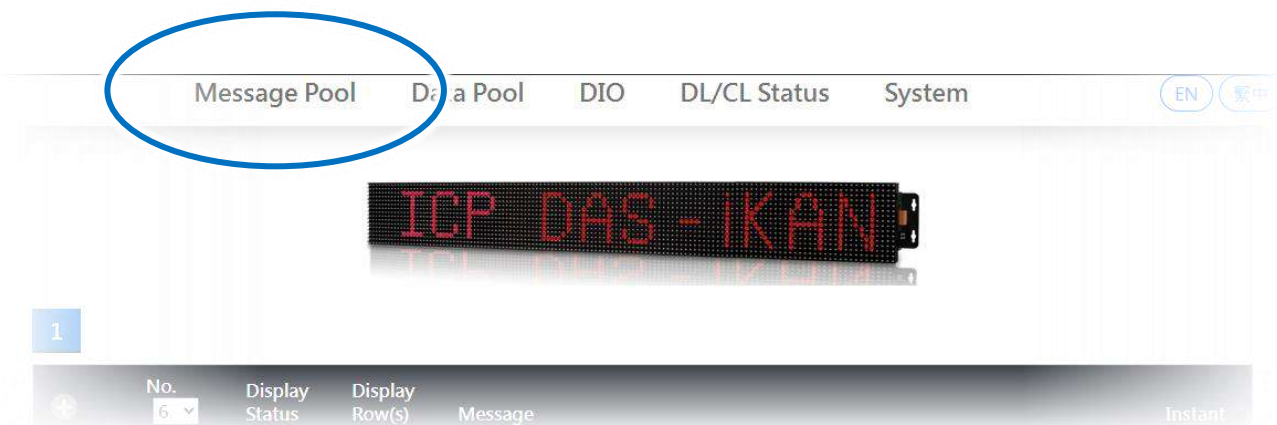
Firmware Version
4.0.0

4. Message Management

This chapter describes how to manage display messages on the iKAN series LED displays. Users can add, edit, or delete messages via the web interface, and configure features such as interrupt display, scrolling, color selection, and variable insertion. Each device supports up to 128 messages, making it suitable for a wide range of industrial and public display applications.

4.1. Managing Messages

The 「Message Pool」 page is the main interface for managing messages. It allows users to configure message content, display format, fonts, and priority, and to enable interrupt messages. All changes will be applied and shown on the iKAN in real time.



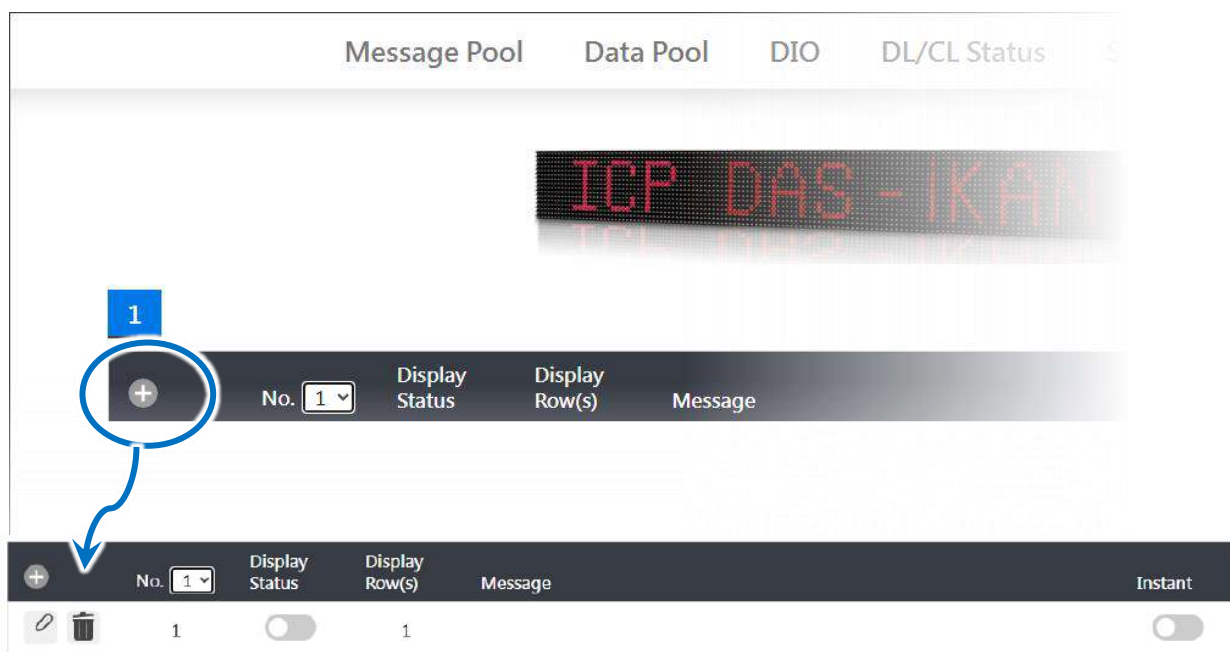
This chapter explains how to manage messages using the 「Message Pool」 page, including adding, editing, and deleting messages. It also introduces how to configure interrupt behavior and relevant considerations.

4.1.1. Adding a Message

Users can add a new blank message from the Message Pool interface to later input message content and configure advanced settings.

Steps

Click 「Add Message icon ()」, and then a blank message will appear in the list.



4.1.2. Editing and Interrupting a Messages

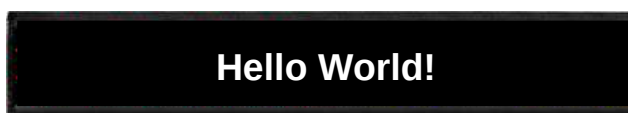
Each message can be configured with display status, interrupt property, scrolling mode, number of display lines, and color. Interrupt messages are used for urgent notifications and will override regular messages during display.

Steps

1) Click 「Edit Message icon ()」 next to a message that you want to edit.

2) Set the message parameters. After completing the setup, click 「Update」 button to activate the changes.

The message will be shown immediately on the iKAN display.



Message Parameters

The table below describes the configurable fields for message parameters.

Parameter	Description
Display	Enable interrupt mode. Interrupt messages take display priority.
Instant	Enable interrupt mode. Interrupt messages take display priority.
Message Moving Mode	Message scroll mode, with 4 available settings: 0: Static (no movement). 1: Static if short; scroll left if too long for one line. 2: First row static, second row scrolls (2-row models only). 3: Auto line break into second row if message is too long (2-row models only).
Row(S)	Define whether to use single-line or two-line display.
Color	Message color: Red, Green, Yellow, Blue, Purple, Cyan, White, or Random.
Message	The actual content to display; can be static text or include variables.

Tips & Warnings



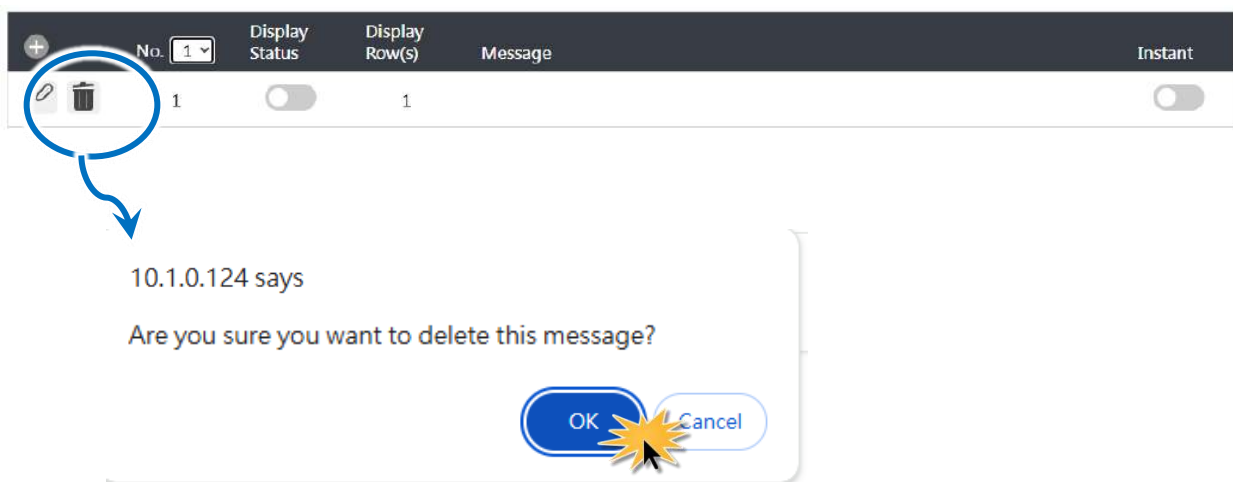
Messages with interrupt mode enabled will override normal messages during their display period. All standard messages will be paused until the interrupt message ends or is disabled.

4.1.3. Deleting a Message

Remove unnecessary messages from the message pool.

Steps

Click 「Delete Message icon ()」 next to a message that you want to delete, and then confirm the action by clicking 「OK」 button in the pop-up window.



4.2. Embedded Variable in Messages

The iKAN series LED displays support a variety of embedded variable formats. Users can insert variables into messages to display real-time status data from PLCs, DL modules, or the system itself. Each variable follows a fixed syntax and maps to a specific Modbus register address. This section outlines the general format and categories of variables. Detailed usage will be covered in subsequent sections.

General Variable Syntax

The iKAN supports multiple variable types for message embedding. Most variables (e.g., signed %iXXX, unsigned %uXXX, float %fXXX, Boolean %bXXX, and system %yXXX) use a fixed 5-character format.

Start Symbol	Variable Type	3-Digit Decimal Number
%	y: System	XXX (3-digit decimal number mapping to Modbus address)
	u: Unsigned Integer (0 ~ 65535)	
	i: Signed Integer (-32768 ~ 32767)	
	f: Floating-point ($\pm 3.4E+38$)	
	b: Boolean (Coil)	

For a complete list of Modbus addresses, data types, lengths, and descriptions used for all supported variables, please refer to the [Appendix. Modbus Register Address Map](#).

String Variable Syntax

String variables follow a different pattern using an index rather than a 3-digit address.

Start Symbol	Variable Type	String Number
%	a: ASCII string	0 ~ 7, 8 independent ASCII strings (2 chars per reg.)
	n	0, single group only

DL/CL Monitoring Module Variables

The iKAN series displays support real-time data display from DL/CL environmental monitoring modules. These values can be directly embedded in display messages as variables, without requiring a PLC or external controller. Users can reference the mapping table and embed %yXXX codes into display messages.

4.2.1. System Variables

System variables provide internal device information such as IP address and time. These values are automatically updated by the system without the need for external input.

Syntax Format

%yXXX

XXX is a 3-digit decimal number mapping to Modbus address 30000–30020.

Common Modbus Address Mapping

The following table lists commonly used Modbus addresses for system variables such as IP address and time, which can be directly embedded in messages.

Modbus Address	Length	Description	Range
30000–30003	4	IP Address	0 ~ 255
30004–30007	4	Subnet Mask	0 ~ 255
30008–30011	4	Gateway Address	0 ~ 255
30012	1	Year	0 ~ 9999
30013	1	Month	1 ~ 12
30014	1	Day	1 ~ 31
30015	1	Day of Week (abbr. ENG, 0 = SUN)	0 ~ 6
30016	1	Day of Week (ENG, 0 = Sunday)	0 ~ 6
30017	1	Day of Week (TW, 0 = 日)	0 ~ 6
30018	1	Hour	0 ~ 23
30019	1	Minute	0 ~ 59
30020	1	Second	0 ~ 59

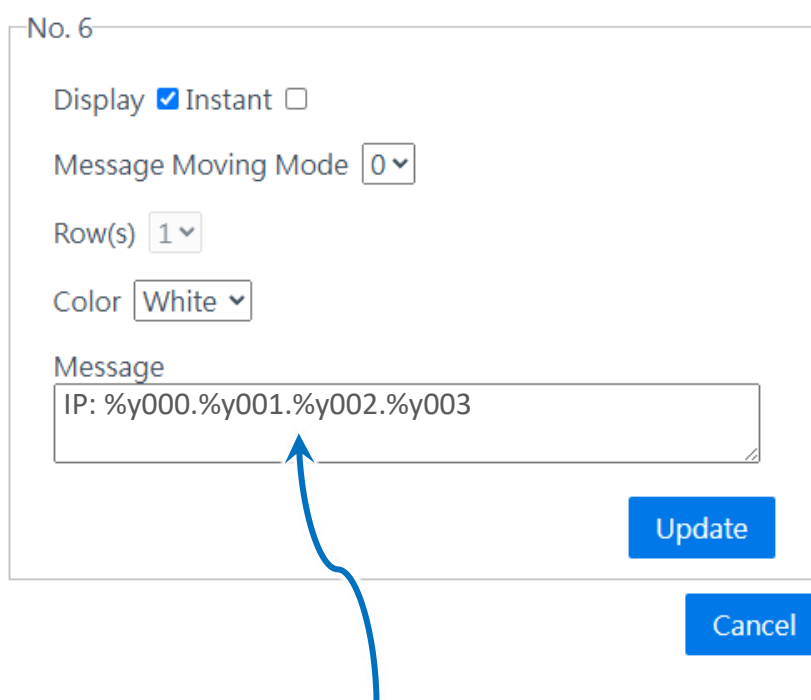
For a complete list of Modbus addresses, data types, lengths, and descriptions used for all supported variables, please refer to the [Appendix. Modbus Register Address Map](#).

Example 1

Display the IP address.

Message

In 「Message Pool」 page, set the message content in 「Message」 field. The message parameters are set as follows:



No. 6

Display ☒ Instant ☐

Message Moving Mode

Row(s)

Color

Message

IP: %y000.%y001.%y002.%y003

Update

Cancel

IP: %y000.%y001.%y002.%y003

Display Result

IP: 10.1.0.102

Example 2

Display the date and time.

Message

In 「Message Pool」 page, set the message content in 「Message」 field. The message parameters are set as follows:

No. 6

Display ☒ Instant ☐

Message Moving Mode

Row(s)

Color

Message

%y012/%y013/%y014 %y018 : %y019

Update

Cancel

%y012/%y013/%y014 %y018 : %y019

Display Result

2025/05/09 13:07

4.2.2. Integer Variables

The iKAN supports 64 integer variable registers, available in both signed and unsigned formats. These values can be written by a PLC or PC via Modbus RTU/TCP, and are suitable for displaying live values such as voltage, temperature, or flow.

Syntax Format

Integer variables are categorized into signed and unsigned formats, each with a distinct data range.

- The range of a signed integer variable is 0 ~ 65535

%iXXX

- The range of an unsigned integer variable is -32768 ~ 32767

%uXXX

XXX is a 3-digit decimal number mapping to Modbus address 40000–40063.

Modbus Address Mapping

The table below shows the Modbus register range assigned for integer variables, along with the corresponding syntax identifiers for implementation reference.

Modbus Address	Length	Description	Range
40000–40063	64	Integer Variables	–32768 ~ +32767 (Signed Integer) 0 ~ 65535 (Unsigned Integer)

For a complete list of Modbus addresses, data types, lengths, and descriptions used for all supported variables, please refer to the [Appendix. Modbus Register Address Map](#).

Example

Display an integer value written from the PC/PLC.

Message

In 「Message Pool」 page, set the message content in 「Message」 field. The message parameters are set as follows:

No. 6

Display ☒ Instant ☐

Message Moving Mode

Row(s)

Color

Message

Input Voltage: %i001 V

Update

Cancel

Input Voltage: %i001 V

Display Result

Input Voltage: 32767 V

For more information on how to scale or convert this raw value into a physical unit (e.g., “32767” representing “5.00 V”), please refer to section [5.1. Mapping Integer Values to Engineering Units](#).

Input Voltage: 32767 V

Input Voltage: 5.00 V

4.2.3. Floating-point Variables

iKAN provides 64 floating-point registers for displaying precise values such as pressure, concentration, or humidity. Each variable uses two consecutive Modbus registers.

Syntax Format

Each floating value occupies two registers

%fXXX

XXX is a 3-digit decimal number mapping to Modbus address 40128–40255.

Modbus Address Mapping

Each floating point variable occupies two consecutive Modbus registers. Therefore, there is a spacing of 2 between variable indices. For example, %f000 corresponds to registers 40128 and 40129, while %f001 maps to 40130 and 40131.

The table below shows the Modbus register range assigned for floating-point variables, along with the corresponding syntax identifiers for implementation reference.

Modbus Address	Length	Description	Range
40128–40255	64	Floating-point Variables	-3.4E+38 ~ +3.4E+38

For a complete list of Modbus addresses, data types, lengths, and descriptions used for all supported variables, please refer to the [Appendix. Modbus Register Address Map](#).

Example

Display a floating-point value written from the PC/PLC.

Message

In 「Message Pool」 page, set the message content in 「Message」 field. The message parameters are set as follows:

No. 6

Display ☒ Instant ☐

Message Moving Mode

Row(s)

Color

Message

Pressure: %f001 bars

Update

Cancel

Pressure: %f001 bars

Display Result

Pressure: 0.9 bars

For more information on how to adjust decimal formatting, please refer to section [5.2.Setting Decimal Places for Float Variables](#).

Pressure: 0.9 bars

Pressure: 0.94 bars

4.2.4. Boolean Variables

Boolean (Coil) variables are used to display binary device statuses, such as Start/Stop or ON/OFF. These values can be written via Modbus from a PLC or PC and displayed in real-time on the message screen.

Syntax Format

%bXXX

XXX is a 3-digit decimal number mapping to Modbus address 00000–00039.

Modbus Address Mapping

The table below lists the Modbus register range assigned for Boolean variables for implementation reference.

Modbus Address	Length	Description	Range
00000–00039	40	Coil Variables	0/1

For a complete list of Modbus addresses, data types, lengths, and descriptions used for all supported variables, please refer to the [Appendix. Modbus Register Address Map](#).

Example

Display a Boolean value written from the PC/PLC.

Message

In 「Message Pool」 page, set the message content in 「Message」 field. The message parameters are set as follows:

No. 6

Display ☒ Instant ☐

Message Moving Mode

Row(s)

Color

Message

Coil variable 0 = %b000

Update

Cancel

Coil variable 0 = %b000

Display Result

Coil variable 0 = 1

For more information on how to map boolean values to text (e.g., 1 = "Running", 0 = "Stopped"), please refer to section [5.3.Mapping Boolean \(Coil\) Values to Custom Text](#).

Coil variable 0 = 1

Coil variable 0 = Opening

4.2.5. ASCII String

iKAN offers multiple string buffers that can be updated in real time via Modbus communication. ASCII strings are typically used for displaying station names, status messages, and alerts.

Syntax Format

%aX

X is the string index from 0 to 7. Each string buffer supports up to 64 characters for display.

Modbus Address Mapping

Each register holds 2 ASCII characters. A full 64-character string occupies 32 Modbus registers. The table below shows the Modbus register range assigned for ASCII string variables, along with the corresponding syntax identifiers for implementation reference.

Modbus Address	Length	Description	Range
41800–41831	32	ASCII string 0	ASCII
41832–41863	32	ASCII string 1	ASCII
41864–41895	32	ASCII string 2	ASCII
41896–41927	32	ASCII string 3	ASCII
41928–41959	32	ASCII string 4	ASCII
41960–41991	32	ASCII string 5	ASCII
41992–42023	32	ASCII string 6	ASCII
42024–42055	32	ASCII string 7	ASCII

For a complete list of Modbus addresses, data types, lengths, and descriptions used for all supported variables, please refer to the [Appendix. Modbus Register Address Map](#).

Example

Display an ASCII string written from the PC/PLC. The figure below shows a PC or PLC sending ASCII character values to the ASCII string 0 register via the Modbus RTU/TCP protocol.

	01800	01810	01820	01830
0	1800 = (AS) 0x4153	1810 = (??) 0x0000	1820 = (??) 0x0000	1830 = (??) 0x0000
1	1801 = (CI) 0x4349	1811 = (??) 0x0000	1821 = (??) 0x0000	1831 = (??) 0x0000
2	1802 = (I) 0x4920	1812 = (??) 0x0000	1822 = (??) 0x0000	
3	1803 = (st) 0x7374	1813 = (??) 0x0000	1823 = (??) 0x0000	
4	1804 = (ri) 0x7269	1814 = (??) 0x0000	1824 = (??) 0x0000	
5	1805 = (ng) 0x6E67	1815 = (??) 0x0000	1825 = (??) 0x0000	
6	1806 = (?!) 0x0021	1816 = (??) 0x0000	1826 = (??) 0x0000	
7	1807 = (??) 0x0000	1817 = (??) 0x0000	1827 = (??) 0x0000	
8	1808 = (??) 0x0000	1818 = (??) 0x0000	1828 = (??) 0x0000	
9	1809 = (??) 0x0000	1819 = (??) 0x0000	1829 = (??) 0x0000	

Message

In 「Message Pool」 page, set the message content in 「Message」 field. The message parameters are set as follows:

No. 6

Display ☒ Instant ☐

Message Moving Mode

0

Row(s)

1

Color

White

Message

%a0

Update

Cancel

%a0

Display Result

ASCII string!

4.2.6. Unicode String

The Unicode supports one buffer of up to 32 Unicode characters. The string content can be written from a PLC or PC to Modbus addresses 43000 to 43031. Unicode strings support languages such as Traditional Chinese, Japanese, and Korean, and can be updated in real time via Modbus communication.

Syntax Format

%n0

The Unicode string variable is represented by %n0.

Modbus Address Mapping

The table below shows the Modbus register range assigned for the Unicode string variable. Each 16-bit register stores one Unicode character.

Modbus Address	Length	Description	Range
43000–43031	32	Unicode string 0	00A0 ~ FFFF

For a complete list of Modbus addresses, data types, lengths, and descriptions used for all supported variables, please refer to the [Appendix. Modbus Register Address Map](#).

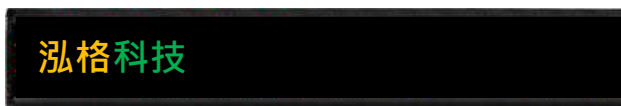
Character Encoding

In addition to Unicode character codes, iKAN supports specific control codes for setting text color and marking the end of the string.

Value Range	Description																								
0	End of string marker.																								
0x0001~ 0x0007	Color control codes (device model dependent)																								
	<table><tr><th>Value</th><th>Small Model</th><th>General Model</th></tr><tr><td>1</td><td>Blue</td><td>Red</td></tr><tr><td>2</td><td>Green</td><td>Green</td></tr><tr><td>3</td><td>Cyan</td><td>Yellow</td></tr><tr><td>4</td><td>Red</td><td>Blue</td></tr><tr><td>5</td><td>Purple</td><td>Purple</td></tr><tr><td>6</td><td>Yellow</td><td>Cyan</td></tr><tr><td>7</td><td>White</td><td>White</td></tr></table>	Value	Small Model	General Model	1	Blue	Red	2	Green	Green	3	Cyan	Yellow	4	Red	Blue	5	Purple	Purple	6	Yellow	Cyan	7	White	White
	Value	Small Model	General Model																						
	1	Blue	Red																						
	2	Green	Green																						
	3	Cyan	Yellow																						
	4	Red	Blue																						
	5	Purple	Purple																						
	6	Yellow	Cyan																						
7	White	White																							
0x0020 ~ 0x007F	Standard ASCII characters																								
0x00A0 ~ 0xFFFF	Full Unicode character set																								

Example

The example below shows how to send Unicode character codes and color control values via Modbus to display the Chinese company name “泓格科技” with color formatting.



Modbus Write Sequence

Value	Description
0003	Yellow Text
6CD3	泓
683C	格
0002	Green Text
79D1	科
6280	技
0	End marker

Example

Display a Unicode string written from the PC/PLC. The figure below shows a PC or PLC sending Unicode character values to the Unicode string 0 register via the Modbus RTU/TCP protocol.

	Alias	03000	Alias	03010
0	Set Color	(?) 0x0001	s	(?s) 0x0073
1	U	(?5) 0xFF35	t	(?t) 0x0074
2	n	(?N) 0xFF4E	r	(?r) 0x0072
3	i	(?I) 0xFF49	i	(?i) 0x0069
4	c	(?C) 0xFF43	n	(?n) 0x006E
5	o	(?O) 0xFF4F	q	(?q) 0x0067
6	d	(?D) 0xFF44	Set Color	(?) 0x0004
7	e	(?E) 0xFF45	!	(?!) 0x0021
8		(?) 0x0020	End	(?) 0x0000
9	Set Color	(?) 0x0006		(?) 0x0000

Message

In 「Message Pool」 page, set the message content in 「Message」 field. The message parameters are set as follows:

No. 6

Display ☒ Instant ☐
Message Moving Mode
Row(s)
Color
Message

%n0

Update

Cancel

%n0

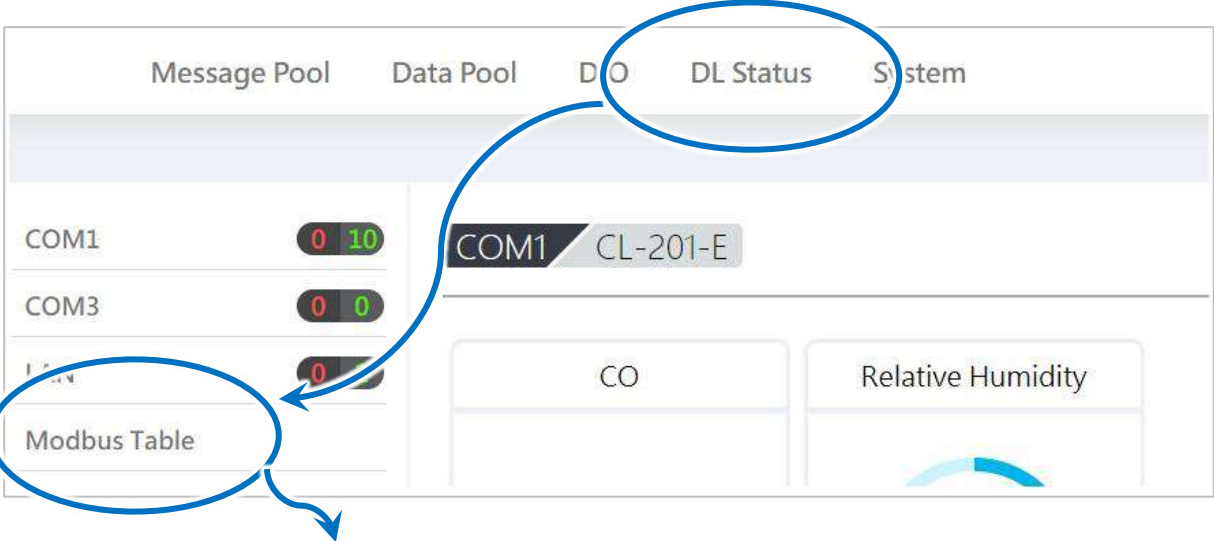
Display Result

Unicode string!

4.2.7. DL/CL Real-time Variables

iKAN series LED displays can directly connect to DL/CL environmental sensing modules via Modbus protocol (TCP or RTU), without requiring an intermediary control system.

DL/CL module variables use the %yXXX syntax. The variable codes are automatically mapped by the system to each module parameter's Modbus address. Users simply refer to the mapping table and embed the appropriate code in the message to display real-time values.



Modbus Register Table for DL Value (3xxxx)

Address (Base 0)	Description	Message Pool Symbol
518	CL-202-E(COM1->ID:193)CO2	%y518
519	Module name (Interface -> Modbus ID) Measurement target	19
520		20
521	CL-202-E(COM1->ID:193)Temperature (°F)	%y521
Modbus Register Address	1->ID:193)Dew Point Temp	Variable Code (%yXXX)

For module connection settings, please refer to chapter [5.3. Mapping Boolean \(Coil\) Values to Custom Text](#)

Boolean variables typically represent binary statuses such as on/off or error states. This function allows users to define custom text for values 0 and 1, such as "STOP/START" or "OFF/ON", enhancing message clarity.

This section is intended to complement the example shown in section 4.2.4. Boolean Variables, where the iKAN map Boolean (Coil) values (0 or 1) to custom text. This is particularly useful for improved message clarity and user-friendliness..

Example

This example, based on Section 4.2.3, shows how to map Boolean (Coil) values (0 or 1) to custom text – START and OFF.

Steps

- 1) Click 「 COIL 」 subpage, and thenlick the 「 Variable ID 」 label that you want to edit.
- 3) A configuration section will appear in the buttom of the interger variable map. Click 「 Adv. Config 」 button to enter the advanced settings section.
- 4) In advanced settings section, set the custom display texts as follows:
ON Text: START

OFF Text: OFF

5) Click 「Update」 button to activate the changes.

Display Result

DL/CL Modules Management, which provides detailed instructions on supported models, communication interfaces, ID configuration, and connection status verification.

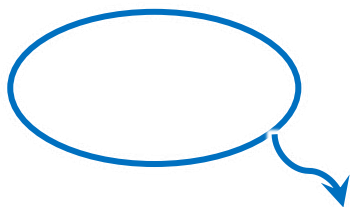
Example

Display the indoor temperature value from a DL-10 module.

Steps

- 1) Go to 「Modbus Table」 subpage under the 「DL Status」 navigation bar.
- 2) Locate the desired temperature value, and note the corresponding variable code





Modbus Register Table for DL Value (3xxxx)

Address (Base 0)	Description	Message Pool Symbol
518	CL-202-E(COM1->ID:193)CO2	%y518
519	CL-202-E(COM1->ID:193)Relative Humidity	%v519
520	CL-202-E(COM1->ID:193)Temperature (°C)	%y520
521	CL-202-E(COM1->ID:193)Temperature (°F)	%y521
522	CL-202-E(COM1->ID:193)Dew Point Temperature	%y522

3)In 「Message Pool」 page, set the message content in 「Message」 field. The message parameters are set as follows:

No. 6

Display ☒ Instant ☐

Message Moving Mode

0 ▾

Row(s)

1 ▾

Color

White ▾

Message

Indoor Temperature: %y520 °C

Update

Cancel



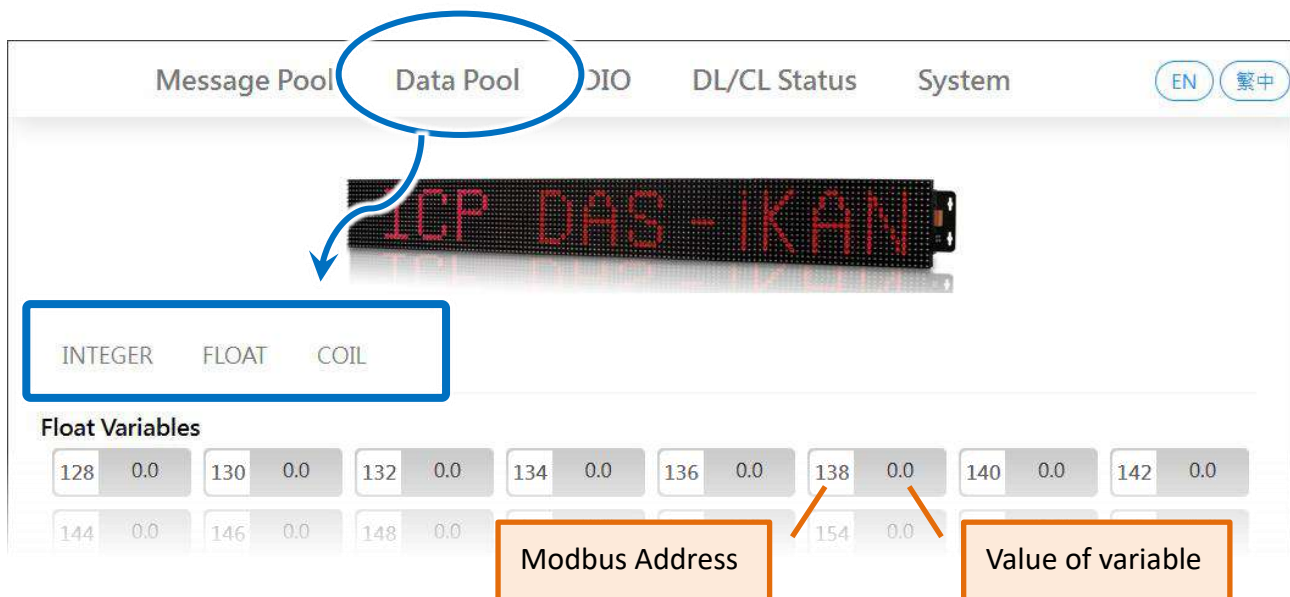
Indoor Temperature: %y520 °C

Display Result

Indoor Temperature: 27 °C

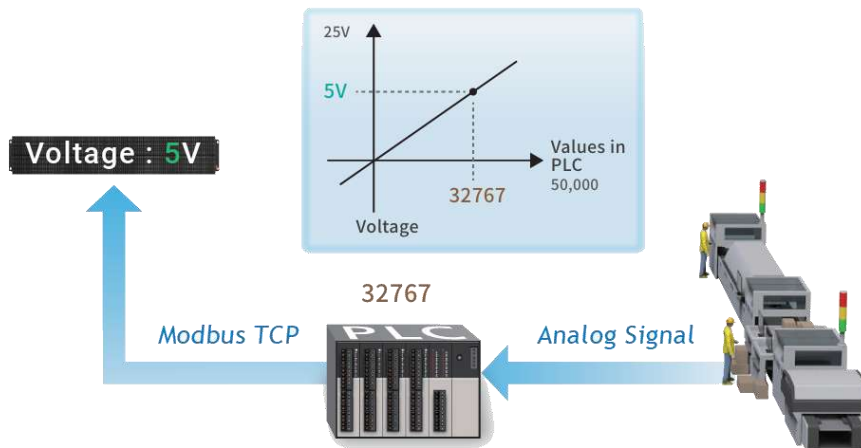
5. Variable Format Management

To enhance readability and flexibility of displayed information, iKAN provides multiple variable formatting functions. Users can configure how integer, float, and coil values appear on screen—such as value scaling, decimal formatting, or custom text replacement. Settings are available on the web-based 「Data Pool」 page, with data sourced from PLCs, sensors, or DL/CL modules.

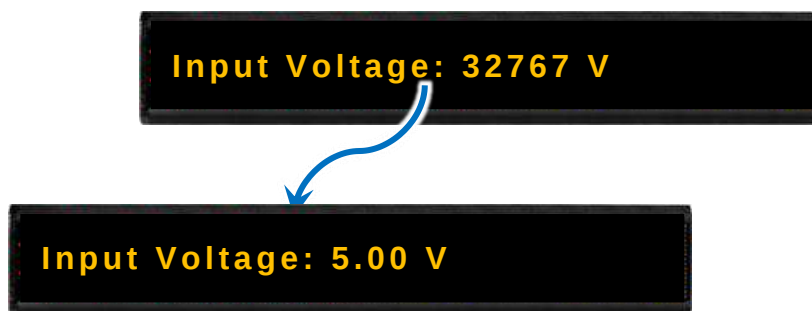


5.1. Mapping Integer Values to Engineering Units

Many devices use 16-bit integers to transmit values like voltage or temperature. iKAN allows conversion of these raw values into meaningful engineering units.



This section is intended to complement the example shown in section 4.2.2 Integer Variables, where the iKAN converts raw integer values into meaningful physical units such as volts (V), temperature (°C), or humidity (%RH).



Example

This example, based on Section 4.2.2 Integer Variables, shows how to convert a 16-bit integer value into a physical value.

Steps

- 1) Click 「Integer」 subpage, and then select the integer type as needed.
- 2) Click the 「Variable ID」 label that you want to edit.

INTEGER FLOAT COIL

Integer Variables

unsigned ▾ Display

0	0	1	0	2	0	3	0	4	0	5	0	6	0	7	0
8	0	9	0	10	0	11	0	12	0	13	0	14	0	15	0
16	4	17	4	18	0	19	0	20	0	21	0	22	0	23	0
24	0	25	0	26	0	27	0	28	0	29	0	30	0	31	0
32	0	33	0	34	0	35	0	36	0	37	0	38	0	39	0
40	0	41	0	42	0	43	0	44	0	45	0	46	0	47	0
48	0	49	0	50	0	51	0	52	0	53	0	54	0	55	0
56	0	57	0	58	0	59	0	60	0	61	0	62	0	63	0

0 0 Red ▾ Update Adv. Config Cancel

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- 3) A configuration section will appear in the bottom of the integer variable map. Click 「Adv. Config」 button to enter the advanced settings section.

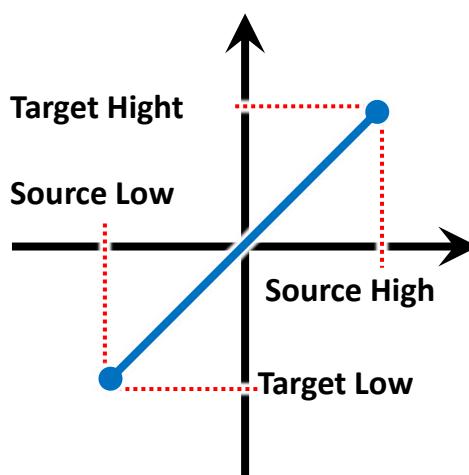
0 0 Red ▾ Update Adv. Config Cancel

4) In advanced settings section, set the configuration parameters. After completing the setup, click 「Uptate」 button to activate the changes.

The following configuration parameters convert a 16-bit unsigned integer variable with a raw value range from 0 to 65535 into a voltage value range from 0 to 10 V.

No.	Source Low	Source High	Target Low	Target High	Decimal Places	Update	Disable	Cancel
0	0	65535	0	10	2	Update	Disable	Cancel

- Source Low : 0
- Source High : 65535
- Target Low : 0 (e.g., 0 V)
- Target High : 10 (e.g., 10 V)
- Decimal Places : 2



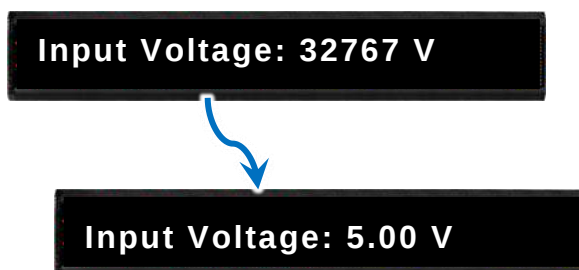
Configuration Parameters

The table below describes the configurable fields for configuration parameters.

Parameters	Description
Source Low	The minimum value of the raw input value (e.g., 0 = 0V).
Source High	The maximum value of the raw input value (e.g., 65535 = 10V).
Target Low	The minimum value of the corresponding physical value (e.g., 0V).
Target High	The corresponding of the corresponding physical value (e.g., 10V).
Decimal Places	The display precision (e.g., 5.00).

Display Result

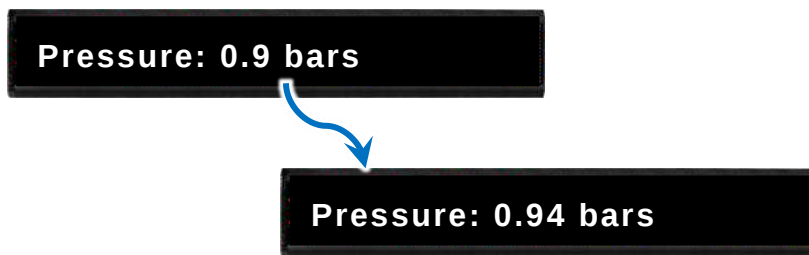
After clicking 「Uptate」 button, the converted physical value will be displayed on iKAN in real time.



5.2. Setting Decimal Places for Float Variables

iKAN supports floating-point variable display with up to **3 decimal places**. Users can set the number of decimals to meet precision requirements.

This section is intended to complement the example shown in section 4.2.3. Floating-point Variables, where the iKAN adjust the display precision of float variables. This is particularly useful for displaying pressure, concentration, or other fine-resolution values.



Example

This example, based on Section 4.2.3, shows how to adjust the display precision of float variables from 1 to 2 decimal places.

Steps

1) Click 「FLOAT」 subpage, and then click the 「Variable ID」 label that you want to edit.

INTERGER **FLOAT** OIL

Float Variables

128	0.0	130	0.0	132	0.0	134	0.0	136	0.0	138	0.0	140	0.0	142	0.0
144	0.0	146	0.0	148	0.0	150	0.0	152	0.0	154	0.0	156	0.0	158	0.0
160	0.0	162	0.0	164	0.0	166	0.0	168	0.0	170	0.0	172	0.0	174	0.0
176	0.0	178	0.0	180	0.0	182	0.0	184	0.0	186	0.0	188	0.0	190	0.0
192	0.0	194	0.0	196	0.0	198	0.0	200	0.0	202	0.0	204	0.0	206	0.0
208	0.0	210	0.0	212	0.0	214	0.0	216	0.0	218	0.0	220	0.0	222	0.0
224	0.0	226	0.0	228	0.0	230	0.0	232	0.0	234	0.0	236	0.0	238	0.0
240	0.0	242	0.0	244	0.0	246	0.0	248	0.0	250	0.0	252	0.0	254	0.0

128 0 Red Update Adv. Config Cancel

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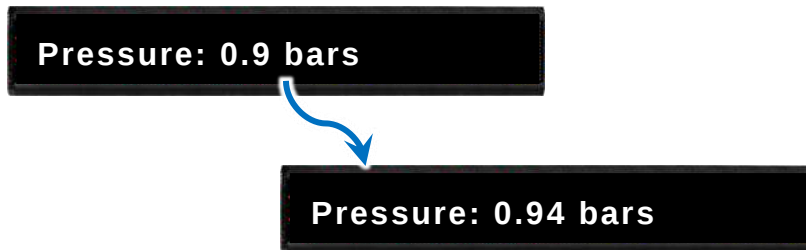
3) A configuration section will appear in the bottom of the interger variable map. Click 「Adv. Config」 button to enter the advanced settings section.

0 0 Red Update Adv. Config Cancel

4) In advanced settings section, select 2 from the 「Decimal Places」. After completing the setup, click 「Update」 button to activate the changes.

No.	Decimal Places	Update	Cancel
128	2 ▼	Update	Cancel

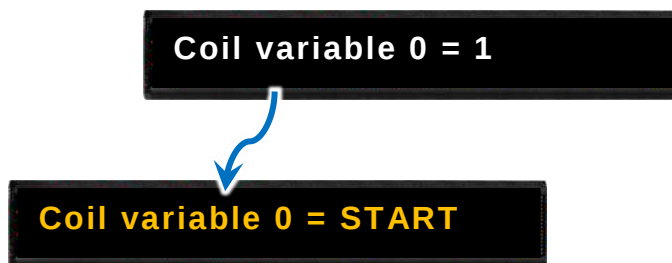
Display Result



5.3. Mapping Boolean (Coil) Values to Custom Text

Boolean variables typically represent binary statuses such as on/off or error states. This function allows users to define custom text for values 0 and 1, such as "STOP/START" or "OFF/ON", enhancing message clarity.

This section is intended to complement the example shown in section 4.2.4. Boolean Variables, where the iKAN map Boolean (Coil) values (0 or 1) to custom text. This is particularly useful for improved message clarity and user-friendliness..



Example

This example, based on Section 4.2.3, shows how to map Boolean (Coil) values (0 or 1) to custom text – START and OFF.

Steps

1) Click 「 COIL 」 subpage, and then click the 「 Variable ID 」 label that you want to edit.

The screenshot shows the 'COIL' subpage interface. At the top, there are three tabs: 'INTEGER', 'FLOAT', and 'COIL'. The 'COIL' tab is selected and circled in blue. Below the tabs is a section titled 'Coil Variables' containing a grid of 40 variables, each with a 'Variable ID' and a 'Value'. The first variable (ID 0) is highlighted with a blue background. A yellow starburst cursor points to the 'Variable ID' of the first variable. A blue arrow points from the 'Variable ID' of the first variable to the 'Variable ID' of the 34th variable. Below the grid is a configuration section for the selected variable (ID 0). This section includes a 'Variable ID' field (containing 0), a 'Value' field (containing 0), a 'Color' dropdown menu (set to 'Red'), and three buttons: 'Update', 'Adv. Config', and 'Cancel'. The 'Adv. Config' button is highlighted with a yellow starburst cursor. At the bottom of the page, there is a copyright notice: '© 2021 ICP DAS Co., Ltd. All Rights Reserved'.

3) A configuration section will appear in the bottom of the integer variable map. Click 「 Adv. Config 」 button to enter the advanced settings section.

This is a close-up of the configuration section for the selected variable (ID 0). It shows the 'Variable ID' field (containing 0), the 'Value' field (containing 0), the 'Color' dropdown menu (set to 'Red'), and the 'Update', 'Adv. Config', and 'Cancel' buttons. The 'Adv. Config' button is highlighted with a yellow starburst cursor.

4) In advanced settings section, set the custom display texts as follows:

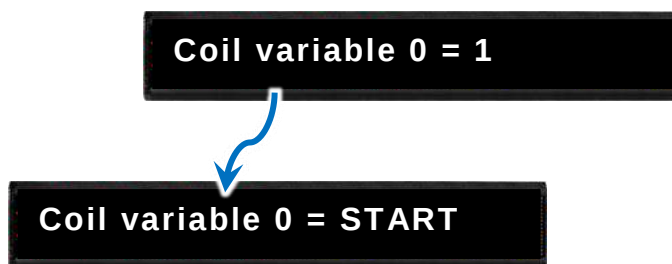
ON Text: START

OFF Text: OFF

No.	ON Text	OFF Text	Update	Cancel
0	START	OFF	Update	Cancel

5) Click 「 Update 」 button to activate the changes.

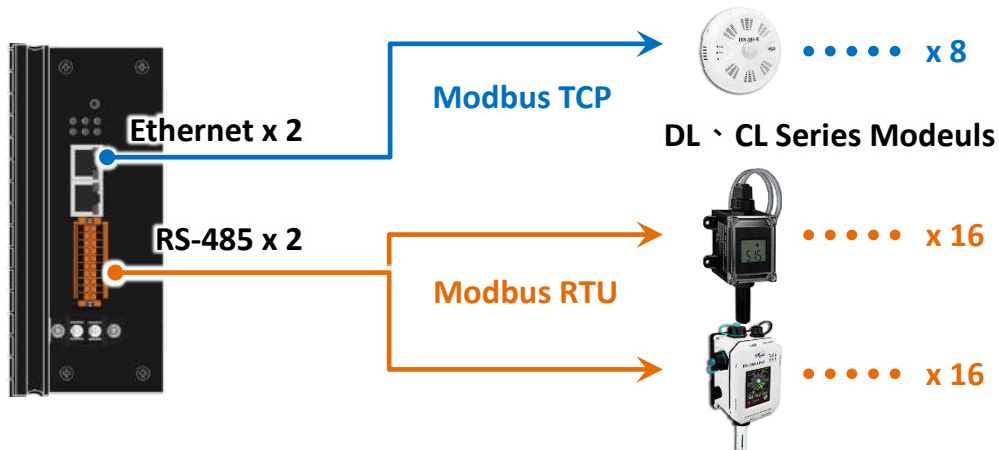
Display Result



6. DL/CL Modules Management

The iKAN series LED displays can directly integrate with ICP DAS DL/CL air quality monitoring modules. These modules communicate via Ethernet or RS-485 for real-time data acquisition and display. This chapter provides guidance on setting up communication modes, adding module information, viewing live sensor data, and referencing Modbus address-variable mapping for message embedding.

Each Ethernet port supports up to 8 modules, each RS-485 port supports up to 16 modules, and each iKAN can manage up to 40 modules.



For detailed product models and application information, please refer to https://www.icpdas.com/tw/product/guide+IIoT+IO_Sensor+Industrial_Sensor

6.1. Connecting to DL/CL Modules

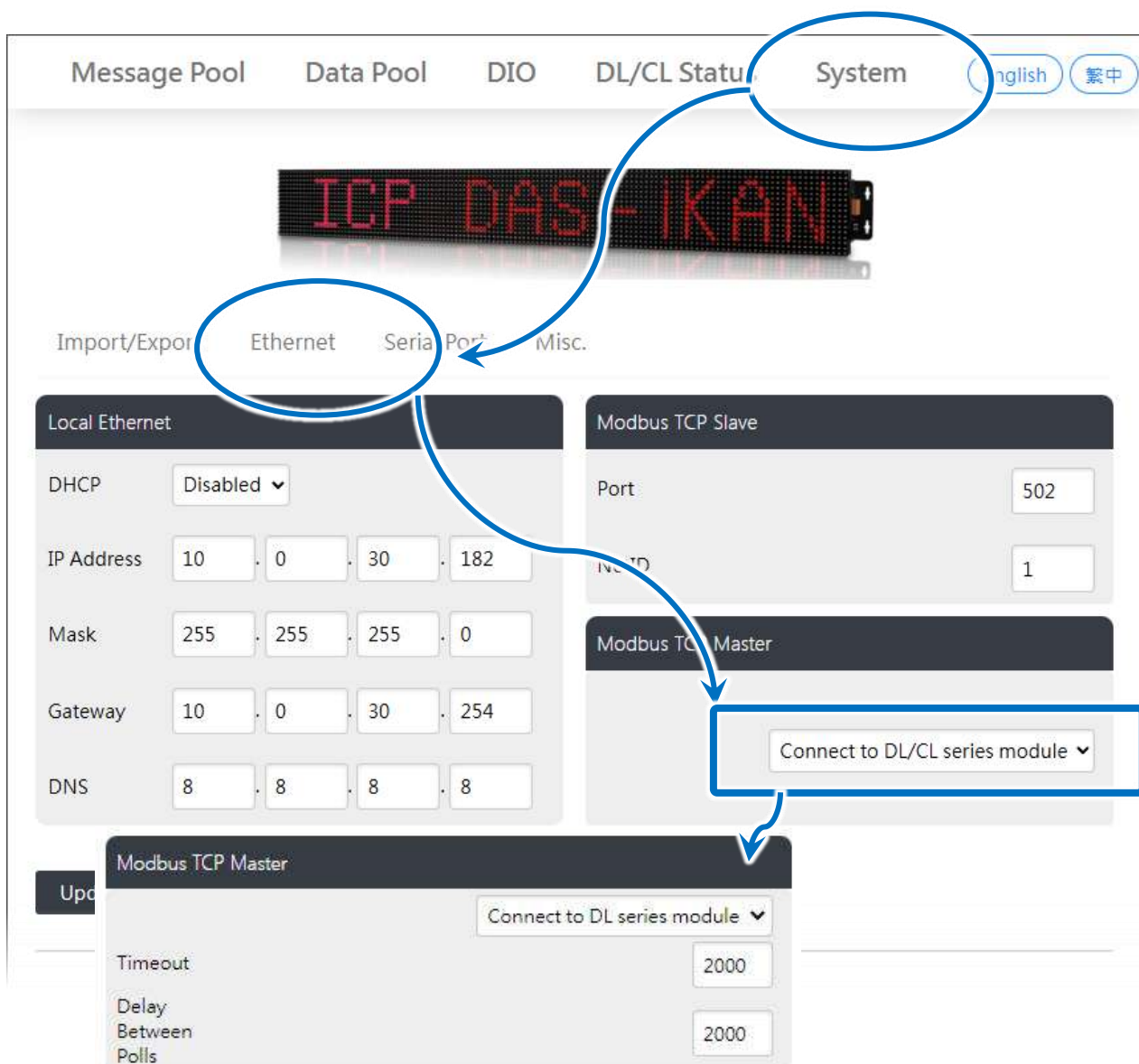
DL/CL modules can connect to iKAN using either Ethernet or RS-485. This section explains how to connect DL/CL modules to the iKAN via Ethernet or COM port (RS-485), including enabling Modbus master mode and adding module configurations.

6.1.1. Connecting via Ethernet

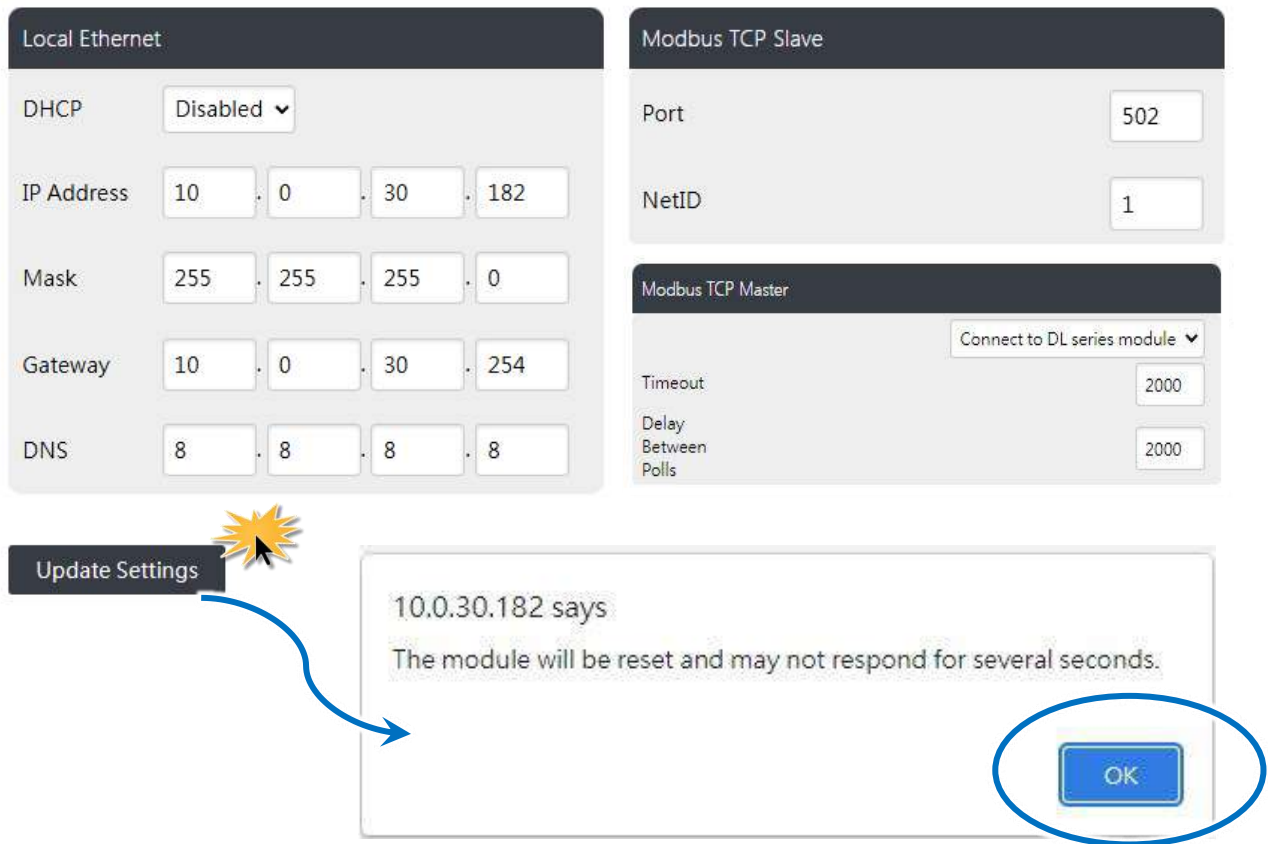
When connecting DL/CL modules via Ethernet, iKAN must be set to Modbus TCP Master mode. Users must register module IP, port, and Modbus ID.

Steps

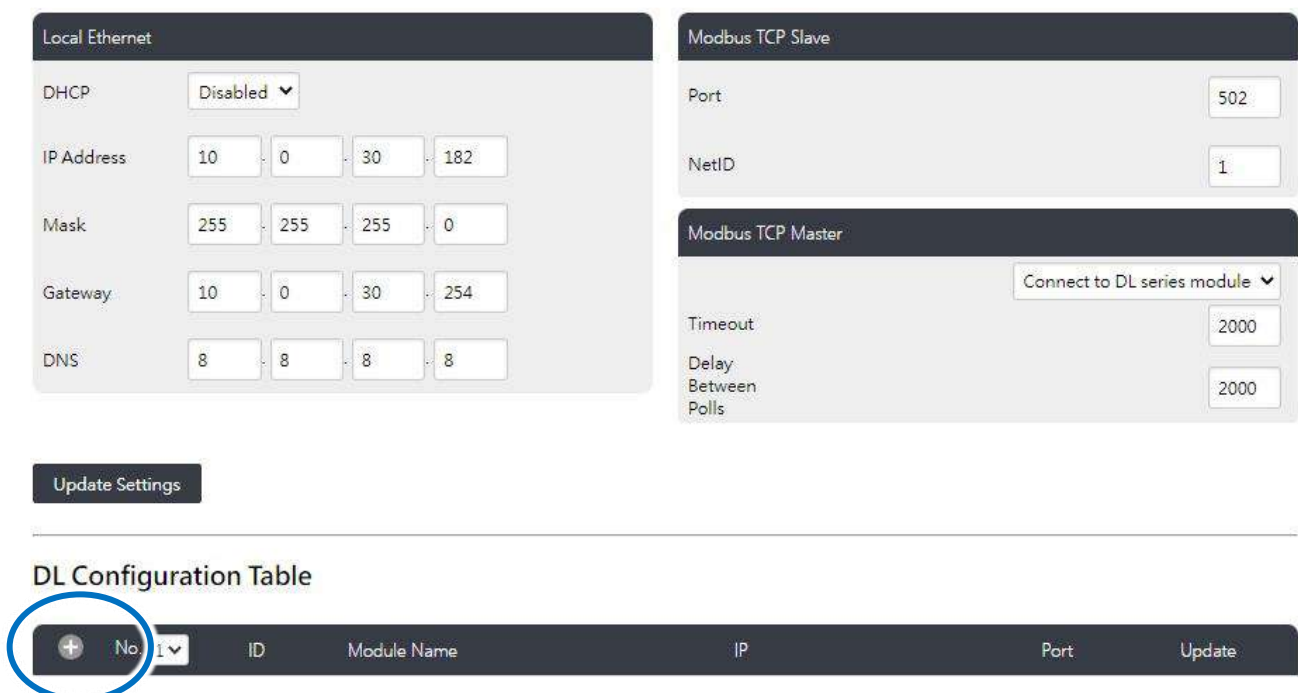
- 1) Click 「System」 in the navigation bar, and then click 「Ethernet」 subpage.
- 2) Select 「Connect to DL/CL series module」 from the drop-down mean under the 「Modbus TCP Master」 section. Set the following parameters as needed:
 - Timeout : Max module response time (recommended: 500 ms).
 - Delay Between Polls : Delay between Modbus commands (recommended: >50 ms).



- 3) Click the 「 Update Settings 」 button to activate the changes, and then confirm the action by clicking 「 OK 」 button in the pop-up window.



- 4) A new section 「 DL Configuration Table 」 will appear in the bottom of the page. Click 「 Add Module icon (+) 」



5) Set the message parameters. After completing the setup, click 「 Save 」 button to apply the settings.

DL Configuration Table The configuration will be updated the next time you reset the iKAN display.

No.	ID	Module Name	IP				Port	Update
1	1	DL-100-E	10	0	1	1	502	Save

- **Address** : Modbus address of the module
- **Module** : Select the module model
- **IP** : IP address of the module
- **Port** : Communication port number used by the module

7) Click 「 System 」 in the navigation bar, and then click 「 Misc 」 subpage.



8) In 「 Software Reset 」 section, click 「 Reset 」 button to reset and restart the iKAN device to activate the new configuration. (about 8 seconds)

Software Reset

This function allows you to reset the display module by clicking the Reset button.

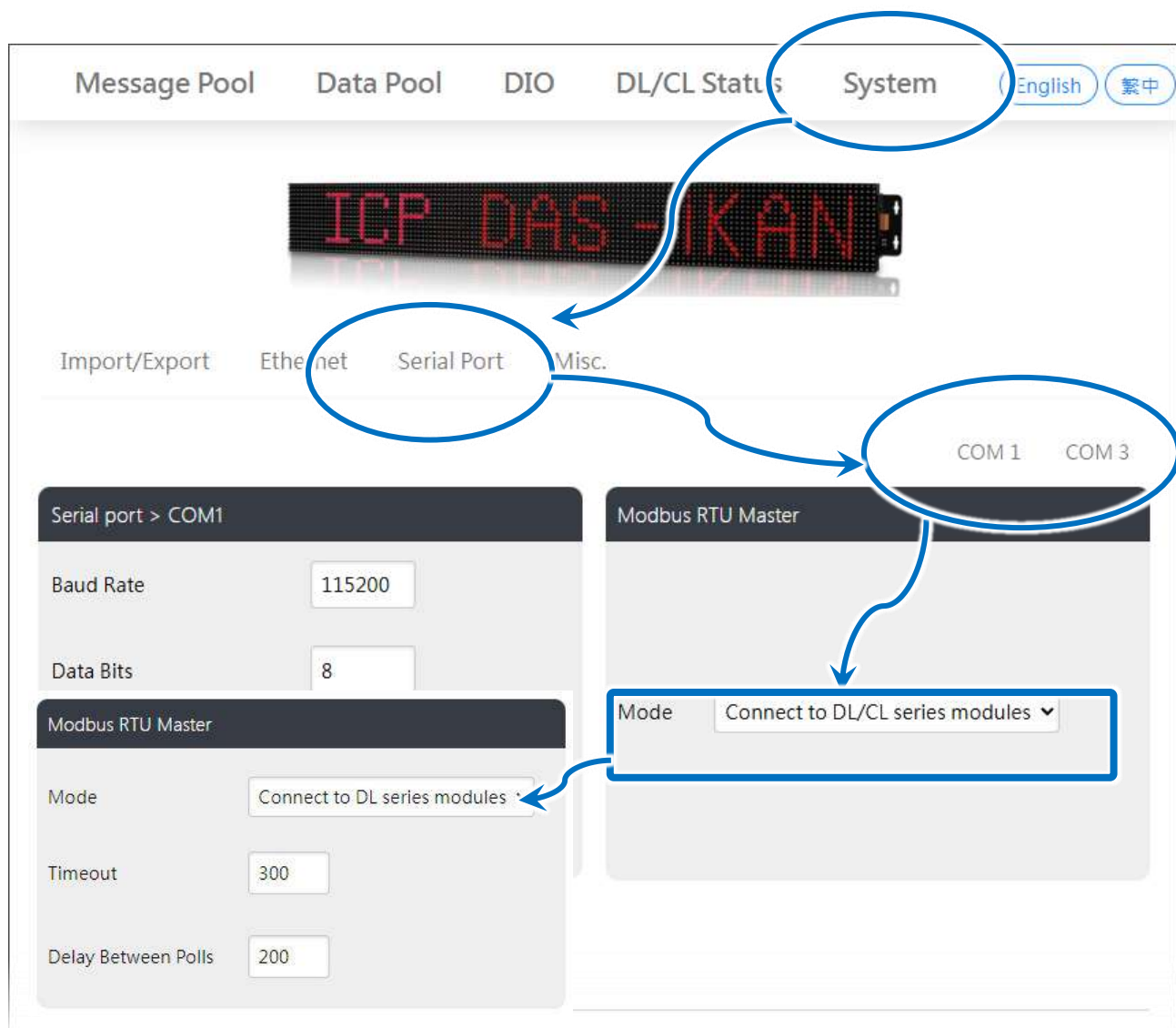
Reset

6.1.2. Connecting via COM Port

For RS-485 communication, enable Modbus RTU Master mode and configure each module's Modbus ID and type.

Steps

- 1) Click 「System」 in the navigation bar, and then click 「Ethernet」 subpage.
- 2) Select the desired COM Port, and then select 「Connect to DL/CL series module」 from the drop-down mean under the 「Modbus RTU Master」 section. Set the following parameters as needed:
 - Timeout : Max module response time (recommended: 500 ms).
 - Delay Between Polls : Delay between Modbus commands (recommended: >50 ms).



- 3) Click the 「Update Settings」 button to activate the changes, and then confirm the action by clicking 「OK」 button in the pop-up window.

Serial port > COM1

Baud Rate: 115200

Data Bits: 8

Stop Bit(s): 1

Parity: None

Modbus RTU Master

Mode: Connect to DL series modules

Timeout: 300

Delay Between Polls: 200

Save Settings

10.0.30.182 says

The module will be reset and may not respond for several seconds.

OK

- 4) A new section「DL Configuration Table」will appear in the bottom of the page. Click「Add Module icon (+)」

Serial port > COM1

Baud Rate: 115200

Data Bits: 8

Stop Bit(s): 1

Parity: None

Modbus RTU Master

Mode: Connect to DL series modules

Timeout: 300

Delay Between Polls: 200

Save Settings

DL Configuration Table

The configuration will be updated the next time you reset the iKAN display.

No.	ID	Module Name	Update
-----	----	-------------	--------

+

5) Set the message parameters. After completing the setup, click 「 Save 」 button to apply the settings.

DL Configuration Table The configuration will be updated the next time you reset the iKAN display.

No.	ID	Module Name	Update
1	4	DL-303	<button>Save</button>

- **Address** : Modbus address of the module
- **Module** : Select the module model

6) Click 「 System 」 in the navigation bar, and then click 「 Misc 」 subpage.



7) In 「 Software Reset 」 section, click 「 Reset 」 button to reset and restart the iKAN device to activate the new configuration. (about 8 seconds)

Software Reset

This function allows you to reset the display module by clicking the Reset button.

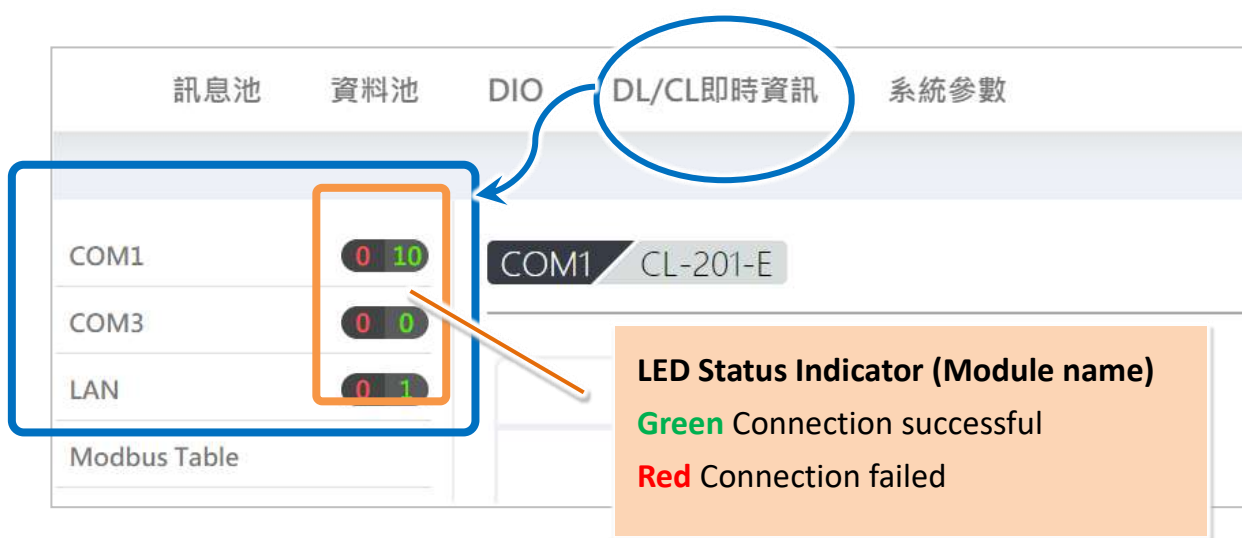
Reset

6.2. Monitoring Real-Time DL/CL Data

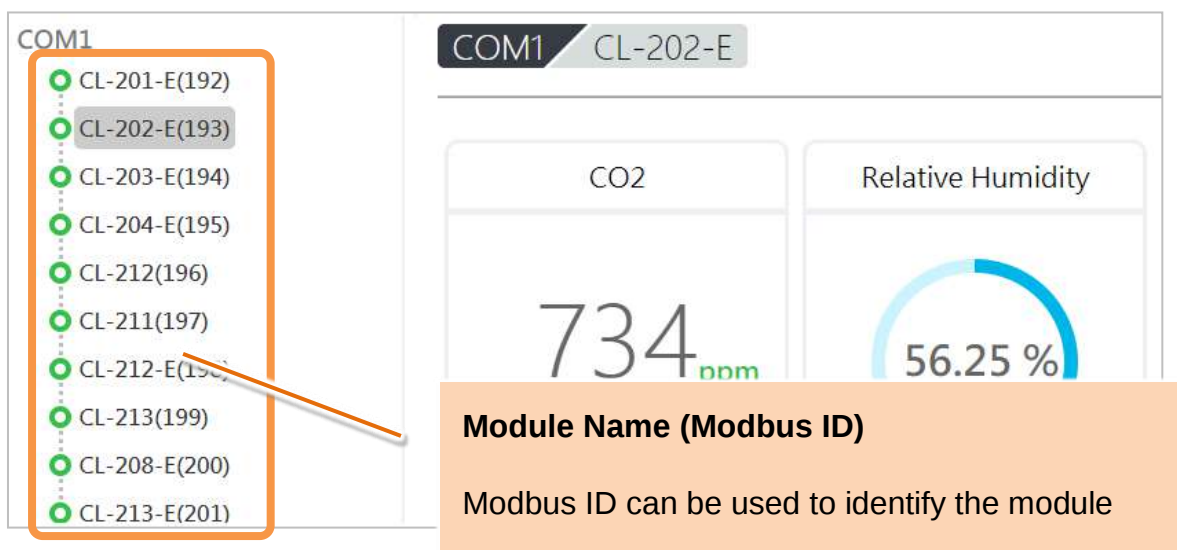
After connecting the modules, you can view the sensor readings and connection status in real-time via the web interface.

Steps

- 1) Click「DL Status」in the navigation bar, and then select the desired communication interface (e.g., COM1, COM3, or LAN).



- 2) Expand the module list on the left and click a module name to view real-time environmental data on the right.

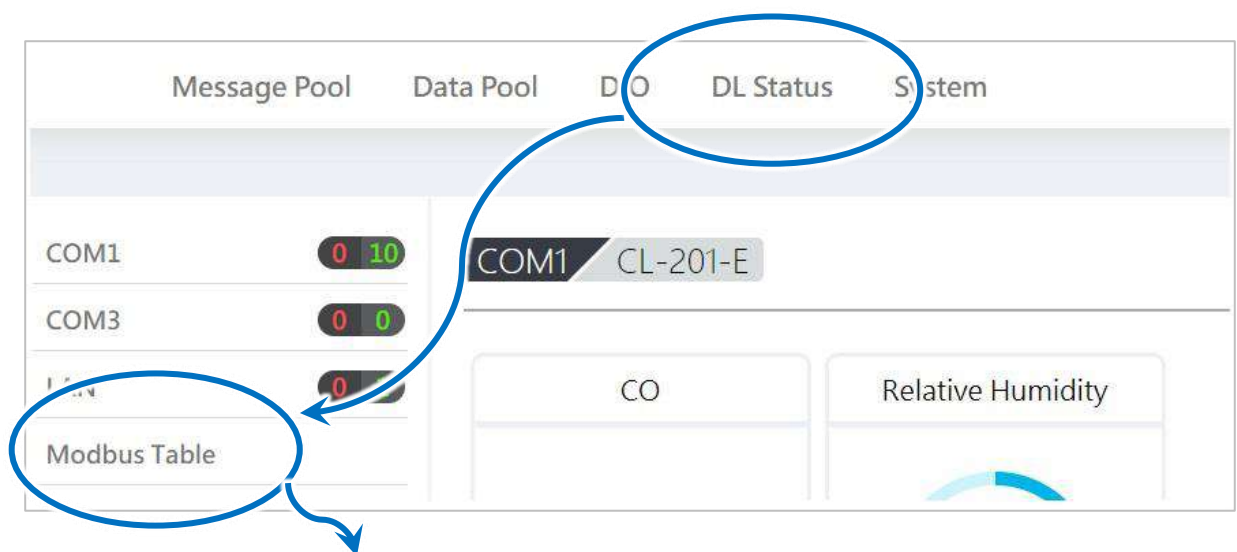


6.3. Accessing DL/CL Modbus Addresses and Variables

iKAN automatically maps measurement items from each module to Modbus registers and assigns variable codes (%yXXX) for use in display messages.

Steps

Click 「DL Status」 in the navigation bar, and then click 「Modbus Table」 subpage to open the mapping list.



Modbus Register Table for DL Value (3xxxx)

Address (Base 0)	Description	Message Pool Symbol
518	CL-202-E(COM1->ID:193)CO2	%y518
519	Data Description Module name (Interface -> Modbus ID) Measurement target	19
520		20
521	CL-202-E(COM1->ID:193)Temperature (°F)	%y521
1->ID:193)Dew Point Temp		Variable Code (%yXXX)

Modbus Register Address

Appendix. Modbus Register Address Map

Coil Variables (0xxxx, 0 based)

Modbus Address		Length	Description	Range	Attribute
Decimal	Hex.				
00000 : 00039	0000 : 0027	40	Coil-type variables	-	R/W
00100 : 00227	0064 : 00E3	128	Enable or disable the display of common messages 0 to 127.	0: Disable 1: Enable	R/W

System Variable (3xxxx, 0 based)

Modbus Address		Length	Description	Range	Attribute
Decimal	Hex.				
30000 : 30003	0000 : 0003	4	IP Address	0 ~ 255	R
30004 : 30007	0004 : 0007	4	Subnet Mask	0 ~ 255	R
30008 : 30011	0008 : 000B	4	Gateway Address	0 ~ 255	R
30012	000C	1	Year	0 ~ 9999	R
30013	000D	1	Month	1 ~ 12	R
30014	000E	1	Day	1 ~ 31	R
30015	000F	1	Day of Week (abbr. ENG, 0 = SUN)	0 ~ 6	R
30016	0010	1	Day of Week (ENG, 0 = Sunday)	0 ~ 6	R
30017	0011	1	Day of Week (TW, 0 = 日)	0 ~ 6	R
30018	0012	1	Hour	0 ~ 23	R
30019	0013	1	Minute	0 ~ 59	R
30020	0014	1	Second	0 ~ 59	R

Integer-type variables/Float-type variables/misc. (4xxxx, 0 based)

Modbus Address		Length	Description	Range	Attribute Decimal
Decimal	Hex.				
40000 : 40063	0000 : 003F	64	Integer-type variables	0 ~ 65535	R/W
40128 : 40255	0080 : 00FF	64	Float-type variables	-3.4E+38 ~ +3.4E+38	R/W
40384 : 40447	0180 : 01BF	64	Data mapping arguments: Source Low	0 ~ 65535	R/W
40512 : 40475	0200 : 023F	64	Data mapping arguments: Source High	0 ~ 65535	R/W
40640 : 40703	0280 : 02BF	64	Data mapping arguments: Target Low	0 ~ 65535	R/W
40768 : 40831	0300 : 033F	64	Data mapping arguments: Target High	0 ~ 65535	R/W
40896 : 40959	0380 : 03BF	64	Data mapping arguments: Decimal Places	0 ~ 2	R/W
41024 : 41087	0400 : 043F	64	Decimal Places for float-type variables	1 ~ 3	R/W
41408 : 41535	0580 : 05FF	128	Color for common messages 0 to 127 in the first row.	1: Blue 2: Green 3: Sky Blue 4: Red 5: Purple 6: Yellow 7: White 8: Rando	R/W
41600	0640	1	Brightness for the display, a smaller number means a brighter screen	0 ~ 4	R/W

Integer-type variables/Float-type variables/misc. (4xxxx, 0 based)

Modbus Address		Length	Description	Range	Attribute Decimal
Decimal	Hex.				
41601	0641	1	Message scrolling speed. A smaller value denotes a greater speed.	0 ~ 9	R/W
41602	0642	1	Modbus Station ID	1 ~ 254	R/W
41604	0644	1	Modbus TCP Slave port	0 ~ 65535	R/W
41612	0652	1	The response timeout value for Modbus TCP communication	0 ~ 65535	R/W
41613	0653	1	The delay between polls for Modbus TCP communication	0 to 65535	R/W
41632 : 41759	0660 : 06DF	128	The priority for messages 0 to 127	0: Common 1: Instant	R/W
41800 : 41831	0708 : 0727	32	The contents of ASCII string 0	ASCII	R/W
41832 : 41863	0728 : 0747	32	The contents of ASCII string 1	ASCII	R/W
41864 : 41895	0748 : 0767	32	The contents of ASCII string 2	ASCII	R/W
41896 : 41927	0768 : 0787	32	The contents of ASCII string 3	ASCII	R/W
41928 : 41959	0788 : 07A7	32	The contents of ASCII string 4	ASCII	R/W
41960 : 41991	07A8 : 07C7	32	The contents of ASCII string 5	ASCII	R/W
41992 : 42023	07C8 : 07E7	32	The contents of ASCII string 6	ASCII	R/W

Integer-type variables/Float-type variables/misc. (4xxxx, 0 based)

Modbus Address		Length	Description	Range	Attribute Decimal
Decimal	Hex.				
42024 : 42055	07E8 : 0808	32	The contents of ASCII string 7	ASCII	R/W
42100 : 42227	0834 : 08B3	128	The color of messages 0 to 127 on the second row.	1: Blue 2: Green 3: Sky Blue 4: Red 5: Purple 6: Yellow 7: White 8: Random	R/W
42300 : 42427	08FC : 097B	128	The message moving type for messages 0 to 127	0 to 3	R/W
42500 : 42539	08FC : 09EB	40	The color for the coil variables 0 to 39	1: Blue 2: Green 3: Sky Blue	R/W
42700 : 42763	0A8C : 0ACB	64	The color for integer variables 0 to 63	4: Red 5: Purple 6: Yellow	R/W
42700 : 42763	0A8C : 0ACB	64	The color for float variables 0 to 63	7: White 8: Random	R/W

Revision History

The table below shows the revision history.

Revision	Date	Description
1.0.1	September 2019	Initial issue
1.0.2	February 2021	Modify the workflow of iKAN updates in chapter 5.
1.1.0	December 2022	Description update for user interface and new functions.
1.1.1	June 2024	Modify the valid range of values for characters in ASCII and Unicode strings.
1.1.2	June 2025	• Added product info for non-RoHS and IP65 iKAN series models in sections 1.2 to 2.5. • Added system parameter configuration descriptions in sections 3.5.4.4 to 3.5.4.7. • Added configuration and management instructions for DL/CL monitoring modules in Chapter 6