

# Programmable Device Server User Manual

Version 0.2, Mar 2016



## *Service and usage information for*

<b>iDS-718i-D</b>	Intelligent Device Server with 1 RS-232/422/485 (Isolated, RoHS, DB9)
<b>iDS-718iM-D CR</b>	Intelligent Device Server with 1 RS-232/422/485 (Isolated, Metal Case, RoHS, DB9)
<b>iDS-728i-T CR</b>	Intelligent Device Server with 2 RS-232/422/485 (Isolated, RoHS, Terminal block)
<b>iDS-728iM-T CR</b>	Intelligent Device Server with 2 RS-232/422/485 (Isolated, Metal Case, RoHS, Terminal block)
<b>iDS-448iM-D</b>	Intelligent Device Server with 4 RS-232/422/485 (Isolated, RoHS, DB9)

## **Warranty**

---

All products manufactured by ICP DAS are under warranty regarding defective materials for a period of one year, starting from the date of delivery to the original purchaser.

## **Warning**

---

ICP DAS assumes no liability for damages resulting from the use of this product. ICP DAS reserves the right to change this manual at any time without notice. The information furnished by ICP DAS is believed to be accurate and reliable. However, no responsibility is assumed by ICP DAS for its use, nor for any infringements of patents or other rights of third parties resulting from its use.

## **Copyright**

---

Copyright © 2016 by ICP DAS. All rights are reserved.

## **Trademark**

---

The names used for identification only may be registered trademarks of their respective companies.

## **Contact US**

If you have any question, please feel free to contact us.

We will give you quick response within 2 workdays.

Email: [service@icpdas.com](mailto:service@icpdas.com) , [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

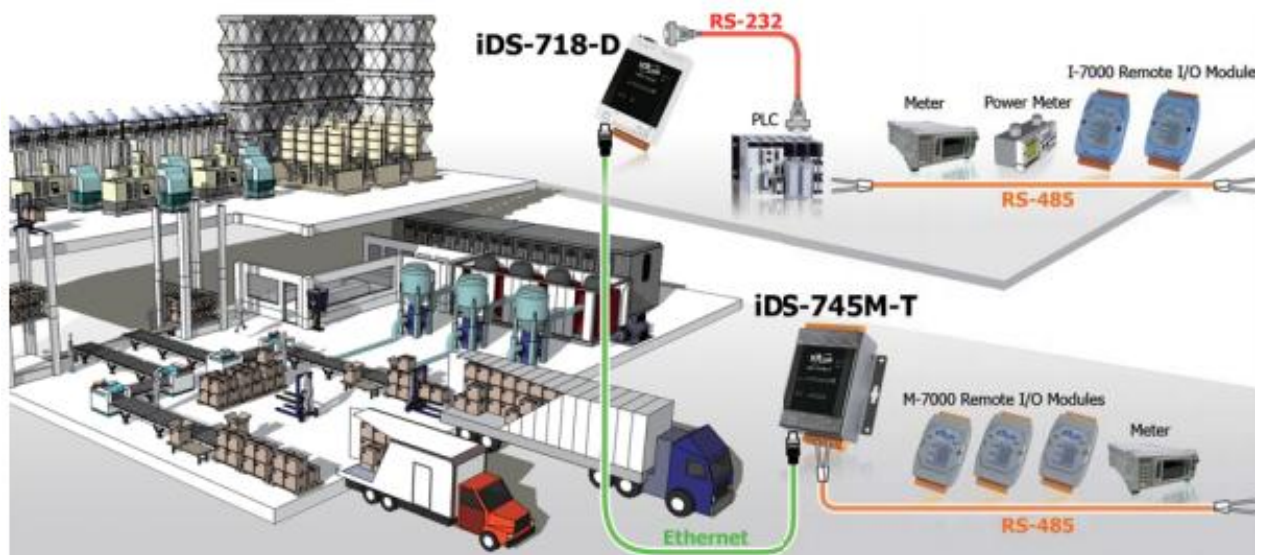
# Table of Contents

---

<b>1. INTRODUCTION</b>	<b>4</b>
1.1 PACKING LIST	6
1.2 FEATURES	6
1.3 SPECIFICATIONS	6
1.4 ORDERING INFORMATION	9
1.5 OPTION ACCESSORIES	10
<b>2. GETTING STARTED</b>	<b>11</b>
2.1 DIMENSIONS AND MOUNTING	11
2.2 PIN ASSIGNMENT	15
2.2.1 <i>iDS-718 Series</i>	15
2.2.2 <i>iDS-728 Series</i>	16
2.2.3 <i>iDS-448 Series</i>	18
2.3 LED INDICATORS	20
2.4 CONFIGURATION METHOD	21
2.4.1 <i>Factory Setting</i>	21
2.4.2 <i>Setting IP Address</i>	21
<b>3. WEB MANAGEMENT INTERFACE</b>	<b>23</b>
3.1 WEB BROWSER	23
3.2 INITIALIZE SETTING	24
3.2.1 <i>Basic Setting</i>	24
3.2.2 <i>Network Setting</i>	25
3.2.3 <i>SNMP</i>	26
3.2.4 <i>Account/Password Table</i>	27
3.2.5 <i>Accessible IP Table</i>	28
3.2.6 <i>Monitor</i>	29
3.2.7 <i>Event Notification</i>	30
3.2.8 <i>Firmware Upgrade</i>	31
3.2.9 <i>Restart</i>	32
<b>4. SERIAL PORT OPERATION MODES</b>	<b>33</b>
4.1 SERIAL PORT BASIC SETTING	33
4.2 VIRTUAL COM	35
4.2.1 <i>Installing Virtual COM Utility</i>	35
4.2.2 <i>Network Setting</i>	35
4.2.3 <i>Configuring Virtual COM Ports</i>	35

4.3	SOCKET MODES	37
4.3.1	<i>TCP Server</i>	37
4.3.2	<i>TCP Client</i>	38
4.3.3	<i>UDP</i>	39
4.4	PAIR CONNECTION	40
4.4.1	<i>Pair Connection Server</i>	40
4.4.2	<i>Pair Connection Client</i>	41
4.5	RFC2217	42
4.6	ETHERNET MODEM	43

# 1. Introduction



The iDS-700 Series is a new generation Device Server from ICP DAS and is equipped with a powerful CPU module running on the open operating system, various connectivity (Ethernet, micro SD and serial port) and communication interfaces. Compared with the previous generation PDS, not only the CPU performance is higher but also more features are improved such as 256 MB flash, 256 MB DDR3 memory, unique 64-bit hardware serial number, and real-time clock, etc. These make the iDS-700 becoming one of the most powerful system.

This device server is designed to add Ethernet and Internet connectivity to any RS-232 and RS-422/485 device, and to eliminate the cable length limitation of legacy serial communication, coupled with a large built-in RAM buffer, allows for fast transmission and prevents congestion of serial data on the network. Built-in powerful 720 MHz ARM-based processor offers excellent performance at low power consumption. The preloaded high-performance operating system is open, flexible, scalable and allows user to easily add or remove application/service from configuration mechanism.

## 1.1 Packing List

---

The package includes the following items:

- One (Programmable) Device Server hardware module
- One software utility CD
- One RS-232 console/download cable, CA-0903
- One Quick Start Guide

**Note: If any of these items are missed or damaged, contact the local distributors for more information. Save the shipping materials and cartons in case you want to ship in the future.**

## 1.2 Features

---

- Incorporate Serial Devices in an Ethernet network
- Virtual COM for 32-bit and 64-bit Windows XP/2003/Vista/7
- High-performance 720 MHz ARM-based Processor
- 256 MB DDR3 memory for data transmission and buffering
- Zero Data Loss
- UDP Support
- RFC2217 support
- Modem Emulator
- Open, Flexible and Scalable Platform
- SNMP Management Protocol

## 1.3 Specifications

---

Models	iDS-718i-D/iDS-718iM-D	iDS-728i-T/iDS-728iM-T
<b>CPU Module</b>		
CPU	32-bit RISC, 720Mhz	
RAM	256MB	



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

Flash	256MB	
Peripheral	microSD, RTC, Serial Number, Watchdog, Buzzer	
<b>Communication Interface</b>		
COM1	RS-232/422/485 (Isolate · 5-Wire)	RS-232/422/485 (5-Wire)
COM2	-	RS-232/422/485 (5-Wire)
COM3	-	-
COM4	-	-
Ethernet Port	10/100 Base-TX, RJ-45 port (Auto-negotiating, Auto MDI/MDI-X, LED indicators), PoE (IEEE 802.3af, Class 1)	
<b>COM Port signals</b>		
RS-232-3w	RxD, TxD and GND; isolated	
RS-232-5w	RxD, TxD, CTS, RTS and GND; isolated	
RS-422	TxD+, TxD-, RxD+, RxD-, GND; Isolated	
RS-485	D2+, D2-; Isolated;	
<b>COM Port Formats</b>		
Speed	921.6 Kbps Max.	
Data Bit	5, 6, 7, 8	
Parity	None, Even, Odd, Space, Mark	
Stop Bit	1, 1.5, 2	
Flow Control	RTS/CTS, XON/XOFF	
Pull High/Low Resistor	1 kΩ for RS-422/485, Non-Resistor for RS-232	
<b>Software</b>		
Protocols	ICMP, IPv4/v6, TCP, UDP, DHCP, BOOTP, SSH, FTP, SFTP, DNS, DDNS, SNMP V1/V2c/V3, HTTP, SMTP, ARP, PPPoE	
Configuration method	Web, Serial Console, SSH Console	
Virtual COM for Windows	Windows 2000, Windows XP/2003/Vista/2008/7/8 x86/x64, 2012 x64, XP Embedded	
Virtual COM for Linux	Linux kernel 2.4.x, 2.6.x, 3.8.x	
Management	SNMP MIB-II	
Operation Modes	Virtual COM, TCP Server, TCP Client, UDP, Pair Connection, RFC2217, Terminal, Reverse Telnet, TCP Modem, Modbus Gateway, Disabled	
Authentication Method	Local, RAIDUS, TACACS+	
<b>Power Input</b>		
ESD Protection	Yes (with Frame Ground)	
Protection	Power Reverse Polarity Protection	
Required Supply Voltage	PoE or +12VDC ~ +48 VDC (non-regulated)	



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

Power Consumption	3.5 W
<b>Mechanism</b>	
Flammability	Fire Retardant Materials (UL94-V0 Level)
Dimension (W x H x D)	76 mm x 123 mm x 42 mm
Installation	DIN-Rail
<b>Environment</b>	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-40 ~ +80 °C
Humidity	5 ~ 90% RH, non-condensing

Models	iDS-7448iM-D	-
<b>CPU Module</b>		
CPU	32-bit RISC, 720Mhz	
RAM	256MB	
Flash	256MB	
Peripheral	microSD, RTC, Serial Number, Watchdog, Buzzer	
<b>Communication Interface</b>		
COM1	RS-232/422/485 (Isolate · 5-Wire)	-
COM2	RS-232/422/485 (Isolate · 5-Wire)	-
COM3	RS-232/422/485 (Isolate · 5-Wire)	-
COM4	RS-232/422/485 (Isolate · 5-Wire)	-
Ethernet Port	10/100 Base-TX, RJ-45 port (Auto-negotiating, Auto MDI/MDI-X, LED indicators), PoE (IEEE 802.3af, Class 1)	
<b>COM Port signals</b>		
RS-232-3w	RxD, TxD and GND; isolated	
RS-232-5w	RxD, TxD, CTS, RTS and GND; isolated	
RS-422	TxD+, TxD-, RxD+, RxD-, GND; Isolated	
RS-485	D2+, D2-; Isolated;	
<b>COM Port Formats</b>		
Speed	921.6 Kbps Max.	



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.



Data Bit	5, 6, 7, 8
Parity	None, Even, Odd, Space, Mark
Stop Bit	1, 1.5, 2
Flow Control	RTS/CTS, XON/XOFF
Pull High/Low Resistor	1 kΩ for RS-422/485, Non-Resistor for RS-232
<b>Software</b>	
Protocols	ICMP, IPv4/v6, TCP, UDP, DHCP, BOOTP,SSH, FTP, SFTP, DNS, DDNS, SNMP V1/V2c/V3, HTTP, SMTP, ARP, PPPoE
Configuration method	Web, Serial Console, SSH Console
Virtual COM for Windows	Windows 2000, Windows XP/2003/Vista/2008/7/8 x86/x64, 2012 x64, XP Embedded
Virtual COM for Linux	Linux kernel 2.4.x, 2.6.x, 3.8.x
Management	SNMP MIB-II
Operation Modes	Virtual COM, TCP Server, TCP Client, UDP, Pair Connection, RFC2217, Terminal, Reverse Telnet, TCP Modem, Modbus Gateway, Disabled
Authentication Method	Local, RAIDUS, TACACS+
<b>Power Input</b>	
ESD Protection	Yes (with Frame Ground)
Protection	Power Reverse Polarity Protection
Required Supply Voltage	PoE or +12VDC ~ +48 VDC (non-regulated)
Power Consumption	3.5 W
<b>Mechanism</b>	
Flammability	Fire Retardant Materials (UL94-V0 Level)
Dimension (W x H x D)	76 mm x 123 mm x 42 mm
Installation	DIN-Rail
<b>Environment</b>	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-40 ~ +80 °C
Humidity	5 ~ 90% RH, non-condensing

## 1.4 Ordering Information

<b>IDS-718i-D</b>	Intelligent Device Server with 1 RS-232/422/485 (Isolated, RoHS, DB9)
<b>IDS-718iM-D CR</b>	Intelligent Device Server with 1 RS-232/422/485 (Isolated, Metal Case, RoHS, DB9)



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

<b>iDS-728i-T CR</b>	Intelligent Device Server with 2 RS-232/422/485 (Isolated, RoHS, Terminal block)
<b>iDS-728iM-T CR</b>	Intelligent Device Server with 2 RS-232/422/485 (Isolated, Metal Case, RoHS, Terminal block)
<b>iDS-448iM-D CR</b>	Intelligent Device Server with 4 RS-232/422/485 (Isolated, Metal Case, RoHS, DB9)

## 1.5 Option Accessories

---

<b>GPSU06U-6 CR</b>	24 VDC/0.25 A, 6 W Power Supply
<b>MDR-20-24 CR</b>	24 VDC/1 A, 24 W Power Supply with DIN-R
<b>DIN-KA52F-48 CR</b>	48V/0.52A, 25 W Power Supply with DIN-Rail Mounting (RoHS, for NS-205PSE)
<b>CA-0903</b>	9-Pin Female D-Sub and RS-232 Connector Cable, 30 cm Cable
<b>CA-0910</b>	9-Pin Female D-Sub and 3-wire RS-232 Cable, 1 m Cable
<b>NS-205 CR</b>	Unmanaged 5-port Industrial Ethernet Switch (RoHS)
<b>NS-205PSE CR</b>	Unmanaged Ethernet Switch with 4 PoE Ports and 1 RJ-45 Uplink (RoHS)



Web Site: <http://www.icpdas.com.tw>

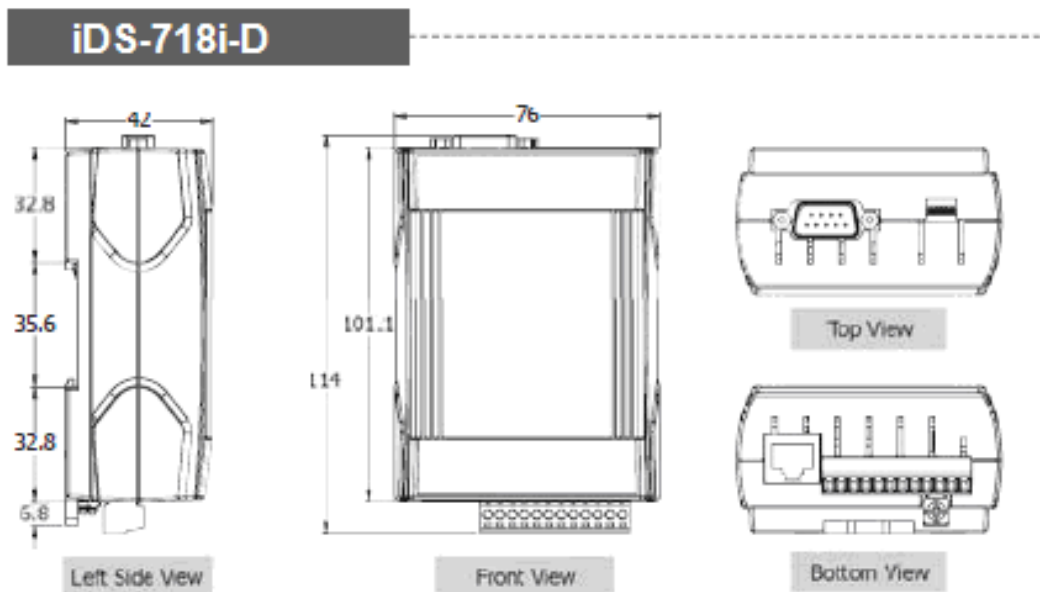
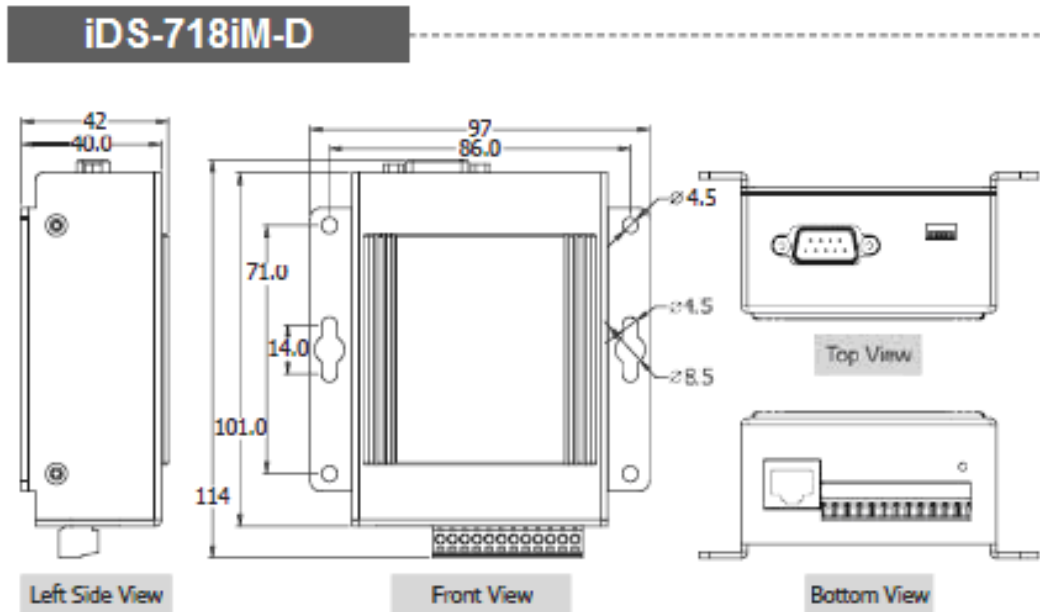
Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright @ 2016 by ICP DAS Co., Ltd. All Rights Reserved.

## 2. Getting Started

### 2.1 Dimensions and Mounting

#### ■ iDS Series



Unit: mm

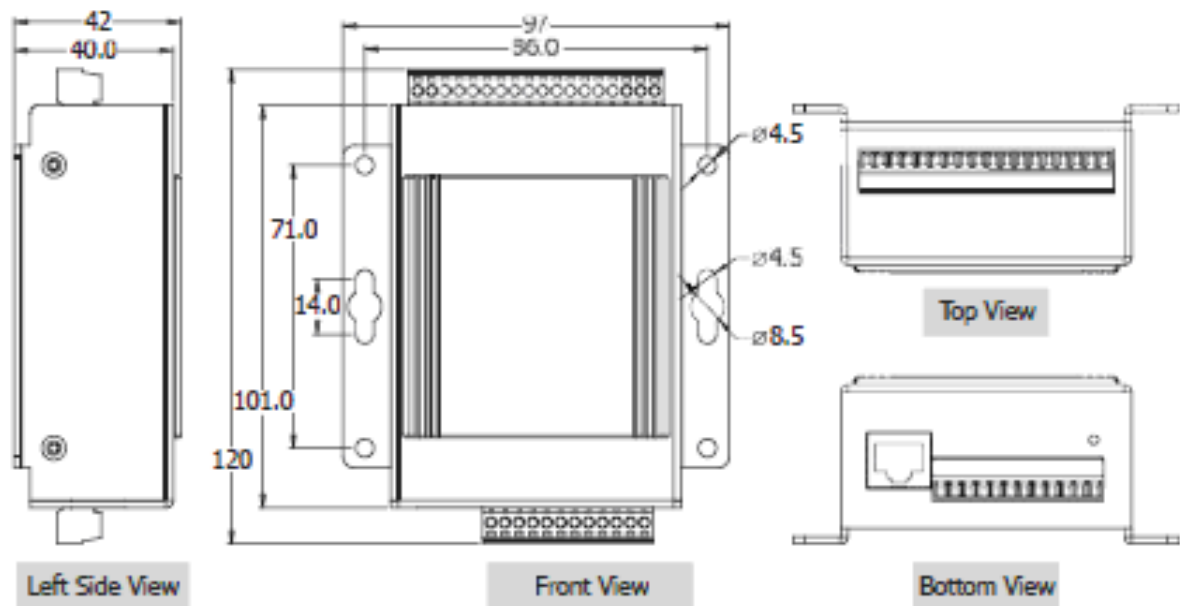


Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

## iDS-728iM-T



## iDS-728i-T

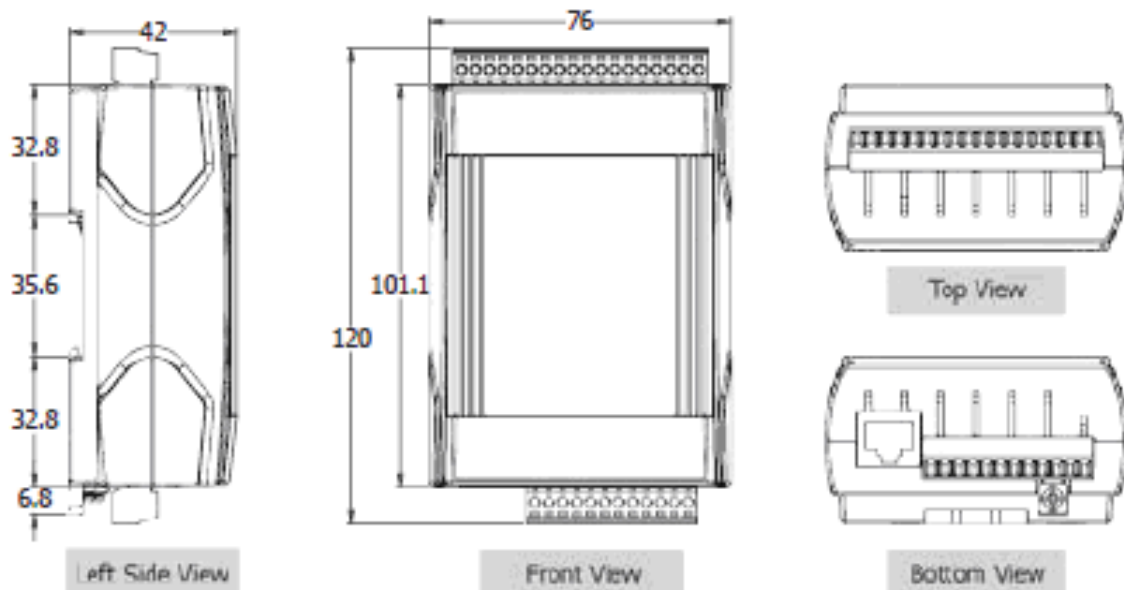


Fig 2-3

Unit: mm

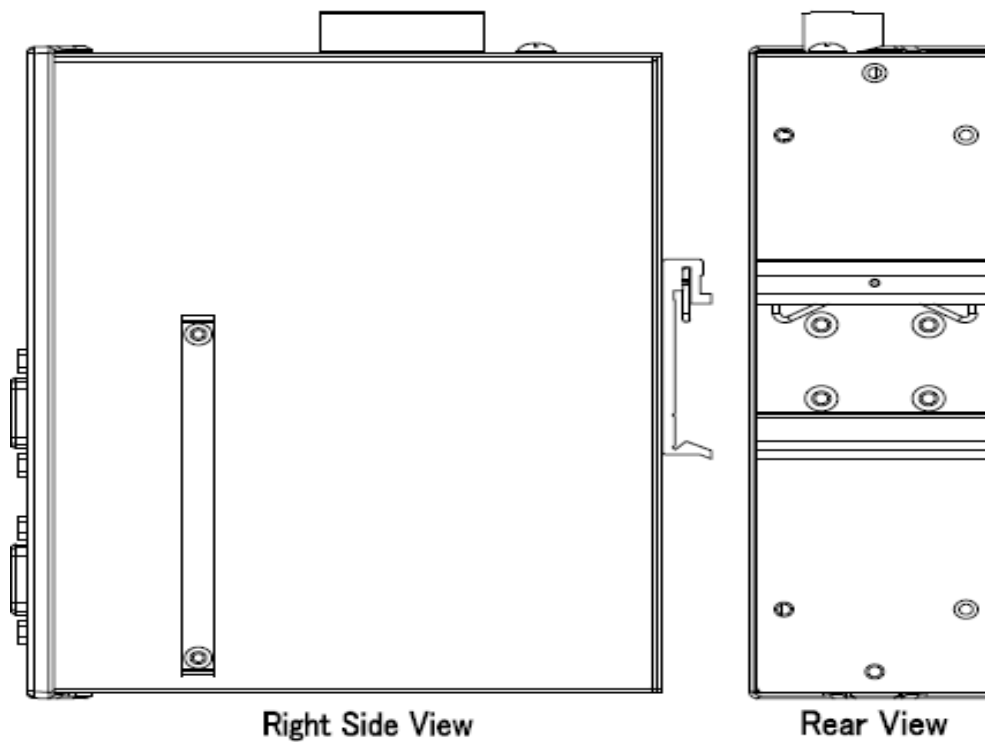
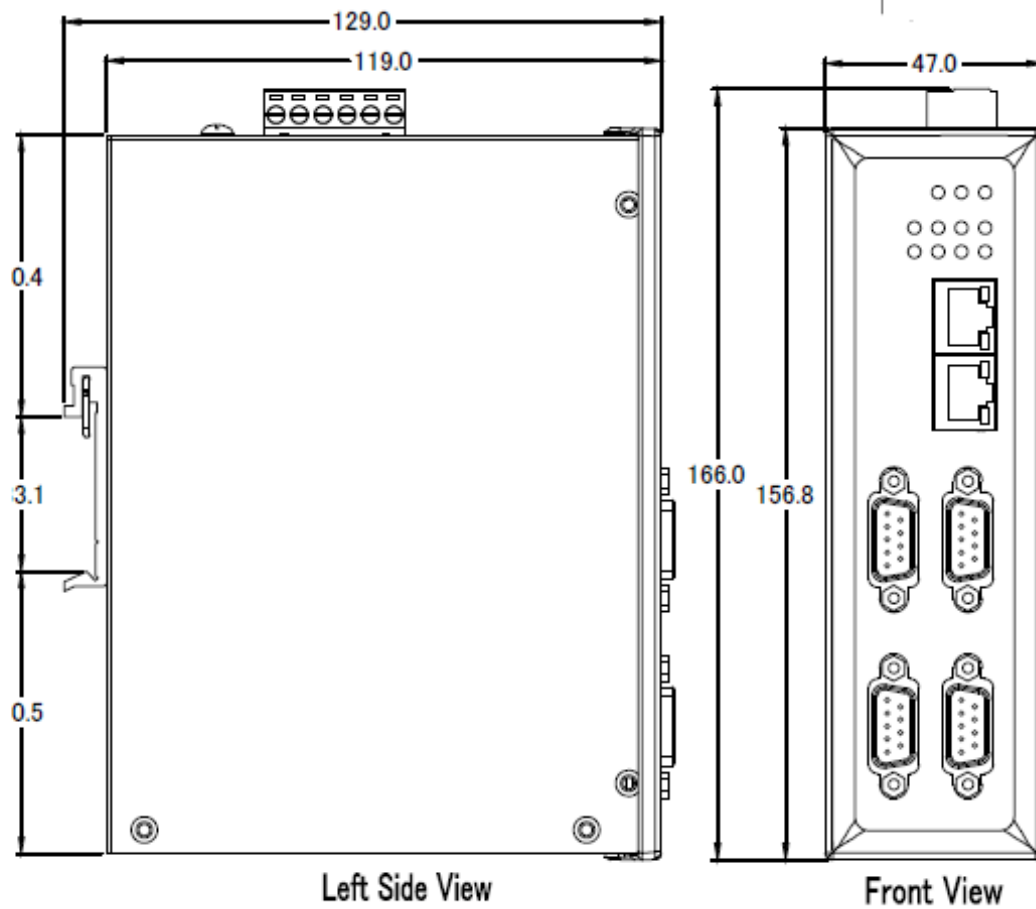


Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

# iDS-448iM-D



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

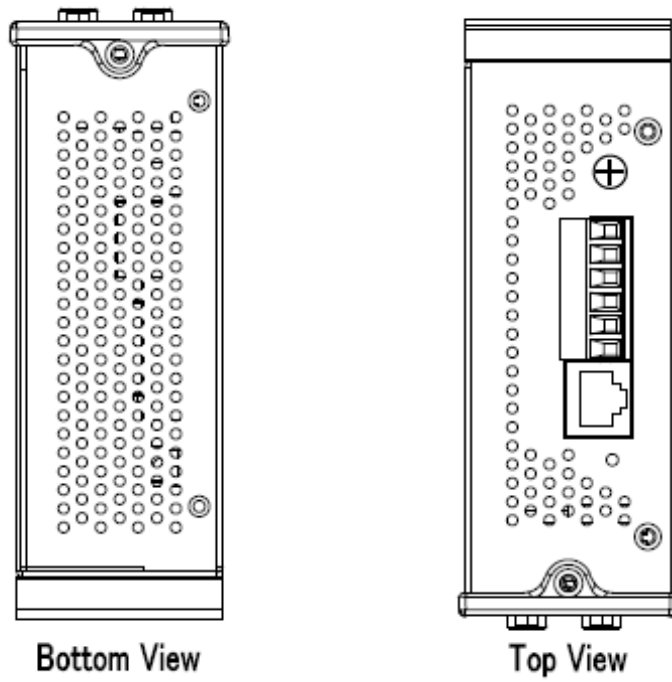
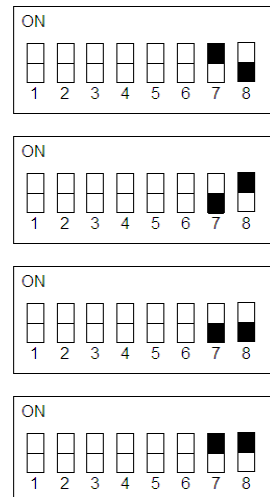


Fig 2-4

Unit: mm

## DII



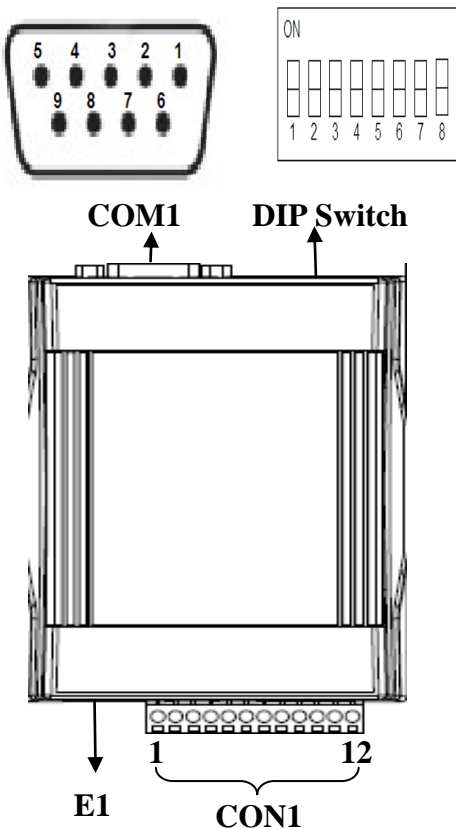
Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

## 2.2 Pin Assignment

### 2.2.1 iDS-718 Series



#### E1 & CON1(1 ~ 12)

Terminal NO	Pin Assignment
E1	
1	-
2	-
3	-
4	-
5	-
6	-
7	-
8	-
9	-
10	-
DC (12~48V)	11 P.PWR
	12 P.GND

#### Pull high/low resistors for the RS-422/RS-485 Port

DIP Switch	1	2	3	4	5	6	7	8
	RS-485/RS-422				RS-485	RS-422	M1	M0
	Pull High/Low				Terminator			
ON	1 K $\Omega$		1 K $\Omega$		120 $\Omega$	120 $\Omega$	0	0
OFF	Default						1	1



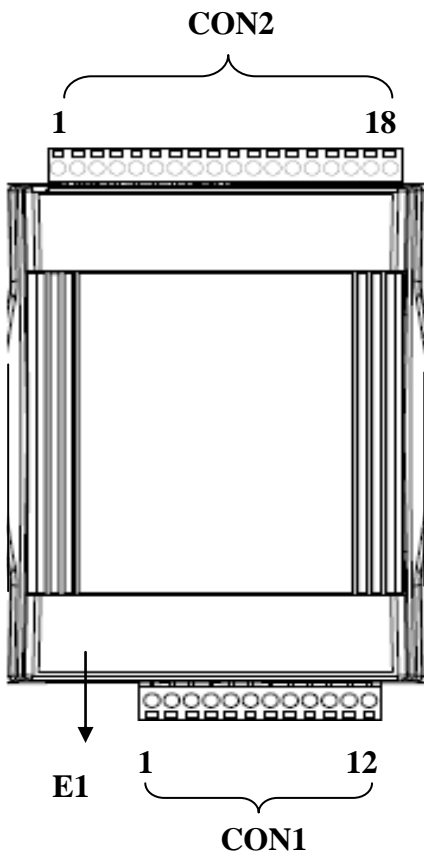
### COM1 Pin Assignment

Pin	RS232	RS422	RS485
1	-	TXD-	Data-
2	RXD	TXD+	Data+
3	TXD	RXD+	-
4	-	RXD-	-
5	GND	GND	GND
6	-	-	-
7	RTS	-	-
8	CTS	-	-
9	-	-	-

### DIP Switch(COM1 Mode)

COM1	M1	M0	DIP Switch
RS232	ON	OFF	
RS422	OFF	ON	
RS485	OFF	OFF	
Software	ON	ON	

## 2.2.2 iDS-728 Series



### E1 & CON1(1 ~ 12)

Terminal NO	Pin Assignment				
E1					
1	-				
2	-				
3	-				
4	-				
5	-				
6	-				
7	-				
8	-				
9	-				
10	-				
DC (12V-48V)	<table border="1"> <tr> <td>11</td> <td>P.PWR</td> </tr> <tr> <td>12</td> <td>P.GND</td> </tr> </table>	11	P.PWR	12	P.GND
11	P.PWR				
12	P.GND				





**CON2(1 ~ 18)**

Terminal NO	Pin Assignment	
<b>COM2</b>	1	RS-422_RxD2-
	2	RS-422_RxD2+
	3	RS-422_TxD2/D2-
	4	RS-422_TxD2/D2+
	5	RS-232_CTS2
	6	RS-232_RTS2
	7	RS-232_RxD2
	8	RS-232_TxD2
	9	GND2
<b>COM1</b>	10	RS-422_RxD1-
	11	RS-422_RxD1+
	12	RS-422_TxD1/D1-
	13	RS-422_TxD1/D1+
	14	RS-232_CTS1
	15	RS-232_RTS1
	16	RS-232_RxD1
	17	RS-232_TxD1
	18	GND1

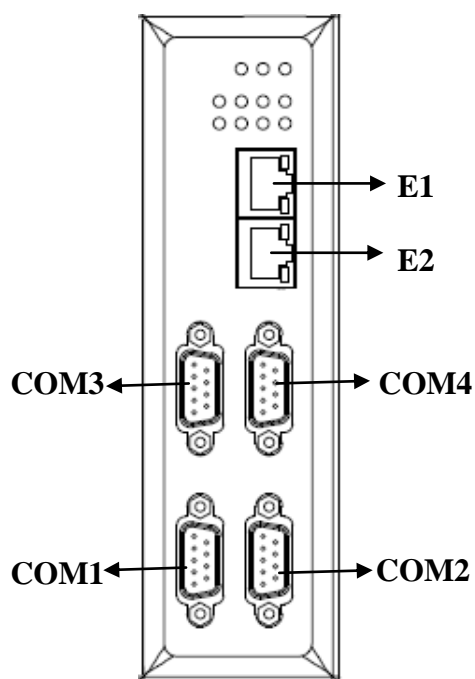


Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

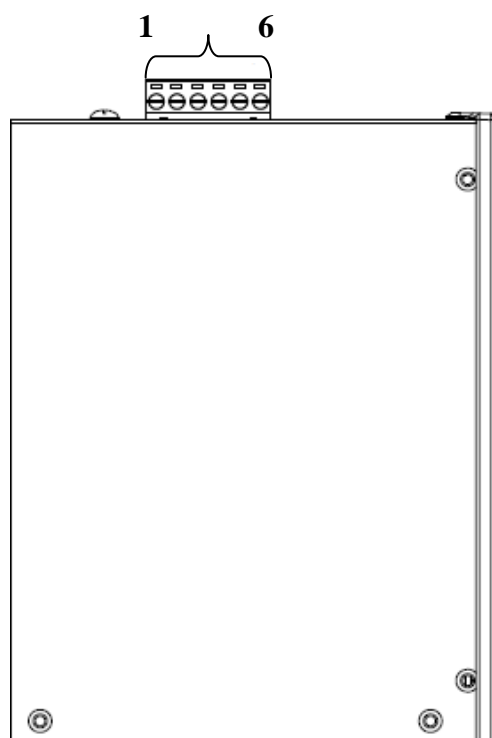
Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

## 2.2.3 iDS-448 Series



### E1、E2 & CON1(1 ~ 6)

Terminal NO		Pin Assignment
E1、E2		
DC (12~48V)	1	P.PWR
	2	P.GND
	3	P.PWR
	4	P.GND
5		-
6		-



Web Site: <http://www.icpdas.com.tw>

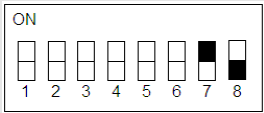
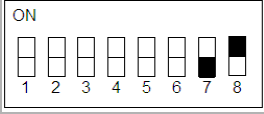
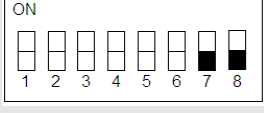
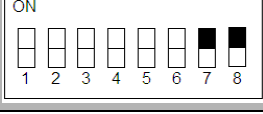
Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

### COM1~4 Pin Assignment

Pin	RS232	RS422	RS485
1	-	TXD-	Data-
2	RXD	TXD+	Data+
3	TXD	RXD+	-
4	-	RXD-	-
5	GND	GND	GND
6	-	-	-
7	RTS	-	-
8	CTS	-	-
9	-	-	-

### DIP Switch(COM1~4 Mode)

COM1	M1	M0	DIP Switch
RS232	ON	OFF	
RS422	OFF	ON	
RS485	OFF	OFF	
Software	ON	ON	



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

## 2.3 LED Indicators

---

The iDS-700 contains three LED indicators..

<b>LED Indicators</b>	<b>Color</b>	<b>Meaning</b>
PWR	Red	Power is on
RUN	Green	OS is running
Ethernet	Green	Ethernet Cable is connecting

Table 2-1



## 2.4 Configuration Method

### 2.4.1 Factory Setting

#### 1.default IP

IP : 192.168.255.1

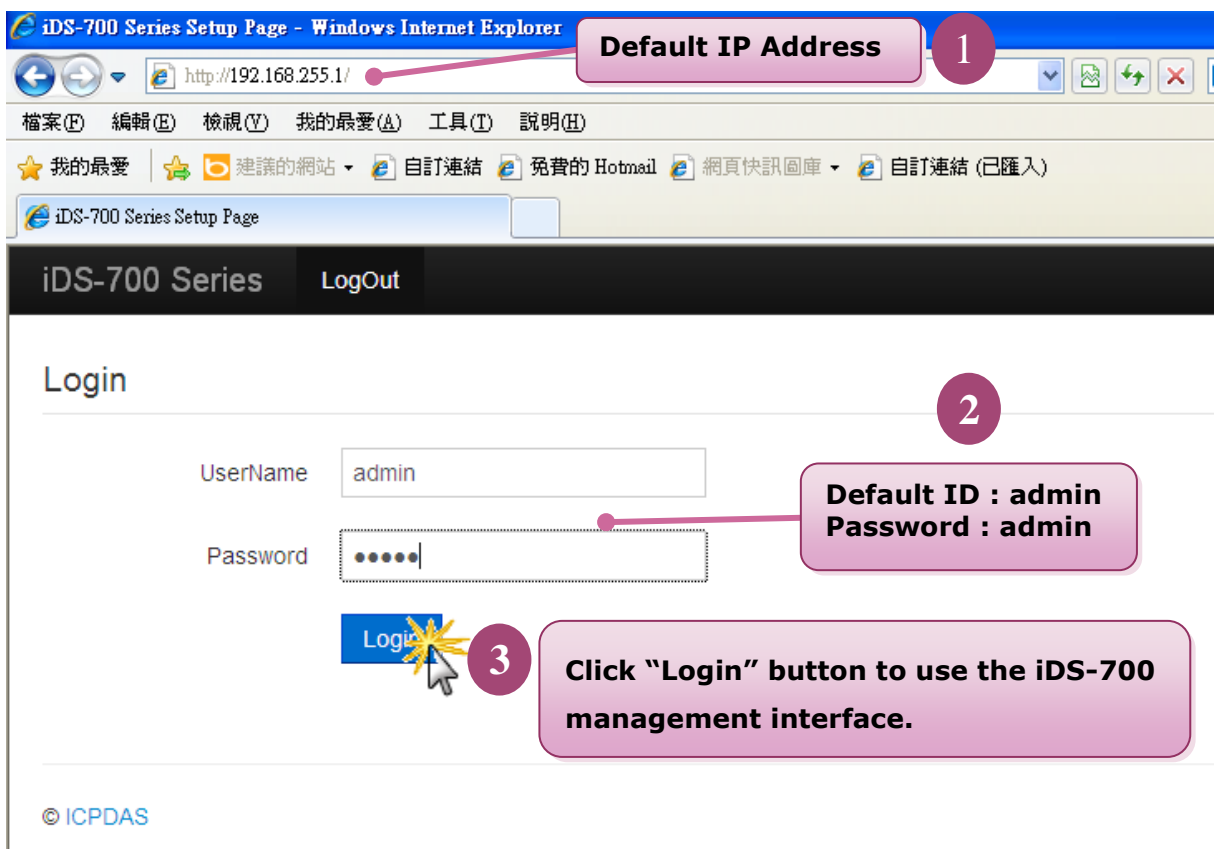
NetMask : 255.255.255.0

Gateway : 192.168.255.254

Protocol : icpdas protocol

### 2.4.2 Setting IP Address

Using web browser (IE or Chrome) and typing the default IP (192.168.255.1) to connect to the iDS devices to set IP address(DHCP or Static). Please refer to the Fig 2-4、2-5:



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

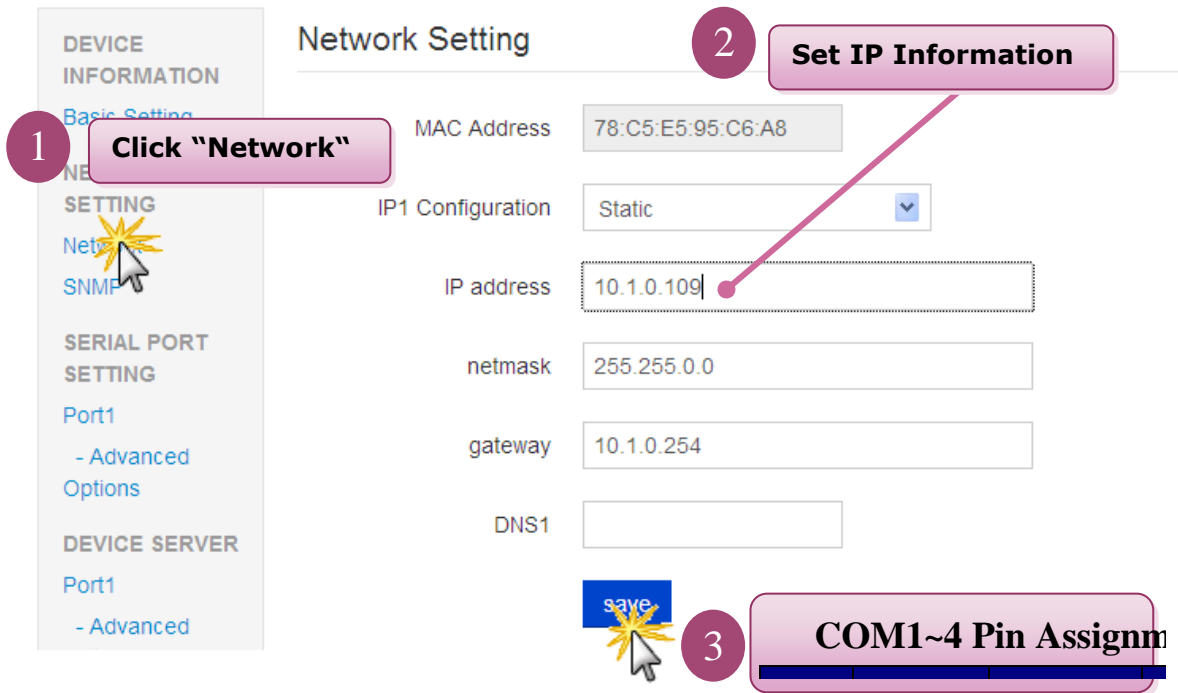
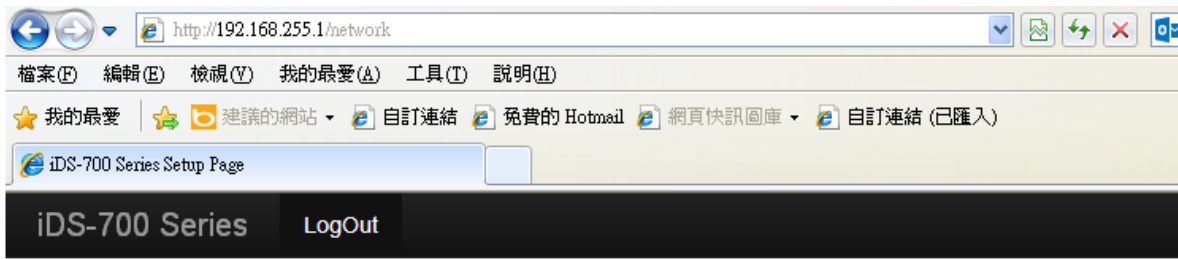


Fig 2-6 Network



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

# 3. Web Management Interface

## 3.1 Web Browser

User can use the web browser(IE 8 or later version 、 Chrome) to operate the iDS-700 series web management interface. User can input the IP address to connect to the “login” interface of iDS-700 device. Please refer to the Fig 3-1:

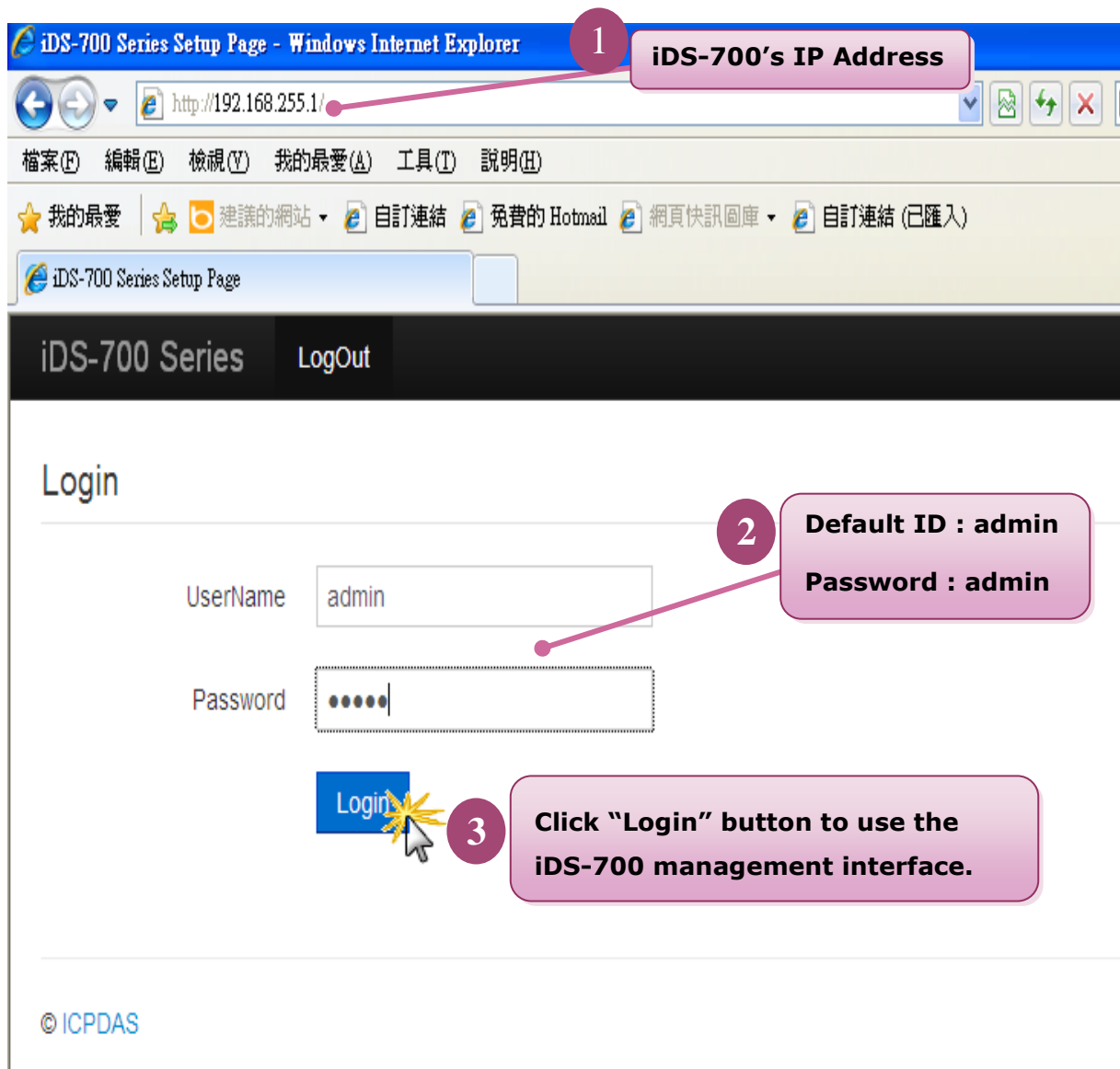


Fig 3-1 Login



Web Site: <http://www.icpdas.com.tw>

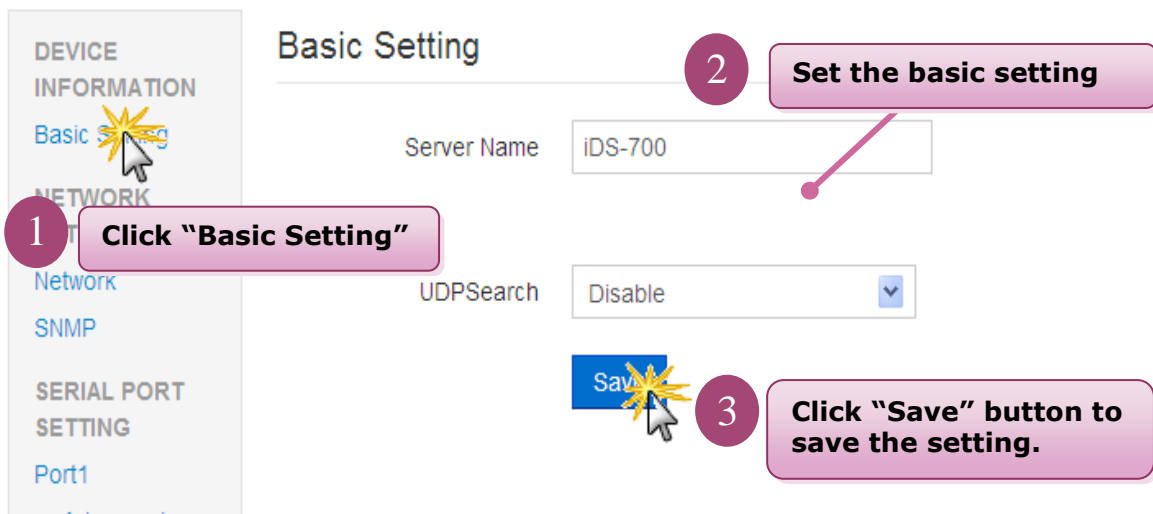
Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

## 3.2 Initialize Setting

### 3.2.1 Basic Setting

Clicking the "Basic Setting" to set the iDS's hostname or enable/disable the function "UDP search"(the system default don't enable). Please refer to the Fig 3-2:



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.



## 3.2.2 Network Setting

Clicking the "Network" to set the IP address. Please refer to the Fig 3-3:

The screenshot shows a web browser window with the URL <http://192.168.255.1/network>. The browser's address bar and menu bar are visible. The page content includes a navigation bar with "iDS-700 Series" and "LogOut". The main content area is titled "Network Setting" and contains the following configuration options:

- MAC Address: 78:C5:E5:95:C6:A8
- IP Configuration: Static
- IP address: 10.1.0.109
- netmask: 255.255.0.0
- gateway: 10.1.0.254
- DNS1: (empty field)

At the bottom of the configuration area, there is a "save" button. The left sidebar contains the following menu items:

- DEVICE INFORMATION
- Basic Setting
- Network (highlighted with a mouse cursor)
- SNMP
- SERIAL PORT SETTING
- Port1
- Advanced Options
- DEVICE SERVER
- Port1
- Advanced

Three numbered callouts are present:

1. Click "Network"
2. Set IP Information
3. Click "Save" button to save the setting.

Fig 3-3 Network



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

### 3.2.3 SNMP

Clicking the "SNMP" to set the SNMP Agent. Please refer to the Fig 3-4:

iDS-700 Series    LogOut

**1** Click "SNMP"

#### SNMP Configuration

**2** Set SNMP Configuration

##### Agent

Read Community Name: private

Write Community Name: public

Contact: Administrator &lt;postmaster@example.com>

Location: Right here, right now.

##### SNMP V3 read only user

UserName: icpdasr

Authentication Password: 123456789

Authentication Protocol: SHA

Privacy Password: 123456789

Privacy Protocol: AES

##### SNMP V3 read/rwrite only user

UserName: icpdasw

Authentication Password: 123456789

Authentication Protocol: SHA

Privacy Password: 123456789

Privacy Protocol: AES

**3** Click "Save" button to save the setting.

Fig 3-4 SNMP



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright @ 2016 by ICP DAS Co., Ltd. All Rights Reserved.

## 3.2.4 Account/Password Table

Clicking the "Account/Password Table" to set the account information. Please refer to the Fig 3-5:

The screenshot displays the web interface for the iDS-700 Series. At the top, there is a header with "iDS-700 Series" and "LogOut". The left sidebar contains a menu with categories: "DEVICE INFORMATION" (Basic Setting, Network, SNMP), "SERIAL PORT SETTING" (Port1 - Advanced Options), "DEVICE SERVER" (Port1 - Advanced Options), and "ACCESS CONTROL" (Account/Password Table). The "Account/Password Table" option is highlighted with a yellow starburst and a mouse cursor, with callout 1 pointing to it. The main content area is titled "Password" and contains three input fields: "UserName" (containing "admin"), "Password" (with five dots), and "Confirm Password" (with five dots). A "Save" button is located below the fields, with callout 3 pointing to it. Callout 2 points to the "Set account information" text in a pink box above the form fields.

Fig 3-5 Account/Password Table



### 3.2.5 Accessible IP Table

Clicking the "Accessible IP Table" to enable/disable the rules of IP filter. Please refer to the Fig 3-6:

The screenshot shows the iDS-700 Series Setup Page. The main content area is titled "Accessible IP Table" and contains a table with the following data:

No.	IP	Netmask	Status	Action
1			Disable	Edit
2			Disable	Edit
3			Disable	Edit
4				
5				
6				
7				
8				
9				
10				

The "IP Filter" dialog box is open, showing the "Status" dropdown menu with "Enable" and "Disable" options. The "Save" and "Cancel" buttons are also visible.

Annotations in the image:

- 1 Click "Accessible IP Table"
- 2 Click "Edit"
- 3 Enable/Disable IP filter
- 4 Save or Cancel the rules

Fig 3-6 Accessible IP Table



### 3.2.6 Monitor

Clicking the "Line/Async/Async Setting" to get the COM's information. Please refer to the Fig 3-7、Fig 3-8:



Fig 3-7 Async

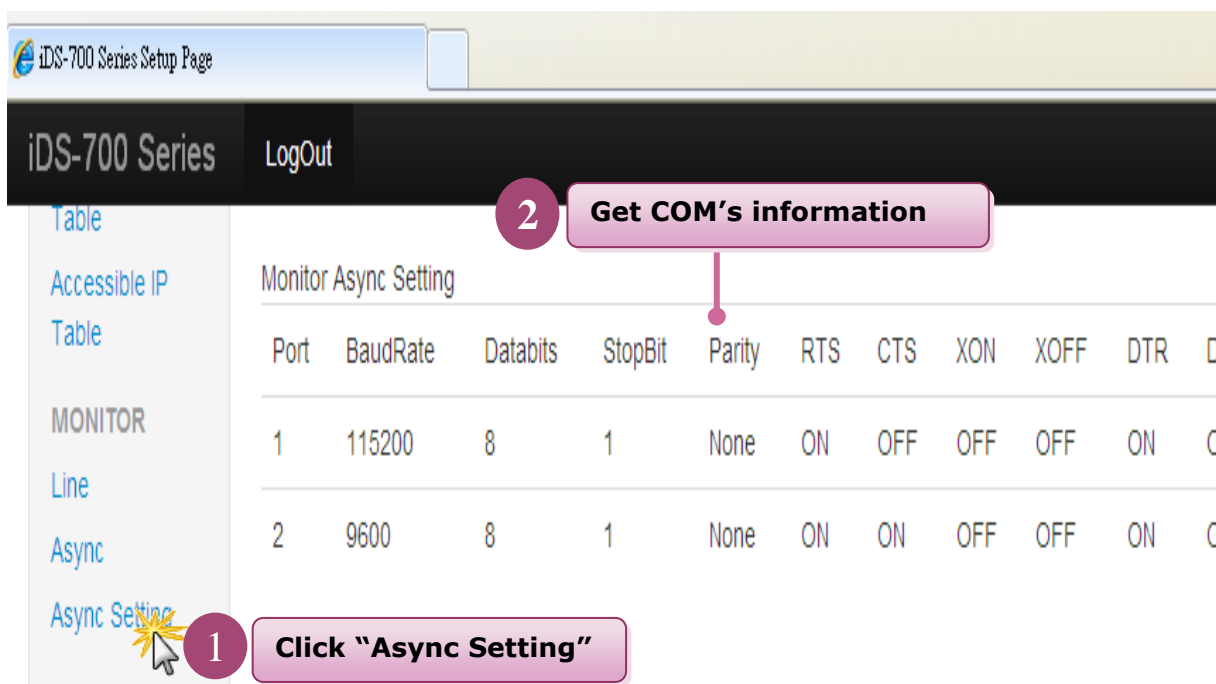


Fig 3-8 Async Setting



### 3.2.7 Event Notification

Clicking the "Events" and "Email/SNMP Trap" to set the function of events notification and inform the system administrator. Please refer to the Fig 3-9、Fig 3-10:

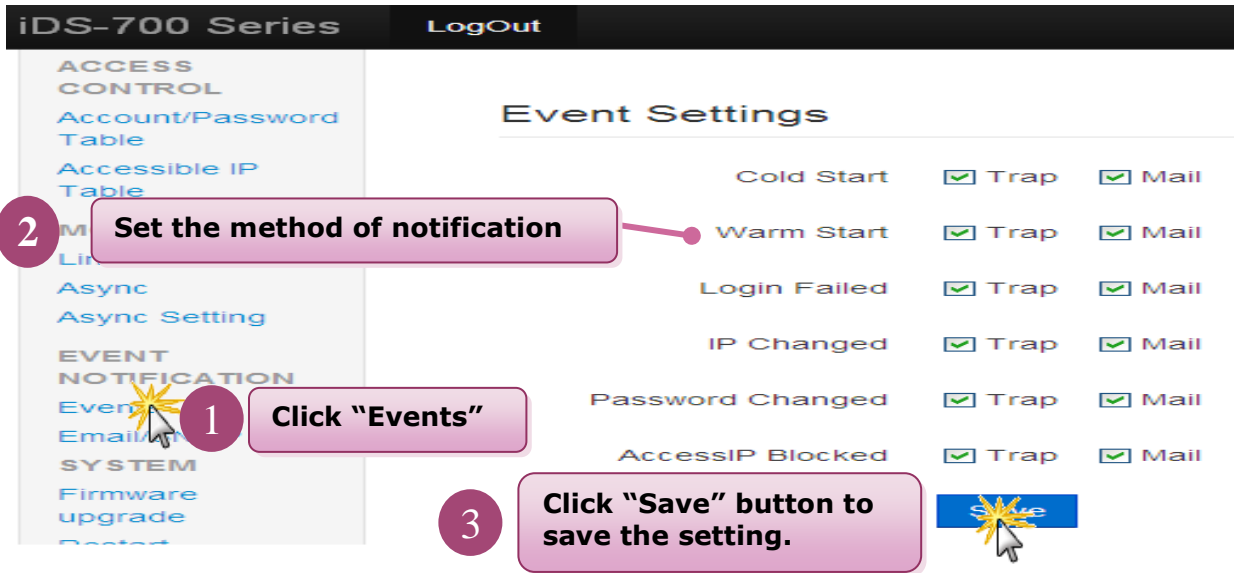


Fig 3-9 Events

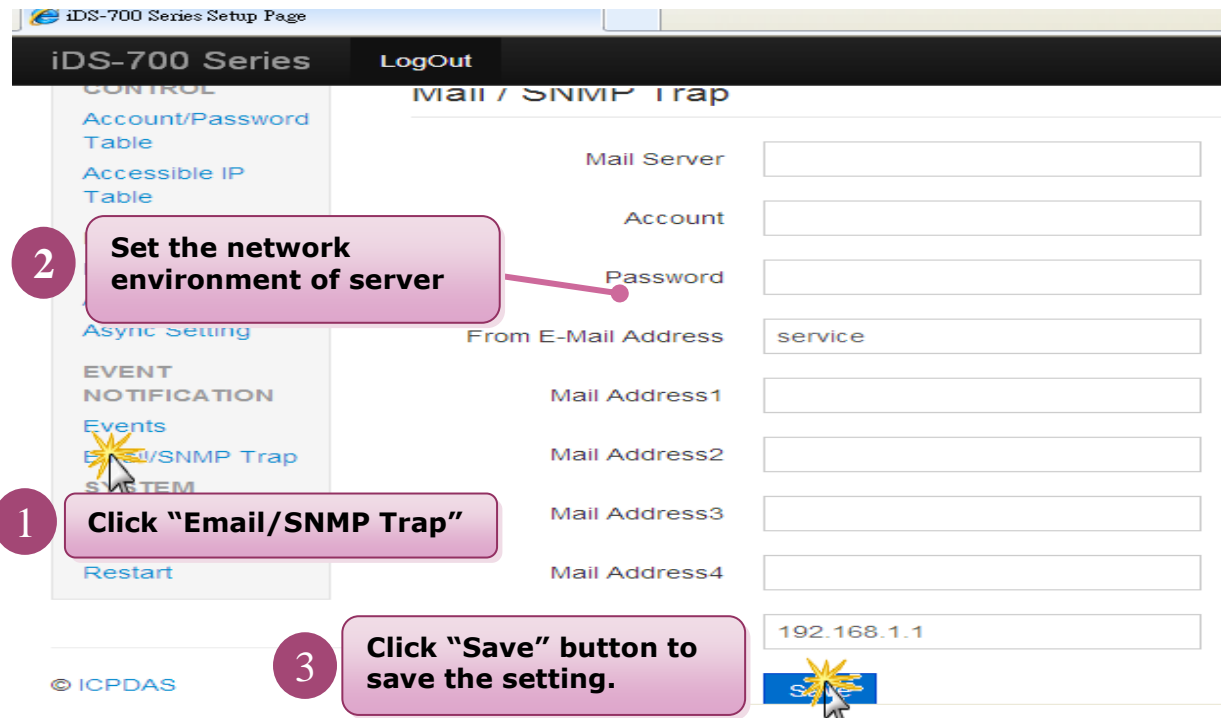


Fig 3-10 Email/SNMP Trap



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

## 3.2.8 Firmware Upgrade

Clicking the "Firmware upgrade" to update the iDS's firmware. Please refer to the Fig 3-11:

The screenshot shows the web interface for the iDS-700 Series. The top navigation bar includes "iDS-700 Series" and "LogOut". A left sidebar menu lists various system functions under categories: ACCESS CONTROL, MONITOR, EVENT NOTIFICATION, and SYSTEM. The "Firmware upgrade" option in the SYSTEM section is highlighted with a yellow starburst and a callout box labeled "1". The main content area is titled "Firmware Upgrade" and features a text input field labeled "Firmware" with a file upload icon to its right, also highlighted with a yellow starburst and a callout box labeled "2". Below the input field is a blue "Upload" button, which is highlighted with a yellow starburst and a callout box labeled "3".

Fig 3-11 Firmware upgrade



### 3.2.9 Restart

Clicking the "Restart" to reboot the iDS-700 module. Please refer to the Fig 3-12:

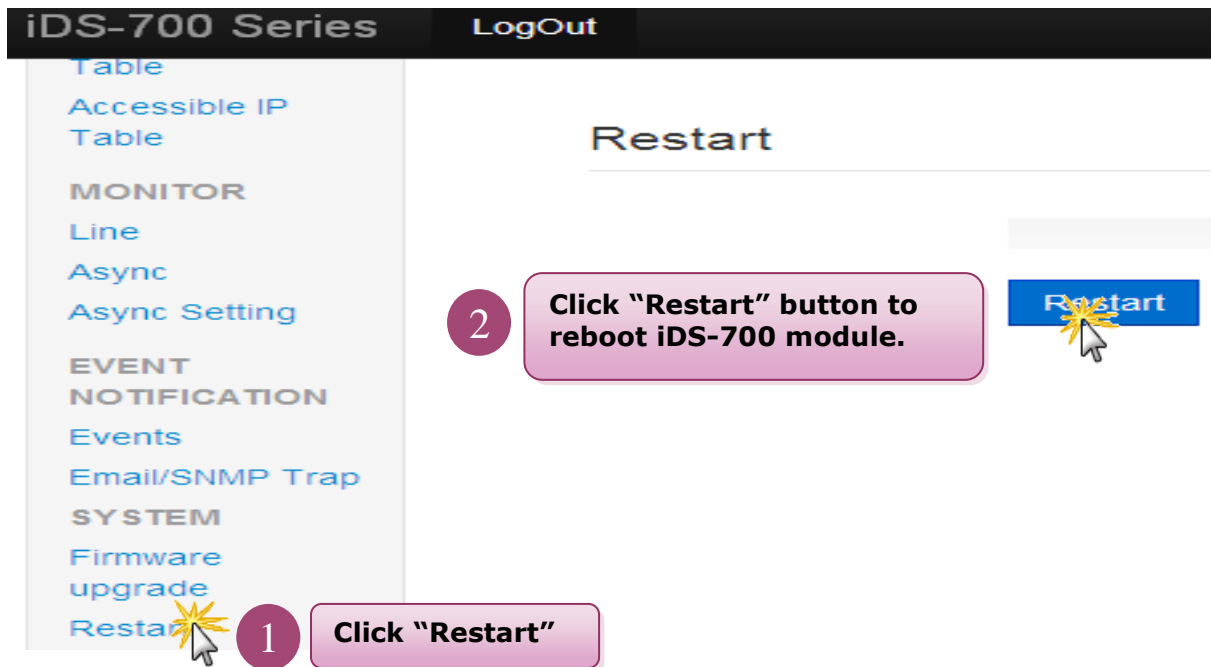


Fig 3-12 Restart





# 4. Serial Port Operation Modes

## 4.1 Serial Port Basic Setting

Clicking the SERIAL PORT SETTING "Port1" to set the serial port's basic configuration or click the SERIAL PORT SETTING "Advanced Options" to set the serial port's modem control and command setting. Please refer to the Fig 4-1 · Fig 4-2:

The screenshot displays the web interface for the iDS-700 Series. At the top, there is a header with "iDS-700 Series" and "LogOut". The left sidebar contains several menu categories: "DEVICE INFORMATION" (Basic Setting), "NETWORK SETTING" (Network), "SERIAL PORT SETTING" (Port1, - Advanced Options, Port2, - Advanced Options), and "DEVICE SERVER" (Port1, - Advanced Options, Port2). The main content area is titled "Serial Port" and shows "Com Port 1" selected. Below this, there are three sections: "Port Configuration" with a "Set Port's Configuration" button, "Communication Parameters" with fields for Alias (Port1), Physical Interface (RS232), Flow Control (NONE), Baudrate (115200), DataBit (8), Parity (None), and StopBit (1). Three numbered callouts are present: 1. A callout pointing to "Port1" in the SERIAL PORT SETTING menu. 2. A callout pointing to the "Set Port's Configuration" button. 3. A callout pointing to the "Save" button at the bottom right.

Fig 4-1 Port1



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

**DEVICE INFORMATION**  
Basic Setting

**NETWORK SETTING**  
Network  
SNMP

**SERIAL PORT SETTING**  
Port1  
- Advanced Options

**DEVICE SERVER**  
Port1  
- Advanced Options

## Advanced Options

Com Port 1

**2** Set Port's Advanced Options

### Modem Control

RTS Control

DTR Control

### Command Sets

Communication Parameters

Flush Data

**3** Click "Save" button to save the setting.

Save

Fig 4-2 Port1's Advanced Option

## 4.2 Virtual COM

### 4.2.1 Installing Virtual COM Utility

Please install VxComm Utility(v 2.12.07 or later version), the software can download from below web link: [http://ftp.icpdas.com/pub/cd/8000cd/napdos/driver/vxcomm\\_driver/](http://ftp.icpdas.com/pub/cd/8000cd/napdos/driver/vxcomm_driver/)

### 4.2.2 Network Setting

Please refer to chapter "3.2.2" to set network environment of iDS-700 modules.

### 4.2.3 Configuring Virtual COM Ports

Please refer to below steps to set and use the virtual COM ports.

1. Double click the **VxComm Utility** shortcut on the desktop.
2. Click the **"Add Server[s]"** button to connect to the iDS-700, then user assign a COM Port number and click **"OK"** to save your settings, please refer to Fig 4-3.

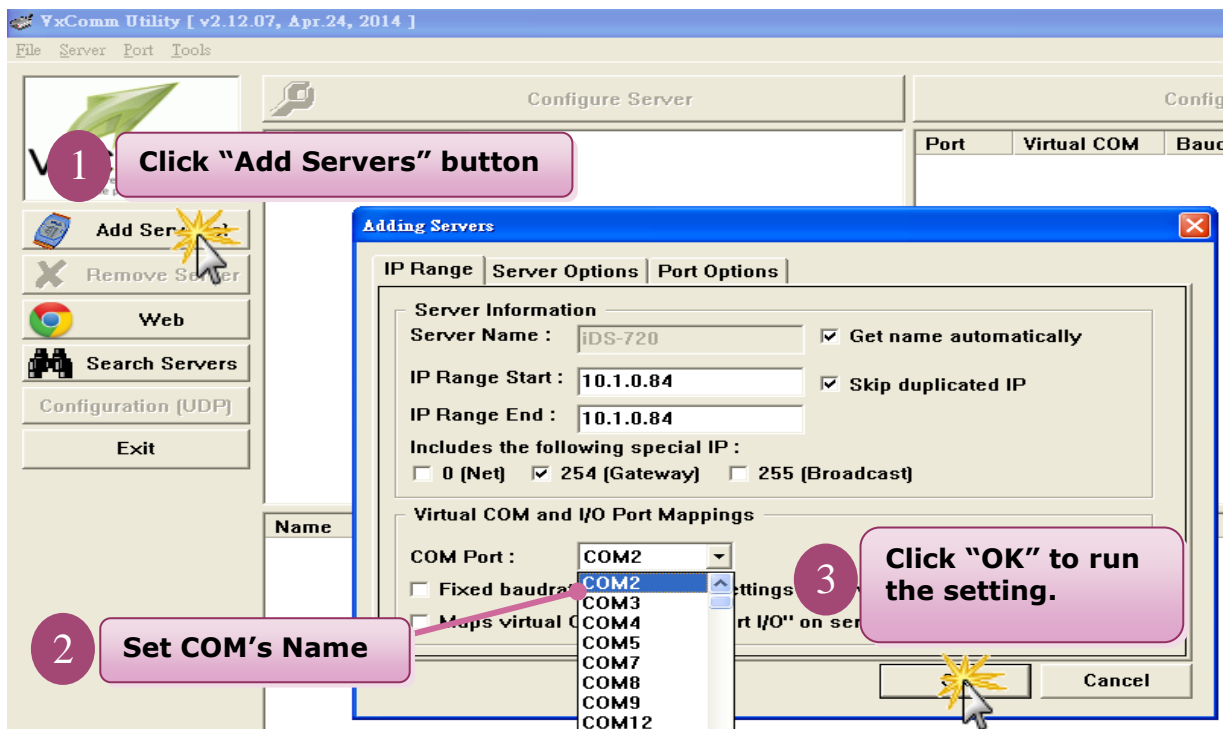
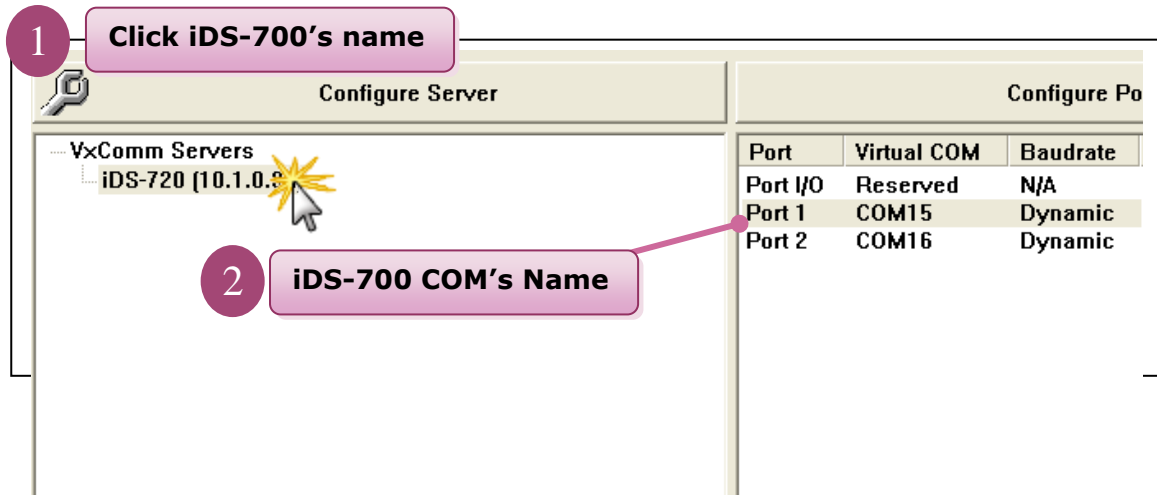


Fig 4-3



3. Click on **iDS-700's name** and check the virtual COM port mappings on the PC, please refer to Fig 4-4.



4. Click "**Tools**" >> "**Restart Driver**", and then click the "**Restart Driver**" button, , please refer to Fig 4-5.

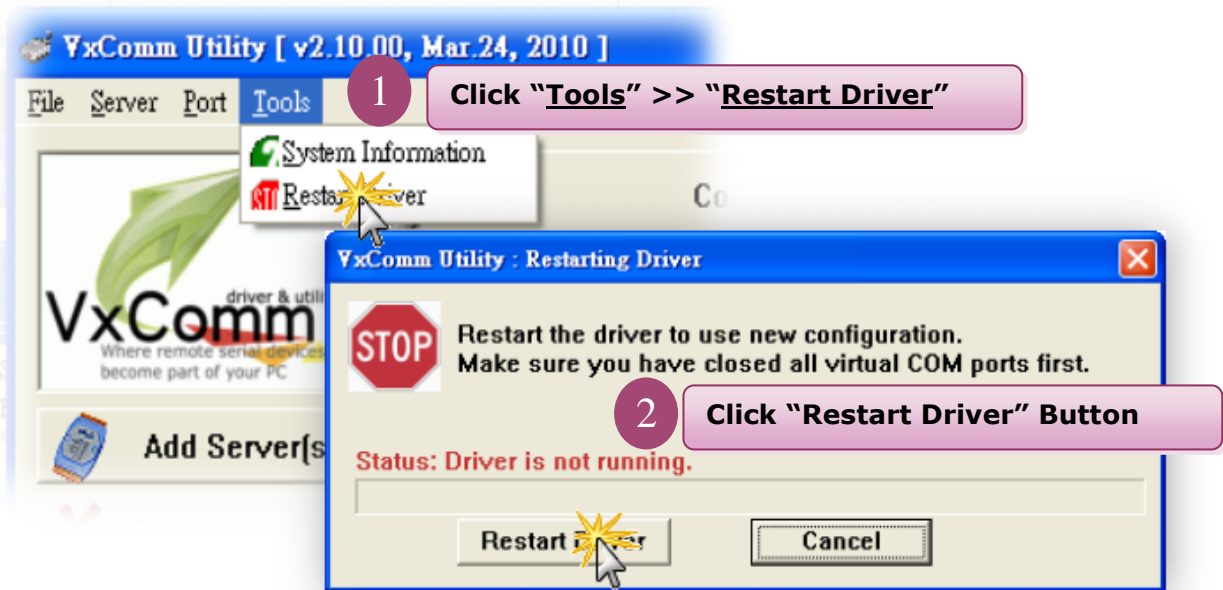


Fig 4-5

## 4.3 Socket Modes

### 4.3.1 TCP Server

To click **"DEVICE SERVER" >> "Port1"** to choose **"TCP Server"** mode, please refer to Fig 4-6. **After user had saved the setting, user must reboot iDS modules(please refer to the chapter "3.2.9 restart")**.

The screenshot displays the 'Operation mode setting' page for 'Com Port 1' in the iDS-700 Series web interface. The left sidebar contains navigation menus for 'DEVICE INFORMATION', 'NETWORK SETTING', 'SERIAL PORT SETTING', and 'DEVICE SERVER'. The main content area is titled 'Operation mode setting' and includes a 'Com Port 1' header. Under 'Applications', the 'Protocol' is set to 'TCP Server'. Under 'Server Options', the 'Session' is set to 'Multi-Session' and the 'Data Port' is '10001'. Under 'Multi-Session', there is an unchecked checkbox for 'Time Division Multi-Session' and a 'Reply Mode' dropdown set to 'Broadcast To ALL'. A 'Save' button is located at the bottom right. Four numbered callouts provide instructions: 1. Click 'Port1' in the sidebar. 2. Choose 'TCP Server' in the Protocol dropdown. 3. Set 'Server Options' (Multi-Session and Data Port). 4. Click the 'Save' button to save the setting.

Fig 4-6 TCP Server Mode



## 4.3.2 TCP Client

To click **"DEVICE SERVER" >> "Port1"** to choose **"TCP Client"** mode, please refer to Fig 4-7. **After user had saved the setting, user must reboot iDS modules(please refer to the chapter "3.2.9 restart")**.

The screenshot shows the configuration page for 'Com Port 1' in the 'iDS-700 Series' web interface. The sidebar on the left contains the following menu items: Basic Setting, NETWORK SETTING, Network, SNMP, SERIAL PORT SETTING, Port1, - Advanced Options, Port2, - Advanced Options, and DEVICE SERVER. Under 'DEVICE SERVER', 'Port1' is highlighted with a yellow starburst icon and a callout box labeled '1 Click "Port1"'. The main configuration area is titled 'Com Port 1' and includes the following sections: Applications (Protocol: TCP Client, callout '2 Choose "TCP Server"'), Client Options (Data Port: 15000, callout '3 Set iDS's port number'), Multi-Session (Time Division Multi-Session checkbox), and four session configurations (Session1 to Session4). Session1 is configured with IP 10.1.0.67, Data Port 18000, and Local Port 15000, with callouts '4 Set remote server's IP and port number' and '5 Set iDS's port number'. Sessions 2, 3, and 4 have Data Port 0 and Local Port 0. At the bottom, a 'Save' button is highlighted with a yellow starburst icon and a callout box labeled '6 Click "Save" button to save the setting.'

Fig 4-7 TCP Client Mode



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright @ 2016 by ICP DAS Co., Ltd. All Rights Reserved.

### 4.3.3 UDP

To click "DEVICE SERVER" >> "Port1" to choose "UDP" mode, please refer to Fig 4-8. After user had saved the setting, user must reboot iDS modules (please refer to the chapter "3.2.9 restart").

The screenshot displays the configuration page for 'Com Port 1' on an iDS-700 Series device. The interface is annotated with six numbered callouts:

- 1 Click "Port1"**: Points to the 'Port1' link in the left sidebar under the 'DEVICE SERVER' section.
- 2 Choose "UDP"**: Points to the 'Protocol' dropdown menu, which is set to 'UDP'.
- 3 Set iDS's port number**: Points to the 'Local Port' input field, which contains the value '11000'.
- 4 Set remote host's IP and port number**: Points to the 'Remote Address' and 'Data Port' fields for 'Session1', with values '10.1.0.67' and '18000' respectively.
- 5 Set iDS's port number**: Points to the 'Local Port' input field for 'Session2', which contains the value '11000'.
- 6 Click "Save" button to save the setting.**: Points to the 'Save' button at the bottom of the configuration area.

Fig 4-8 UDP Mode



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.

## 4.4 Pair Connection

### 4.4.1 Pair Connection Server

To click **"DEVICE SERVER" >> "Port1"** to choose **"Pair Connection"** mode, please refer to Fig 4-9. **After user had saved the setting, user must reboot iDS modules(please refer to the chapter "3.2.9 restart")**.

The screenshot displays the 'iDS-700 Series' web interface. The top navigation bar shows 'iDS-700 Series' and 'LogOut'. The left sidebar contains the following menu items: 'DEVICE INFORMATION' (Basic Setting), 'NETWORK SETTING' (Network, SNMP), 'SERIAL PORT SETTING' (Port1, - Advanced Options, Port2, - Advanced Options), and 'DEVICE SERVER' (Port1, - Advanced Options). The main content area is titled 'Operation mode setting' and shows 'Com Port 1' configuration. Five numbered callouts indicate the steps: 1. Click 'Port1' in the left sidebar. 2. Choose 'Pair Connection' in the 'Applications' dropdown menu. 3. Choose 'Server' in the 'Options' dropdown menu. 4. Set 'Local Port' to 15000. 5. Click the 'Save' button.

Fig 4-9 Pair Connection Server





## 4.4.2 Pair Connection Client

To click **"DEVICE SERVER" >> "Port1"** to choose **"Pair Connection"** mode, please refer to Fig 4-10. **After user had saved the setting, user must reboot iDS modules (please refer to the chapter "3.2.9 restart")**.

iDS-700 Series    LogOut

DEVICES INFORMATION  
Basic Setting

NETWORK SETTING  
Network  
SNMP

SERIAL PORT SETTING  
Port1  
- Advanced Options  
Port2  
- Advanced Options

DEVICE SERVER

Operation mode setting

Com Port 1

Applications

Protocol: Pair Connection

Options

Role: Client

Pair Connect Client

Remote Address: 10.1.0.67    Data Port: 15000    Local Port: 11000

Save

- 1 Click "Port1"
- 2 Choose "Pair Connection"
- 3 Choose "Client"
- 4 Set Pair Connection server's IP and port number
- 5 Set Pair Connection client's port number
- 6 Click "Save" button to save the setting.

Fig 4-10 Pair Connection Client

## 4.5 RFC2217

To click "DEVICE SERVER" >> "Port1" to choose "RFC-2217" mode, please refer to Fig 4-10. After user had saved the setting, user must reboot iDS modules (please refer to the chapter "3.2.9 restart").

iDS-700 Series    LogOut

DEVICES INFORMATION

Basic Setting

NETWORK SETTING

Network

SNMP

SERIAL PORT SETTING

Port1

- Advanced Options

Port2

- Advanced Options

DEVICE SERVER

Port1

Advanced Options

Operation mode setting

Com Port 1

Applications

Protocol    RFC-2217

Options

Local Port    11000

1    Click "Port1"

2    Choose "RFC-2217"

3    Set iDS's port number

4    Click "Save" button to save the setting.

Fig 4-10

## 4.6 Ethernet Modem

To click "DEVICE SERVER" >> "Port1" to choose "Ethernet Modem" mode, please refer to Fig 4-11. After user had saved the setting, user must reboot iDS modules (please refer to the chapter "3.2.9 restart").

iDS-700 Series    LogOut

DEVICES INFORMATION

Basic Setting

NETWORK SETTING

Network

SNMP

SERIAL PORT SETTING

Port1

- Advanced Options

Port2

- Advanced Options

DEVICE SERVER

Port1

- Advanced Options

Operation mode setting

Com Port 1

Applications

2 Choose "Ethernet Modem"

Protocol Ethernet Modem

Options

3 Set iDS's Dial-in port number

Dial-in 15000

4 Set iDS's Dial-Out port number

Dial-out 11000

5 Click "Save" button to save the setting.

1 Click "Port1"

Fig 4-11 Ethernet Modem



Web Site: <http://www.icpdas.com.tw>

Contact Us (E-mail): [Service@icpdas.com](mailto:Service@icpdas.com), [service.icpdas@gmail.com](mailto:service.icpdas@gmail.com)

Copyright © 2016 by ICP DAS Co., Ltd. All Rights Reserved.