CR-IPS1

IP to Serial Controller with a Single I/O Port

OPERATION MANUAL

CYP ///

SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.

- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.

- Never spill liquid of any kind on or into this product.

- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.

- Do not attach the power supply cabling to building surfaces.

- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.

- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.

- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

- Please completely disconnect the power when the unit is not in use to avoid wasting electricity.

VERSION HISTORY

REV.	DATE	SUMMARY OF CHANGE
Ver 1.00	2024/12/10	Initial Release

CONTENTS

1. INTRODUCTION

The CR-IPS1 Control System Centre is for users to control a single Serial device of any variety. It supports one RS-232/422/485 port. Users can connect device and control it via a 3 (or 5)-pin adapter cable to send RS-232/422/485 commands from this unit. Comprehensive user control interfaces are available, including WebGUI, Telnet, and console (RS-232 in).

This unit can be powered either by a 12V/1.25A adapter or Power over Ethernet (PoE), allowing it to be powered directly from a standard PoE network switch without the need for an external power adapter, providing incredible installation flexibility.

The LEDs on the board provide status indicators for users to check: power and Ethernet status. It supports IEEE 802.1x RTS/CTS protocol to avoid hidden stations. The unit also provides a hotkey for convenient firmware updates.

2. APPLICATIONS
▰ Smart home control
▰ Product showroom
▰ Factory and building automation
▰ Meeting room control
▰ Security surveillance and control

3. PACKAGE CONTENTS
▰ 1× IP to RS232/422/485 Control Box
▰ 1× 12V/1.25A DC Power Adapter
▰ 1× 5-pin Terminal Block
▰ 1× Shockproof Feet (Set of 4)
▰ 1× Operation Manual

![CYP logo]

4. SYSTEM REQUIREMENTS

◢ Equipment which can be controlled via serial.

◢ An active network connection from a switch or router for control of serial device

5. FEATURES

◢ Supports one RS-232/422/485 port

◢ Support multiple user control interfaces including WebGUI, Telnet and RS-232/422/485

◢ Simple configuration of macros, triggers settings via the WebGUI

◢ Support IEEE 802.1x RTS/CTS protocol

◢ Support Power over Ethernet (PoE), providing incredible installation flexibility

◢ LED indicates the unit's status for confirmation

◢ Firmware can be easily updated in the field either via USB or using the hotkey

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel
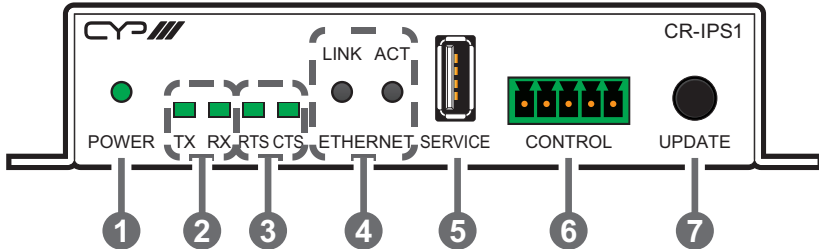
1 POWER LED: This LED will illuminate to indicate the unit is on and receiving power.

2 TX/RX LEDs: These LEDs will illuminate to indicate the unit status of transmitting and receiving data.

3 RTS/CTS LEDs: These LEDs will illuminate to indicate the unit status of requesting to send (RTS) and clearing to send (CTS) signal.

4 ETHERNET LEDs: These LEDs will illuminate to indicate the Ethernet status of link and action.

5 SERVICE Port: This port is reserved for firmware update use only.

6 CONTROL 5-pin Terminal Block: Connect to the devices you wish to control via 5-pin adapter cables to send RS-232/422/485 commands from the unit.

7 UPDATE Button: This button is reserved for firmware update use only.

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6.2 Rear Panel
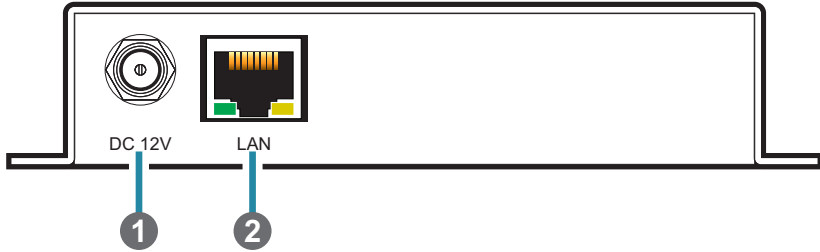
① **DC 12V Port:** Plug the 12V DC power adapter into the unit and connect it to an AC wall outlet for power.

Note: Optional, not required if the unit is powered via PoE.

② **LAN Port:** Connect directly, or through a network switch to your PC/laptop to control the unit via Telnet/WebGUI.

Note: If the connected network switch supports the IEEE 802.3af-2003 PoE (Power over Ethernet) standard, this unit can optionally be powered directly via this Ethernet port.

6.3 Serial Pinout and Defaults

Serial Port Default Settings	
Baud Rate	9600
Data Bits	8
Parity Bits	None
Stop Bits	1
Flow Control	None

5-pin Terminal Block

① GND
② TxD
③ RTS
④ CTS
⑤ RxD
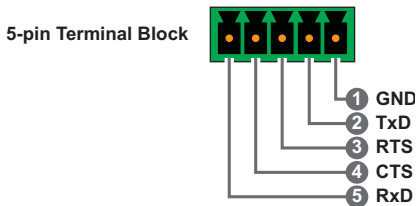
6.4 WebGUI Control

Device Discovery

Please obtain the "Device Discovery" software from your authorised dealer and save it in a directory where you can easily find it.

Connect the unit and your PC/Laptop to the same active network and execute the "Device Discovery" software. Click on "Find Devices on Internet" and a list of devices connected to the local network will show up indicating their current IP address.

Note: This unit defaults to DHCP mode.
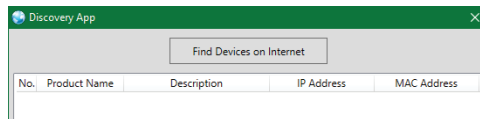
By clicking on one of the listed devices you will be presented with the network details of that particular device.
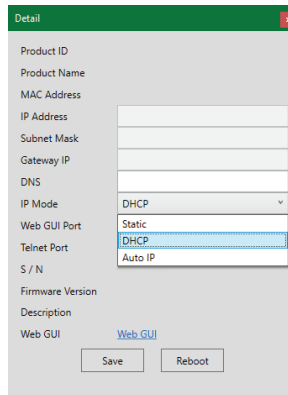
1) **IP Mode:** If you choose, you can alter the static IP network settings for the device, or switch the unit into DHCP mode to automatically obtain proper network settings from a local DHCP server. To switch to DHCP mode, please select DHCP from the IP mode drop-down, then click "Save" followed by "Reboot".

2) **WebGUI Hotkey:** Once you are satisfied with the network settings, you may use them to connect via Telnet or WebGUI. The network information window provides a convenient link to launch the WebGUI directly.

WebGUI Overview

After connecting to the WebGUI's address in a web browser, the system monitor page will appear. This page contains a set of useful information that can be accessed without the need to log in.
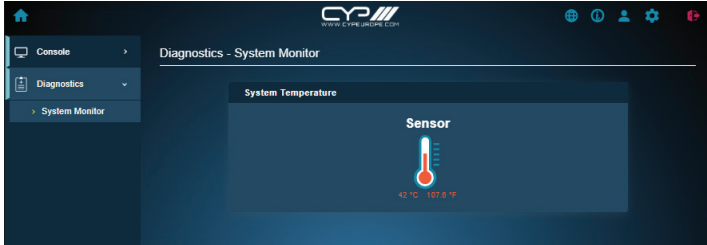
Click the login icon () in the upper right corner to log in, enter the appropriate user name and password then click "Continue" to log in.

Note: The default user name and password is "admin".
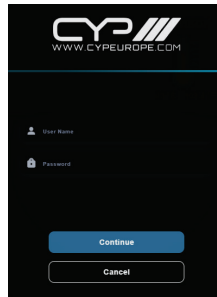
After logging in, the upper right corner will now display 5 navigation icons. Clicking on the "System Settings" icon () will take you to the System Settings page for configuration options including IP configuration, device name, and firmware update functionality. Clicking on the "User Management" icon () will take you to the User Management page, provides access to user management controls for the unit. Clicking on the "Language" icon () can change the interface language to user's preference, current only support Traditional Chinses and English. Clicking on the "System Information" icon () will take you to the System Information page, providing information of technical support for the unit. Clicking on the red "Logout" icon () will log the currently connected user out of the WebGUI and return to home page. Clicking on the "Home" icon () or the unit's logo at the top of the page will return to home page.
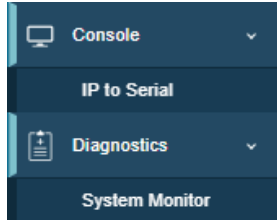
The left side of the browser will display a compressed version of the above menu tabs where all primary functions of the unit are controllable via the built in WebGUI. The individual functions will be introduced in the following sections.

6.4.1 Console Pages

The Console page contains a configuration page for managing the unit's peripheral settings such as serial.
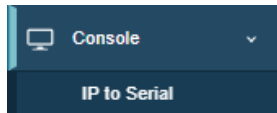
6.4.1.1 IP to Serial Page

This page provides a way to send and receive RS-232/422/485 commands as well as the configuration of serial settings.

1) **COM:** Enter the command to be sent to the specified serial port and press "Send". Clicking on "ASC" or "Hex" button will define the command type between plain ASCII or hex. Clicking on the "Edit" icon (⚙) opens up the COM Edit window. The console bypass port number is also displayed on the top right corner.

- **Serial:** Any responses the unit received will be displayed in the "Serial" field. Click on the trash icon (🗑) will remove the command received log.

- **TCP Server:** All the commands that sent from this browser will be displayed in the "TCP Server" field. Click on the trash icon (🗑) will remove the command transmitted log.

2) **COM Edit:** Provides individual control over the IP protocol and port setting, as well as select the termination character(s), and provides controls to configure the serial settings and operation mode.

- **IP Protocol Setting:** Select the socket modes between TCP Server, TCP Client, and UDP, then click on the "Apply" button. The primary difference between the TCP and UDP protocols is that TCP ensures data delivery by requiring the receiver to send an acknowledgment back to the sender.

- ■ **IP Port Setting:** To change the IP port, type the new port in the space provided, then click on the "Apply" button.
- ■ **ASC End Character Setting:** Select the termination character(s) button, if any, to attach to the end of the command when it is sent, then click on the "Apply" button.
- ■ **Serial Port Setting:** Provides controls to configure the operational mode and settings (baud rate, stop bits, data length, parity, and flow control) of the unit's CONTROL serial port, then click on the "Apply" button.

6.4.2 Diagnostics Pages

The Diagnostics page contains a system monitor for the temperature status.
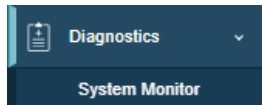
6.4.2.1 System Monitor Page

This page provides information concerning the temperature inside the unit.

1) **System Temperature:** Display the current temperature inside the unit.

6.4.3 System Settings Page

Click on the "System Settings" page to make changes to various system settings. From this page you can change the WebGUI login timeout, device name, and IP configurations. It also allows the user to reset the unit to factory default and to update the firmware.
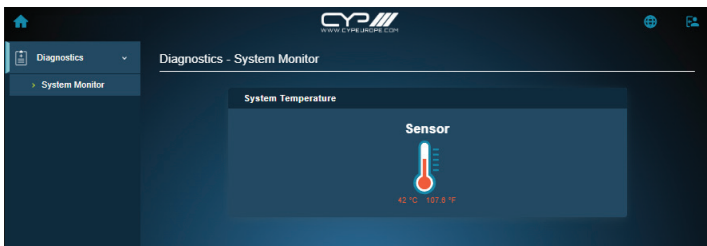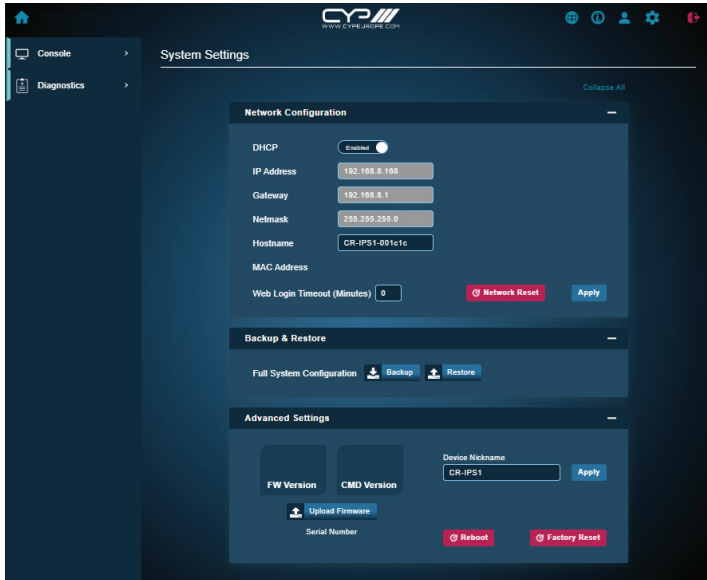

1) **Network Configuration:**

   ■ **IP Configuration:** IP Mode may be switched between Static IP or DHCP. In Static IP Mode the IP, netmask and gateway addresses may be manually set. When in DHCP Mode, the unit will attempt to connect to a local DHCP server and obtain IP, netmask and gateway addresses automatically. Please press "Apply" after making any changes to the IP configuration or mode.

   Note: If the IP address is changed then the IP address required for WebGUI/Telnet access will also change accordingly.

   ■ **Hostname:** Enter a new hostname for the unit, if desired. Please press "Apply" to store any changes made.

   ■ **Web Login Timeout (Minutes):** Set the length of time to wait, in minutes, before logging out a user due to inactivity. Setting it to 0 means there is no timeout. Click "Apply" to store the change.

■ **Network Reset:** Reset all Ethernet settings back to their factory defaults.

2) **Backup & Restore:**

■ **Backup:** The current system configuration, including routing and settings, may be saved as a JSON file to a PC. Click the "Backup" button to save the current system configuration to your local PC.

■ **Restore:** Previously saved system configurations may be restored from a saved JSON file. Click the "Restore" button to open the file selecting window and then select the saved JSON file located on your local PC. After selecting the file, click the "Open" button to import the new configuration.

3) **Advanced Settings:**

■ **Firmware Version:** Displays the unit's firmware version.

■ **CMD Version:** Displays the unit's command version.

■ **Firmware Upgrade:** To update the unit's firmware, click the "Upload Firmware" button to open the file selection window and then select the firmware update file (*.bin format) located on your local PC. After the upgrade is complete, the unit will reboot automatically.

■ **Serial Number:** Displays the unit's serial number.

■ **Device Nickname:** To change the name of the unit, type the new name in the space provided, then click on the "Apply" button.

■ **Reboot:** Click this button to reboot the unit.

■ **Factory Reset:** Press the "Factory Reset" button to reset the unit to its factory default state. After the reset is complete, the unit will reboot automatically.

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6.4.4 User Management Page

This page provides access to user management controls for the unit, such as changing the admin login password.

1) **Administrator Account:** The username and password for the WebGUI can be changed on this page. After entering the old and new login information, press "Apply" to save the changes.

   Note: The default user name and password is "admin".

6.4.5 System Information Page

This page provides technical support information, including serial number/version details and contact information for the manufacturer.

1) **Information:** Displays the unit's firmware and command version, as well as the unit's serial number.

2) **System log:** A comprehensive system log file to help diagnose configuration issues or other problems can be generated, if requested by technical support. Detailed logging may be enacbled or disabled using the switch. Click the "Download Log" button to save a copy of the current log data in, *.txt format, to your local PC.

3) **Manufacturer Contact Information:**

   ■ **Website:** Displays the manufacturer's official website link.

   ■ **E-mail:** Displays the manufacturer's contact email address.

   ■ **Address:** Displays the manufacturer's official address.

   ■ **Contact** Number: Displays the manufacturer's contact phone number.

6.5 Telnet Control

Before attempting to use Telnet control, please ensure that both the unit and the PC are connected to the same active networks.

Start your preferred Telnet/Console client, or use the built in client provided by most modern computer operating systems. After starting the client, connect by using the current IP address of the unit and port 23 (if the communication port number used by the unit has not been changed previously). This will connect us to the unit we wish to control and commands may now be entered directly.

Note 1: If the IP address of the unit is changed then the IP address required for Telnet access will also change accordingly.

Note 2: This unit defaults to DHCP mode. The default communication port is 23.

6.6 Telnet Commands

COMMAND
Description and Parameters
help↵
Show the full command list
help N1↵
Show details about the specified command.
N1 = {Command Name}
?↵
Show the full command list
? N1↵
Show details about the specified command.
N1 = {Command Name}

COMMAND
Description and Parameters

get fw ver↵

    Show the unit's current firmware version.

get hw ver↵

    Show the unit's current hardware version.

get command ver↵

    Show the unit's command version.

get mac addr↵

    Show the unit's MAC address.

get model name↵

    Show the unit's model name.

get model type↵

    Show the unit's model type.

get user config↵

    List the unit's current configuration information.

get user group config A↵

    List the unit's current configuration information.

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COMMAND
Description and Parameters

get update filename↵

Show the unit's update firmware filename.

---

set nickname N1↵

Set the name of the unit's nickname.

Available values for **N1**:

N1 = {ASCII string}　　　　　[Nickname]

---

get nickname↵

Show the name of the unit's nickname.

---

set feedback broadcast N1↵

Enable or disable the broadcast of console command feedback.

Available values for **N1**:

ON　　　　　　　　　　　[Enable]
OFF　　　　　　　　　　　[Disable]

---

get feedback broadcast↵

Show the current console command feedback broadcast state.

---

set local echo N1↵

Enable or disable the local echo display of typed characters.

Available values for **N1**:

ON　　　　　　　　　　　[Enable]
OFF　　　　　　　　　　　[Disable]

---

get local echo↵

Show the current local echo display setting.

COMMAND
Description and Parameters

get device temperature↵

Show the unit's current temperature.

set system reboot↵

Reboot the unit.

set factory default↵

Reset the unit to its factory defaults.

set factory ipconfig default↵

Reset the unit's network settings to the factory defaults.

set uart 1 reset↵

Reset the settings of the serial port to the factory defaults.

set uart 1 baudrate N1↵

Set the baud rate of the serial port.

Available values for **N1**:

2400	[2400 baud]
4800	[4800 baud]
7200	[7200 baud]
9600	[9600 baud]
14400	[14400 baud]
19200	[19200 baud]
38400	[38400 baud]
57600	[57600 baud]
115200	[115200 baud]

get uart 1 baudrate↵

Show the current baud rate of the serial port.

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COMMAND
Description and Parameters

set uart 1 stop bit N1↵

Set the number of stop bits for the serial port.

Available values for **N1**:

1~2	[Stop bits]

get uart 1 stop bit↵

Show the current number of stop bits of the serial port.

set uart 1 data bit N1↵

Set the data bits for the serial port.

Available values for **N1**:

7~8	[Data bits]

get uart 1 data bit↵

Show the current number of data bits of the serial port.

set uart 1 parity N1↵

Set the parity of the serial port

Available values for **N1**:
0	[None]
1	[Odd]
2	[Even]

get uart 1 parity↵

Show the current parity setting of the serial port.

set uart 1 flow control N1↵

Set the mode of hardware flow control for the serial port.

Available values for **N1**:

ON	[Enable]
OFF	[Disable]

COMMAND

Description and Parameters

get uart 1 flow control↵

Show the mode of hardware flow control for the serial port.

set uart 1 all N1 N2 N3 N4↵

Set the all parameters of the serial port.

Available values for **N1**:
2400	[2400 baud]
4800	[4800 baud]
7200	[7200 baud]
9600	[9600 baud]
14400	[14400 baud]
19200	[19200 baud]
38400	[38400 baud]
57600	[57600 baud]
115200	[115200 baud]

Available values for **N2**:

7~8	[Data bits]

Available values for **N3**:
0	[None]
1	[Odd]
2	[Even]

Available values for **N4**:

1~2	[Stop bits]

get uart 1 all↵

Show the all parameters of the serial port.

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COMMAND
Description and Parameters

set console 1 uart mode N1↵

Set the uart mode of the console.

Available values for **N1**:
rs-232	[RS-232]
rs-422	[RS-422]
rs-485	[RS-485]

get console 1 uart mode↵

Show the uart mode of the console.

set console 1 bypass port N1↵

Set the bypass port of the console.

Available values for **N1**:

1~65535   [bypass port number]

get console 1 bypass port↵

Show the bypass port of the console.

set console 1 remote ip N1↵

Set the remote ip of the console.

N1 = X.X.X.X   [X = 0~255, Remote IP address]

get console 1 remote ip↵

Show the remote ip of the console.

set console 1 bypass mode N1↵

Set the bypass mode of the console.

Available values for **N1**:
tcp-s	[TCP-Server]
tcp-c	[TCP-Client]
udp	[UDP]

COMMAND
Description and Parameters

get console 1 bypass mode↵

Show the bypass mode of the console.

set console 1 data mode N1↵

Set the data mode of the console.

Available values for **N1**:
ascii	[ASCII]
hex	[Hex]

get console 1 data mode↵

Show the data mode of the console.

set console 1 ascii end N1↵

Set the end character of the console in ASCII mode.

Available values for **N1**:
0	[CR+LF]
1	[CR]
2	[LF]

get console 1 ascii end↵

Show the end character of the console in ASCII mode.

set ip mode N1↵

Set the IP address assignment mode.

Available values for **N1**:
STATIC	[Static IP mode]
DHCP	[DHCP mode]

get ip mode↵

Show the current IP address assignment mode.

get ipconfig↵

Show the unit's current IP configuration information

COMMAND
Description and Parameters

get ipaddr↵

Show the unit's current IP address.

get netmask↵

Show the unit's current netmask.

get gateway↵

Show the unit's current gateway address.

set static ipaddr N1↵

Set the unit's static IP address.

N1 = X.X.X.X   [X = 0~255, Static IP address]

get static ipaddr↵

Show the unit's current static IP address.

set static netmask N1↵

Set the unit's static netmask.

N1 = X.X.X.X   [X = 0~255, Static netmask]

get static netmask↵

Show the unit's current static netmask.

set static gateway N1↵

Set the unit's static gateway address.

N1 = X.X.X.X   [X = 0~255, Static gateway address]

get static gateway↵

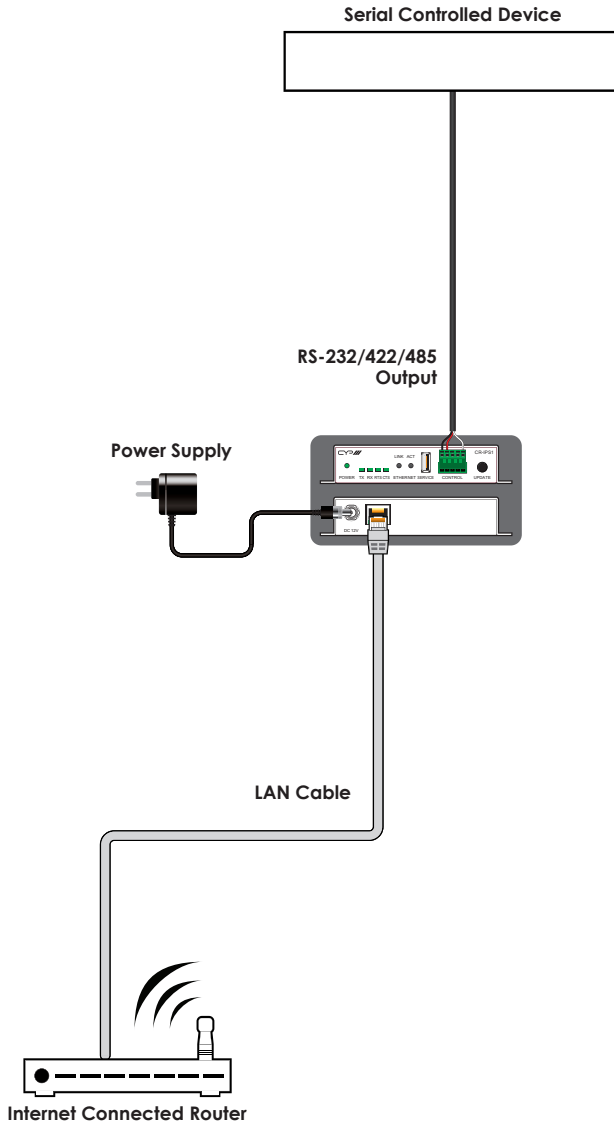Show the unit's current static gateway address.

COMMAND

Description and Parameters

---

set static ip settings N1 N2 N3↵

Set the unit's static IP, netmask, and gateway address.

N1 = X.X.X.X	[X = 0~255, Static IP address]
N2 = X.X.X.X	[X = 0~255, Static netmask]
N3 = X.X.X.X	[X = 0~255, Static gateway address]

---

get static ip settings↵

Show the unit's current static IP, netmask, and gateway address.

---

get telnet maximum user↵

Show the maximum number of users allowed to connect simultaneously via Telnet.

---

set webgui username N1↵

Set the WebGUI login username.

N1 = { ASCII string }   [Username]

---

get webgui username↵

Show the current WebGUI login username.

---

set webgui password N1↵

Set the WebGUI login password.

N1 = {ASCII string}   [Password]

---

get webgui password↵

Show the current WebGUI login password.

---

set webgui port N1↵

Set the unit's WebGUI access port.

Available values for **N1**:

1~65535   [http port number]

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COMMAND
Description and Parameters
get webgui port↵
Show the unit's current WebGUI access port.
set telnet port N1↵
Set the unit's Telnet access port.   **N1** = 1~ 65535   [Telnet port number]
get telnet port↵
Show the unit's current Telnet access port.
set hostname N1↵
Set the unit's hostname.   **N1** = {ASCII string}   [Hostname]
get hostname↵
Set the unit's hostname
set telnet timeout N1↵

Set the Telnet inactivity timeout value.
 	
  Available values for **N1**:
 	
  0   [Disabled]
  1~65535   [Timeout in minutes]

get telnet timeout↵
Show the current Telnet inactivity timeout value.
set webgui login timeout N1↵

Set the WebGUI inactivity timeout value.
 	
  Available values for **N1**:
  0   [Disabled]
  1~120   [Timeout in minutes]

COMMAND
Description and Parameters

get webgui login timeout↵

Show the current WebGUI inactivity timeout value.

---

set webgui language N1↵

Set the unit's WebGUI language.

Available values for **N1**:
en   [English]
zh-tw   [Traditional Chinese]

---

get webgui language↵

Show the unit's current WebGUI language.

Note: Commands will not be executed unless followed by a carriage return. Commands are not case-sensitive.

7. CONNECTION DIAGRAM

Serial Controlled Device

RS-232/422/485 Output

Power Supply

LAN Cable

Internet Connected Router

8. SPECIFICATIONS

8.1 Technical Specifications

Pass-through Ports	1×RS-232/422/485 (5-pin Terminal Block)
	1×LAN (RJ-45)
Service Port	1×USB 2.0 (Type-A)
Baud Rate	Up to 115200
Power Supply	12V/1.25A DC
	(US/EU standards, CE/FCC/UL certified)
PoE Support	802.3af minimum
ESD Protection (HBM)	±8kV (Air Discharge)
	±4kV (Contact Discharge)
Dimensions (W×H×D)	128mm×25mm×108mm [Case Only]
	128mm×25mm×116.3mm [All Inclusive]
Weight	367g
Chassis Material	Metal (Steel)
Chassis Colour	Black
Operating Temperature	0˚C – 40˚C/32˚F – 104˚F
Storage Temperature	-20˚C – 60˚C/-4˚F – 140˚F
Relative Humidity	20 – 90% RH (Non-condensing)
Power Consumption	4.75W

9. ACRONYMS

ACRONYM	COMPLETE TERM
ASCII	American Standard Code for Information Interchange
Cat.5e	Enhanced Category 5 cable
Cat.6	Category 6 cable
Cat.6A	Augmented Category 6 cable
Cat.7	Category 7 cable
CLI	Command-Line Interface
COM	Communication
IEEE	Institute of Electrical and Electronics Engineers
IP	Internet Protocol
kHz	Kilohertz
LAN	Local Area Network
LED	Light-Emitting Diode
MAC	Media Access Control
MHz	Megahertz
PD	Powered Device
PoE	Power over Ethernet
PSE	Power Sourcing Equipment
TCP	Transmission Control Protocol
USB	Universal Serial Bus