


Console Port Server (AP9301, AP9302, AP9303)—Installation and Configuration

Product Description

The American Power Conversion (APC[®]) Console Port Server (CPS) product line allows both local and dial-in access for in-band and out-of-band network management. There are three CPS models, which can be used as Console Access Servers (CAS) or Terminal Servers (TS):

- AP9301: An 8-port unit
- AP9302: A 16-port unit
- AP9303: A 32-port unit with a dual power supply and two PCMCIA slots

AP9301 

AP9302 

AP9303 

Default values are generally for CAS, but you can reconfigure these values to apply to TS.

Inventory

Receiving inspection

Inspect the package and contents for shipping damage, and make sure that all parts were sent. Report any damage immediately to the shipping agent, and report missing contents, damage, or other problems immediately to APC or your APC reseller.



Note

The shipping materials are recyclable. Please save them for later use, or dispose of them appropriately.

Inventory

Your product package should include the following:

- The model of CPS that you ordered
- Two brackets for mounting the CPS in an APC NetShelter[®] or other standard 19-inch rack or enclosure
- Eight Phillips-head screws for attaching the brackets to the CPS and at the mounting location within the rack or enclosure
- For AP9301 or AP9302, one power cable, or for AP9303, two power cables
- DB9/RJ45 console cable
- This *Quick-Start Manual*, printed
- The *Declaration of Conformity*, printed
- The product registration card
- The APC Documentation CD, containing the following:
 - The *User's Guide* in PDF format
 - The *Reference Guide* in PDF format
 - This *Quick-Start Manual* in PDF format

Installation

Pre-installation checklist

You must confirm the following before installing and configuring the CPS:

- | | |
|--|---|
| Linux [®] /UNIX [®] access | You will need Kermit [®] or Minicom [®] |
| Windows [®] users | Ensure that HyperTerminal is set up on your Windows operating system. |

Install the CPS

1. Mount the CPS in a 19-inch rack or enclosure using the brackets and screws provided. The CPS requires one U-space.
2. Connect a power cord (provided) to the power supply on the CPS and to an electrical outlet. For the AP9303, connect the second provided power cord to the second power supply.



To help prevent electric shock, plug the CPS into a properly grounded power source. The cable is equipped with a 3-prong plug to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from the cable. If you use an extension cable, use a 3-wire cable with properly grounded plugs.

Configuration

Configure the initial settings

If you have a DHCP server on your LAN. Use the Web interface to configure the initial settings for the CPS. (The CPS comes with a DHCP client enabled by default.)

1. After the DHCP server assigns an IP address to the CPS automatically, type that IP address into the address field of your Web browser.



Note

If the DHCP server fails to answer the automatic IP address request, the CPS will use the static IP address 192.168.160.10. If this occurs, do not continue with this procedure, but use the procedure in “If you do not have a DHCP server on your LAN.” on page 3.

2. Change the root user password.



Note

When setting up a CPS for the first time, always change the password of the root user as soon as possible after an IP address is assigned. Failure to change the root user password leaves your LAN vulnerable to unauthorized access of the CPS. See “Change the Root Password” on page 5.

3. Click the **Network** link on the top banner and click Host Setting on the left navigation menu to configure the basic parameters. You must configure the following settings:

- **Gateway IP:** The IP address of the default gateway.
- **Network Mask:** The subnet mask.



Note

For a detailed description of the other parameters, see “Installation and Configuration” in the *User’s Guide*.

4. To make the changes effective and save them to flash, click the **apply changes** button and click **OK** in the dialog that appears.
5. The CPS is now configured as a CAS with its assigned IP address and no authentication. You can use Telnet to connect to the CPS at serial port 1 with the following command:

```
telnet <assigned_IP_address> 7001
```

If you do not have a DHCP server on your LAN. Configure the initial settings of your CPS through a serial connection to a COM port.

1. Connect the DB9/RJ45 console cable (provided) to the port labeled **Console** on the back of the CPS and to COM port 1 on your computer.
2. Apply power to the CPS.
3. Open a terminal emulation program such as HyperTerminal or Minicom, and configure the serial port at 9600 bps, 8 data bits, no parity, 1 stop bit, and no flow control.
4. Log on. Use the login name **root** and the password **apc**.

5. Type `wiz`, press `ENTER`, and follow the on-screen instructions. You must configure the following settings:
 - **DHCP enabled/disabled:** Disable DHCP
 - **System IP:** The IP address you want to assign to the CPS
 - **Gateway IP:** The IP address of the default gateway
 - **Network Mask:** The subnet mask
6. On the confirmation screen, confirm your parameter settings.
 - If they are correct, type `y` and proceed to the next step.
 - If they are not correct, type `n`. Then type `c` to change any values and reconfirm them.
7. To activate your configurations, type `y`. To make the configuration permanent by saving it to flash, type `y` again when prompted.
8. Exit from the terminal emulation program.
9. Use the Web interface of the CPS to change the root user's password.



Caution

When setting up a CPS for the first time, always change the password of the root user as soon as possible after an IP address is assigned. Failure to change the root user's password leaves your LAN vulnerable to unauthorized access of the CPS. See "Change the Root Password" on page 5.

10. On the Host Settings page of the Web interface, configure any other basic parameters.



For a detailed description of the parameters, see "Installation and Configuration" in the *User's Guide*.

11. To make the changes effective and save them to flash, click on the **apply changes** button and click **OK** in the dialog that appears.
12. The CPS is now configured as a CAS with its assigned IP address and no authentication. You can use Telnet to connect to the CPS at serial port 1 with the following command:

```
telnet <assigned_IP_address> 7001
```

Select a Security Profile

To select a security profile

1. From the main menu, select **Security**, then **Security Profile**. Alternately, click the **Wizard** button and select **Step 1: Security Profile**.
2. Select a pre-defined security profile, or define a custom profile for specific services.
 - **Secured:** Disables all protocols except Secure SHell (SSH) v2, HyperText Transfer Protocol with Secure SHell (HTTPS), and SSH to Serial Ports.
 - **Moderate:** Enables Telnet, SSHv1, SSHv2, HTTP, HTTPS, Internet Control Message Protocol (ICMP), HTTP redirection to HTTPS, and raw connections to Serial Ports.
 - **Open:** Enables all services: Telnet, SSHv1, SSHv2, HTTP, HTTPS, Simple Network Management Protocol (SNMP), Remote Procedure Call (RPC), ICMP, and raw connections to serial ports.
 - **Default:** Sets the profile to the **Moderate** security profile.
 - **Custom:** Enable or disable individual protocols and services, and configure access to ports.

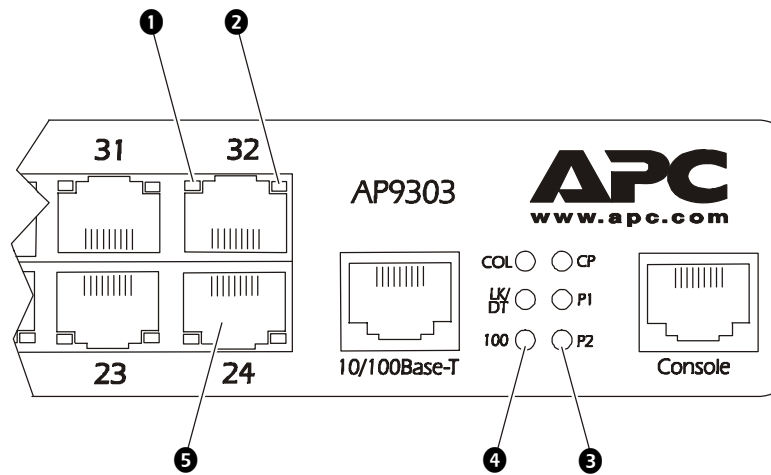
Change the Root Password

Use your Web browser to connect to the IP address of the CPS, and use the username **root** and the default password **apc** to log on to the Web interface. Then change the password of the root user, as follows:

1. Click the link **Web Security > Users and Groups**.
2. Select the root user, and click **Change Password**.
3. Type the password twice, and click **Submit**.
4. Click the **try changes** button.
5. At the Login page, type the username root and the password that was configured, then click the **Login** button.
6. After the authentication, click **apply changes**.

How to Interpret the LEDs

The rear panel of the CPS model AP9303 has the following LEDs, connectors, and serial ports. (The AP9301 and AP9302 models do not have a P2 LED and have fewer serial ports.)



Ethernet connector

The Ethernet connector (labeled 10/100Base-T) has a column of three LEDs **4**.

LED	Function
COL	Alerts you that a collision occurs on the LAN every time the unit tries to transmit an Ethernet packet.
LK/DT	LK (Link State): The LED is illuminated steadily if the LAN is active. DT (Data Transaction): The LED flashes when data is transmitted to or received from the LAN. This LED is hardware-controlled.
100	If 100Base-T is detected, the LED illuminates. If 10Base-T is detected, it turns off.

Console connector

The Console connector (labeled Console) has a column of two or three LEDs **3**, depending on the CPS model.

LED	Function
CP	Indicates Central Processing Unit (CPU) activity. It flashes at intervals of about one second.
P1	Indicates power supply #1 is ON.
P2	Indicates power supply #2 is ON (AP9303 only).

CP LED

Normally the CP LED (CPU status LED) blinks consistently (one second on, one second off). Any other blinking pattern indicates an error during start-up.

Event	CPU LED Blinking Pattern (S=Short, L=Long)
Normal Operation	S (continuously)
Flash Memory Error - Code	L (continuously)
Flash Memory Error - Configuration	S, L
Ethernet Error	S, S, L
No Interface Card Detected	S, S, S, L
Network Boot Error	S, S, S, S, L
Real-Time Clock Error	S, S, S, S, S, L



Note

The Ethernet error listed in the preceding table will occur automatically if the Fast Ethernet link is not connected to an external hub during start-up. If the Fast Ethernet is not being used or is connected later, this error can be ignored.

Serial ports

To the left of the Ethernet and Console Connectors are two rows of serial ports **5**, totaling 8, 16, or 32, depending on the CPS model. Each serial port has two LEDs.

LED	Function
1 DT	When illuminated, this Green LED indicates a Data Terminal Ready (DTR) signal; data is being transmitted to or received from the serial line. This is a software-controlled LED.
2 LK	When illuminated, this yellow LED indicates that the Link State (the connection to the LAN) is active. This is a hardware-controlled LED.

Cables and Adapters

The following cables and adapters are available for purchase from APC to use with your CPS. Choose those that are appropriate for the equipment you are managing with the CPS.

Cables

Part Number	Cable Description
AP9307	DB9F to RJ45 crossover cable
AP9308	DB25M to RJ45 cable
AP9309	DB25F to RJ45 crossover cable
AP9317	RJ45 to RJ12 CPS to Rack PDU cable

Adapters

Part Number	Adapter Description
AP9310	DB25F to RJ45 crossover adapter
AP9311	DB25M to RJ45 crossover adapter
AP9313	DB9F to RJ45 crossover adapter
AP9314	DB9M to RJ45 crossover adapter
AP9315	RJ45 to RJ45 Cisco/SUN adapter
AP9316	CPS Console Port to UPS DB9 adapter

Two-Year Factory Warranty

This warranty applies only to the products you purchase for your use in accordance with this manual.

Terms of warranty

APC warrants its products to be free from defects in materials and workmanship for a period of two years from the date of purchase. APC will repair or replace defective products covered by this warranty. This warranty does not apply to equipment that has been damaged by accident, negligence or misapplication or has been altered or modified in any way. Repair or replacement of a defective product or part thereof does not extend the original warranty period. Any parts furnished under this warranty may be new or factory-remanufactured.

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 - **www.apc.com/support/**
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- Contact an APC Customer Support center by telephone or e-mail.
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Latin America	(1)(401)789-5735 (USA)
Europe, Middle East, Africa	(353)(91)702000 (Ireland)
Japan	(0) 35434-2021
Australia, New Zealand, South Pacific area	(61) (2) 9955 9366 (Australia)

- Local, country-specific centers: go to **www.apc.com/support/contact** for contact information.

Contact the APC representative or other distributor from whom you purchased your APC product for information on how to obtain local customer support.

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