

**Industrial 1-/2-/4-port RS232/422/485
Serial Device Server Series**

**ICS-2100T/ICS-2105AT/ICS-2102T/
ICS-2102TS/ICS-2200T/ICS-2400T**

Quick Installation Guide

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1. Package Contents

Thank you for purchasing PLANET Industrial Serial Device Servers. The table below shows the models with the number of serial ports:

Model Name	Serial Port	Ethernet Port	Power Input	DI/DO
ICS-2100T	1 x DB9 + 1 x 4-pin terminal block	1 x 10/100TX RJ45	DC 9~48V or AC 24V	-
ICS-2105AT		1 x 100FX SFP		-
ICS-2102T		1 x 100FX SC, MM/2km		-
ICS-2102TS		1 x 100FX SC, SM/30km		-
ICS-2200T	2 x DB9	2 x 10/100TX RJ45	DC 12~48V	-
ICS-2400T	4 x DB9			■

“Industrial Serial Server” is used as an alternative name in this Quick Installation Guide.

Open the box of the Industrial Serial Server and carefully unpack it. The box should contain the following items:

The Industrial Serial Server x 1	Quick Installation Guide x 1	
		
Wall Mounting Kit x 1	Dust Cap (RJ45/SFP)	DIN-rail Bracket w/Screws x 1
		

If any item is found missing or damaged, please contact your local reseller for replacement.

2. Requirements

The Industrial Serial Server provides remote login interface for management purposes. The following equipment is necessary for further management:

■ **Workstations** running Windows XP/2003/Vista/7/8/2008/10, MAC OS X or later, Linux, UNIX, or other platforms are compatible with TCP/IP Protocols.

■ Ethernet Port Connection

- Workstations are installed with Ethernet NIC (Network Interface Card)
- Network cables
 - Use standard network (UTP) cables with RJ45
 - Use multi-mode or single-mode fiber patch cord with SC connector (ICS-2102T/ICS-2102TS only)
 - Use multi-mode or single-mode fiber patch cord with LC connector and 100BASE-FX SFP transceiver (ICS-2105AT only).
- The above PC is installed with Web browser.



Note

It is recommended to use Internet Explorer 8.0 or above to access the Industrial Serial Server.




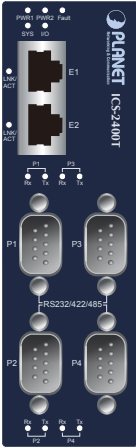




Note

If the Web interface of the Industrial Serial Server is not accessible, please turn off the anti-virus software or firewall and then try it again.

3. Hardware Introduction

3.1 Front Panels

ICS-2100T	ICS-2105AT	ICS-2200T
 <p>The front panel of the ICS-2100T features a dark blue background with the PLANET logo at the top. It includes a power section with 'PW01', 'PW02', and 'Fault' indicators, a 'Reset' button, and a 'LINK ACT' indicator. A 10/100TX RJ45 port is highlighted with a yellow box. Below the port is an RS232 port. At the bottom, there are four RJ45 ports labeled 'Tx0+', 'Tx0-', 'Rx0+', and 'Rx0-' with an RS422/485 label.</p>	 <p>The front panel of the ICS-2105AT is similar to the ICS-2100T but features a 100FX SFP (Small Form-factor Pluggable) port instead of a standard RJ45 port, which is highlighted with a yellow box. It also includes the power section, reset button, and RS232 port. The bottom RJ45 ports and RS422/485 label are present.</p>	 <p>The front panel of the ICS-2200T has a dark blue background with the PLANET logo. It includes a power section, a 'Reset' button, and a 'LINK ACT' indicator. It features two RJ45 ports labeled 'E1' and 'E2', both highlighted with yellow boxes. Below these are two RS232 ports labeled 'P1' and 'P2', and an RS232/422/485 port. At the bottom, there are four RJ45 ports labeled 'Tx0+', 'Tx0-', 'Rx0+', and 'Rx0-' with an RS422/485 label.</p>
ICS-2400T	ICS-2102T	ICS-2102TS
 <p>The front panel of the ICS-2400T features a dark blue background with the PLANET logo. It includes a power section, a 'Reset' button, and a 'LINK ACT' indicator. It has two RJ45 ports labeled 'E1' and 'E2', both highlighted with yellow boxes. Below these are four RS232 ports labeled 'P1', 'P3', 'P2', and 'P4'. At the bottom, there are four RJ45 ports labeled 'Tx0+', 'Tx0-', 'Rx0+', and 'Rx0-' with an RS422/485 label.</p>	 <p>The front panel of the ICS-2102T has a dark blue background with the PLANET logo. It includes a power section, a 'Reset' button, and a 'LINK ACT' indicator. It features a 100 FX SFP port and a 'Multi-mode' port, both highlighted with yellow boxes. Below these is an RS232 port. At the bottom, there are four RJ45 ports labeled 'Tx0+', 'Tx0-', 'Rx0+', and 'Rx0-' with an RS422/485 label.</p>	 <p>The front panel of the ICS-2102TS is similar to the ICS-2102T but features a 'Single Mode' port instead of a 'Multi-mode' port, which is highlighted with a yellow box. It also includes the power section, reset button, RS232 port, and bottom RJ45 ports with RS422/485 label.</p>

3.2 Wiring the Power Inputs

The upper panel of the Industrial Serial Server indicates a DC inlet power socket and consists of one terminal block connector within 6 contacts. Please follow the steps below to insert the power wire.

1. Insert positive/negative DC power wires into **Contacts 1 and 2** for **Power 1**, or **Contacts 5 and 6** for **Power 2**. Figures 3-1 to 3-3 show PWR1 and PWR2 of the Industrial Serial Server.

■ ICS-2100T/2105AT/2102T/2102TS: 9~48V DC or 24V AC

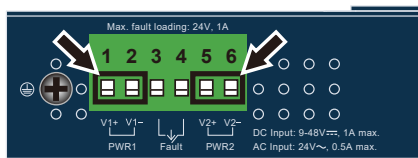


Figure 3-1: ICS-2100T/ 2105AT/ 2102T/ 2102TS Upper Panel

■ ICS-2200T: 12~48V DC

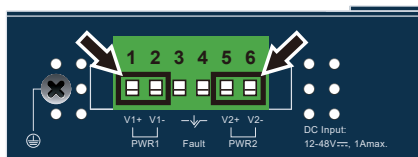


Figure 3-2: ICS-2200T Upper Panel

■ ICS-2400T: 12~48V DC

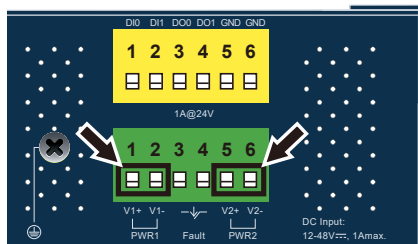


Figure 3-3: ICS-2400T Upper Panel

2. Tighten the wire-clamp screws for preventing the wires from loosening.

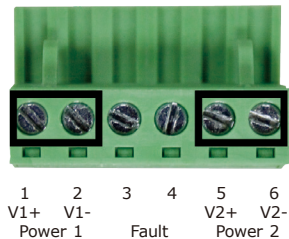


Figure 3-4: PWR1 & PWR2 Pins of Terminal Block



Note

The wire gauge for the terminal block should be in the range from 12 to 24 AWG.




Don't pull out the plug while in operation.

3.3 Serial Port PIN Assignment

Male DB9	Pin	RS232	RS422 RS485-4W	RS485-2W
	1	DCD	TxD+	--
	2	RxD	TxD-	--
	3	TxD	RxD-	Data-
	4	DTR	RxD+	Data+
	5	GND	GND	GND
	6	DSR	--	--
	7	RTS	--	--
	8	CTS	--	--
	9	--	--	--

3.4 4-pin Terminal Block PIN Assignment

Terminal Block	Pin	RS422 RS485-4W	RS485-2W
	1	TxD+ (A)	--
	2	TxD- (B)	--
	3	RxD- (B)	Data- (B)
	4	RxD+ (A)	Data+ (A)

4. Web Login

4.1 Starting Web Management

The following shows how to start up the **Web Management** of the Industrial Serial Server. Note the Industrial Serial Server is configured through an Ethernet connection. Please make sure the manager PC must be set to the same **IP subnet address**.

For example, the default IP address of the Industrial Serial Server is **192.168.0.100**, then the manager PC should be set to **192.168.0.x** (where x is a number between 1 and 254, except 100), and the default subnet mask is 255.255.255.0.

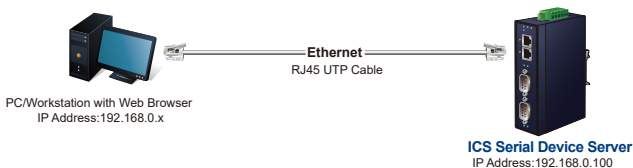


Figure 4-1: IP Management Diagram

4.2 Logging in to the Industrial Serial Server

1. Use Internet Explorer 8.0 or above for Web browser and enter IP address **<http://192.168.0.100>** (the factory-default IP address) to access the Web interface.
2. When the following dialog box appears, please enter the default user name "**admin**" and password "**admin**" (or the password you have changed before) as shown in Figure 4-2.

Default IP Address: **192.168.0.100**
Default User Name: **admin**
Default Password: **admin**

The login screen features the PLANET logo at the top left. Below it are two input fields: 'User Name' and 'Password'. A 'Login' button is positioned at the bottom center of the form.

Figure 4-2: Login Screen

3. After entering the password, the main screen appears as shown in Figure 4-3.

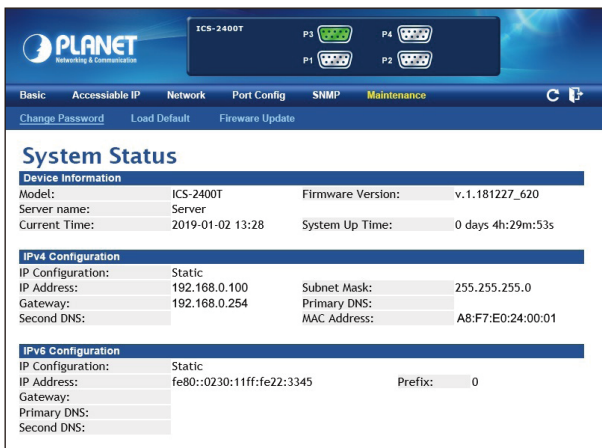
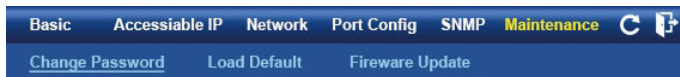



Figure 4-3: Web Main Screen of Industrial Serial Server

4. The Server Menu on the middle of the Web page lets you access all the functions and statuses the Industrial Serial Server provides.



Now, you can use the Web management interface to continue the Serial Server management. Please refer to the user manual for more.



Note

1. For security reason, **please change and memorize the new password after this first setup.**
2. Only accept command in lowercase letter under web interface.

5. Remote Telnet Login

5.1 Logging in to the Remote Command Line Interface

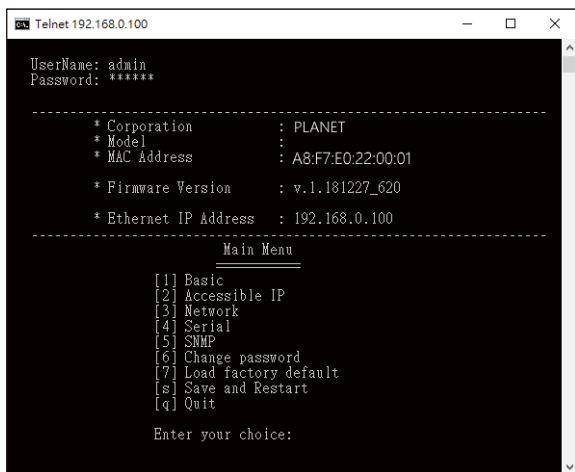
The Industrial Serial Server also supports Telnet for remote management. You can use Telnet to open a terminal session over one of the Ethernet ports. The Serial Server asks for user name and password for remote login when using Telnet; please use the following default IP address, username and password for the first-time login.

Default IP Address: **192.168.0.100**

Default Username: **admin**

Default Password: **admin**

You will be presented with a text menu displaying the Industrial Serial Server's general settings, which you will be able to view and modify. Please refer to User Manual for a description of the available settings.



```
Telnet 192.168.0.100
UserName: admin
Password: *****

-----
* Corporation      : PLANET
* Model           :
* MAC Address     : A8:F7:E0:22:00:01

* Firmware Version : v.1.181227_620

* Ethernet IP Address : 192.168.0.100
-----

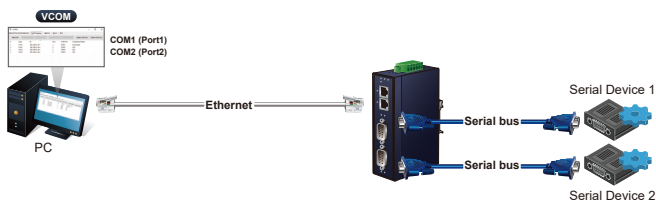
      Main Menu
      -----
      [1] Basic
      [2] Accessible IP
      [3] Network
      [4] Serial
      [5] SNMP
      [6] Change password
      [7] Load factory default
      [s] Save and Restart
      [q] Quit

      Enter your choice:
```

6. Getting Started with VCOM Utility

With Industrial Serial Server's **VCOM** administration utility, you can easily install and configure one or multiple ICS serial device servers over the network from a remote location. There are several functions to configure Industrial Serial Server:

- Searching device
- Creating virtual COM port
- Firmware upgrade
- Importing or exporting file



6.1 Installation of VCOM Utility

The ICS serial VCOM Utility can be downloaded from PLANET Web site. Please locate and run the setup program "**vspsetup.exe**" and follow the on-screen instructions.



Download link: <https://www.planet.com.tw/en/support/downloads?&met hod=keyword&keyword=ICS-2&view=6#list>

After installing, rebooting your workstation/PC is required.

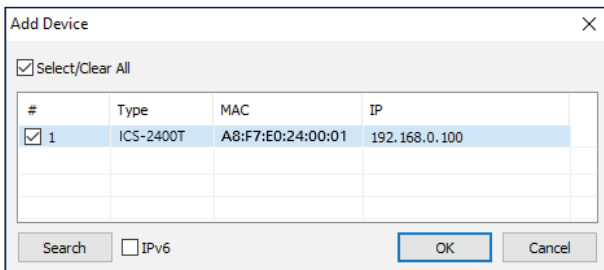


Note

If you have difficulty in downloading or executing VCOM Utility, turn off the firewall and anti-virus software first.

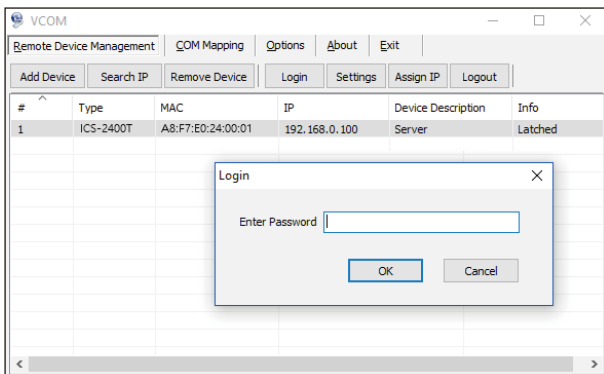
6.2 Searching Serial Device Server

First click **"Add Device"** and then click **"Search"** if Serial Server has access to network, as shown below.



6.3 Serial Server Login

The ICS Serial Server is password protected, so user can't modify any settings. The user must first log in the ICS serials if the password is correct; the status will become **"Logged in"**. On the contrary, if the password is incorrect, the status will pop up an error window.



6.4 Serial Server Setting

Click **"Settings"** to open the target Industrial Serial Server's configuration window.

The screenshot shows a 'Settings' dialog box with a close button (X) in the top right corner. The window displays the following information:

- Type: ICS-2400T
- MAC: A8:F7:E0:24:00:01
- Firmware Version: v.1.181227_620

Below this information are five tabs: Basic, Network, Serial, SNMP, and Change Password. The 'Basic' tab is selected. The configuration fields are as follows:

- Device Description: ICS-2400T
- Time Zone: UTC+08:00 (dropdown menu)
- Local Date: 1/27/2019 (calendar icon)
- Local Time: 2:29:01 PM (time picker)
- Time Server: time.stdtime.gov.tw

At the bottom, there are three checkboxes:

- Enable Web Console
- Enable Remote Console
- Enable Reset button protect

At the bottom right, there are two buttons: 'OK' (highlighted with a blue border) and 'Cancel'.

Parameters are grouped into tables. Click **"OK"** to implement changes.

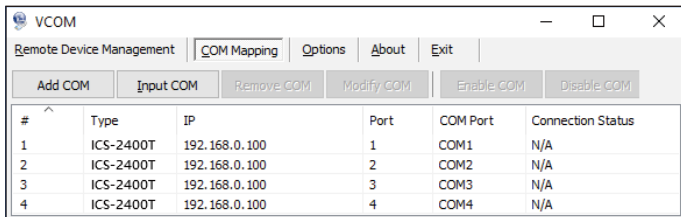
Please refer to user manual for a description of all functional properties for the Industrial Serial Server.

6.5 COM Port Mapping

With VCOM utility, COM port mapping is a way to define a physical interface in the device server by creating a virtual interface in the computer. VCOM utility supports Microsoft Windows XP, and other platforms.

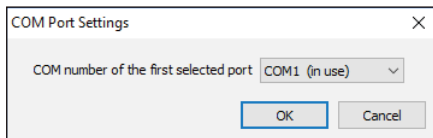
■ Adding COM

If your Serial Server has been found, select it in order to add it to the COM mapping list. Click **"OK"** to take effect.



■ COM Mapping Settings

Click **"Modify COM"** to configure Serial Server's serial COM port.



User can manually assign COM number to the ICS Serial Server. After that, user can click the **"OK"** button, and finally press the **"OK"** button to take effect.

7. Recovering Back to Default Configuration

■ IP Address has been changed or admin password has been forgotten -

To reset the IP address to the default IP address **“192.168.0.100”** or reset the login username and password to default value, press the hardware-based reset button on the bottom panel for about 5 seconds. After the device is rebooted, you can log in the management Web interface within the same subnet of 192.168.0.xx and default password. Be noted that all the previous setups will be disappeared after the factory default reset is made.

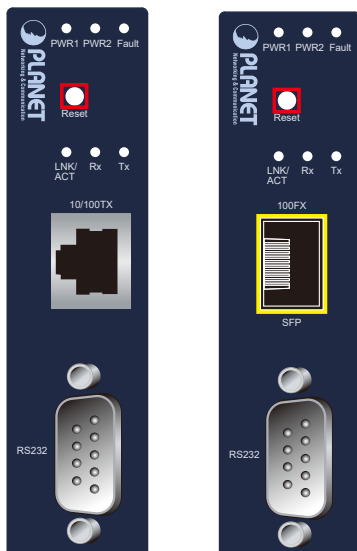


Figure7-1: ICS-2100T/ICS-2105AT Hardware-based Reset Button



Figure7-2: ICS-2102T/ICS-2102TS Hardware-based Reset Button

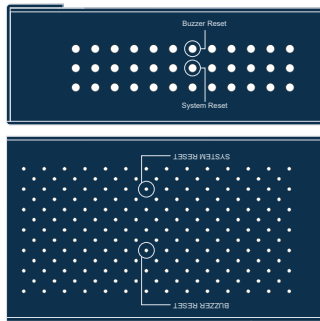


Figure7-3: ICS-2200T/ICS-2400T Hardware-based Reset Button

8. Customer Support

Thank you for purchasing PLANET products. You can browse our online FAQ resource on PLANET web site first to check if it could solve your issue. If you need more support information, please contact PLANET switch support team.

PLANET online FAQs:

<http://www.planet.com.tw/en/support/faq>

Switch support team mail address:

support@planet.com.tw

ICS-210x/220x series User's Manual:

<https://www.planet.com.tw/en/support/download.php?method=keyword&keyword=ICS&view=3&page=1#list>



(Please select your Industrial Serial Server model from the Product Model drop-down menu)

VCOM Utility:

<https://www.planet.com.tw/en/support/downloads?&method=keyword&keyword=ICS&view=6#list>



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