



## Connecting the Cisco IC3000

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This chapter describes how to connect the Cisco IC3000 to Ethernet devices and a network.

- [Connecting the Cisco IC3000 Industrial Compute Gateway, on page 1](#)

## Connecting the Cisco IC3000 Industrial Compute Gateway

This chapter describes how to connect the Cisco IC3000 to Ethernet devices and a network. The chapter contains the following sections:

### Preparing to Connect the Cisco IC3000

Before you connect the Cisco IC3000 to the devices, install the IC3000 according to the instructions in [Installing the Cisco IC3000 Industrial Compute Gateway](#).

**Caution:** If this product will be installed in a hazardous location, read the Getting Started/Product Document of Compliance included in the package.

**WARNING:** To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-network voltage (TNV) circuits. LAN ports contain SELV circuits, and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables. **Statement 1021**

### Preventing Damage to the Cisco IC3000

Before installation, observe these general guidelines:

- Proper ESD protection should be observed
- Ensure the device is properly grounded
- Ensure there is proper airflow around the device

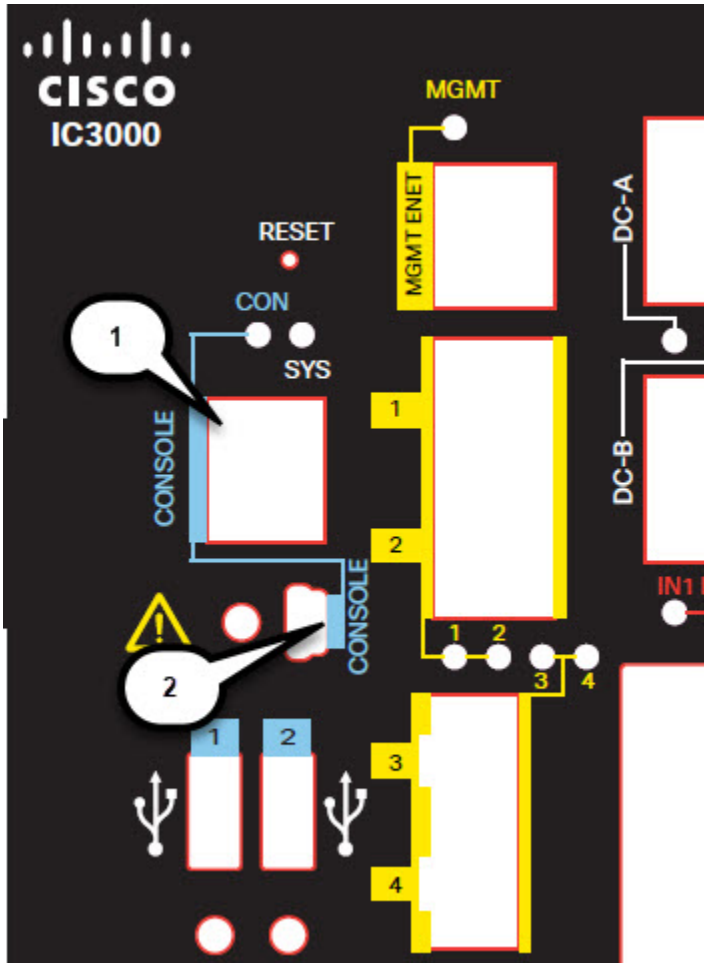
## Connecting a PC to the Cisco IC3000 For Configuration

There are two methods of connecting to the Cisco IC3000 in case of troubleshooting:

- Connect a PC to the console connector of the Cisco IC3000 and launch a console terminal to use the CLI.
- Connect the PC to the Cisco IC3000 management sub-network which will then receive an IP address.

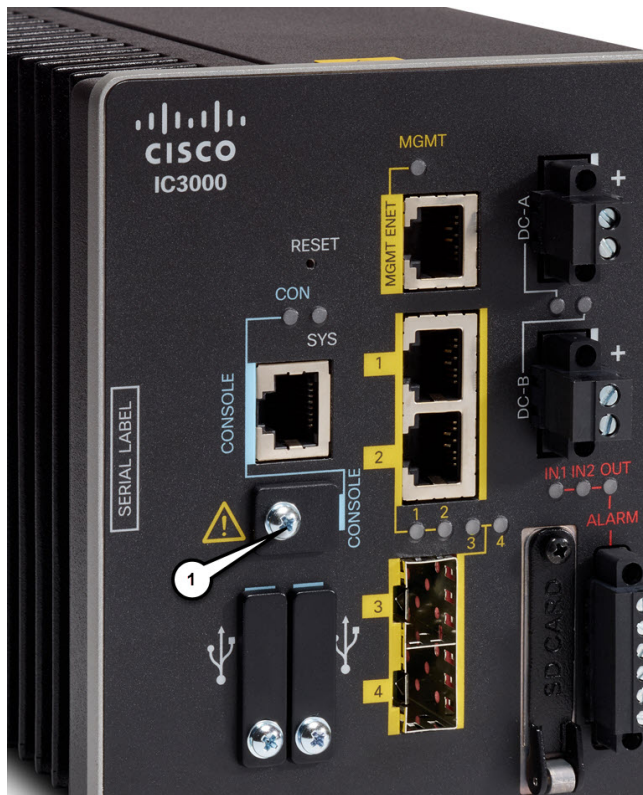
- Step 1** Choose which console connection will be used. In [Figure 1: Console Connection Ports](#), on page 2, Item **1** is the RJ-45 console connector, and item **2** is the mini-USB connector.

*Figure 1: Console Connection Ports*



- Step 2** If the mini-USB connector is being used, the protective cover will need to be removed first. Item **(1)** in the following graphic shows the location of the cover. Remove the cover with a Phillips screw driver and set it aside to be reinstalled after completing the configuration.

Figure 2: mini-USB Cover



**Step 3** Connect the mini-USB side of a cable to the USB Console port on the Cisco IC3000.

**Step 4** Connect the opposite end of the mini-USB cable to the USB port on your PC. If your PC warns you that you do not have the proper drivers to communicate with the device, you can obtain them from your computer's manufacturer, or go here: <https://software.cisco.com/download/home/282774227/type/282855122/release/3.1>

**Step 5** Start up a console terminal.

## Connecting to DC Power

### Before you begin

**WARNING:** Before performing any of the following procedures, ensure that power is removed from the DC circuit. **Statement 1003**

**WARNING:** This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than 60 VDC minimum, 5A maximum. **Statement 1005**

**WARNING:** A readily accessible two-poled disconnect device must be incorporated in the fixed wiring. **Statement 1022**

**WARNING:** Only trained and qualified personnel should be allowed to install, replace, or service this equipment. **Statement 1030**

**WARNING:** In device installations in a hazardous location, the DC power source could be located away from the vicinity of the device. Before performing any of the following procedures, locate the DC circuit to ensure that the power is removed and cannot be turned on accidentally, or verify that the area is nonhazardous before proceeding. **Statement 1059**

**WARNING:** Installation of the equipment must comply with local and national electrical codes. **Statement 1074**

**WARNING:** Explosion Hazard—Substitution of components may impair suitability for Class I, Division 2/Zone 2. **Statement 1083**

You connect DC power to the device through the front panel connectors. The device has a dual-feed DC power supply; two connectors provide primary and secondary DC power (DC-A and DC-B).

Each power connector has an LED status indicator. The device power connectors are attached to the device chassis. Each power connector has screw terminals for terminating the DC power. All connectors are attached to the device front panel with the provided captive screws.

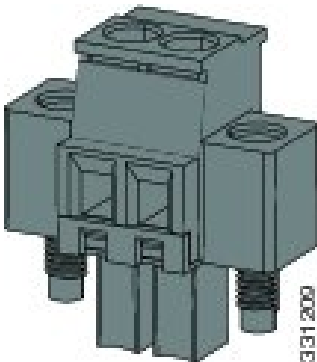
The power connector labeling is on the panel. The positive DC power connection is labeled “+”, and the return connection is labeled “-”.

The device can operate with a single power source or with dual power sources. When both power sources are operational, the device draws power from the DC source with the higher voltage. If one of the two power sources fail, the other continues to power the device.

To connect DC power to your Cisco IC3000, follow these steps:

**Step 1** Locate the two power connectors on the device front panel labeled DC-A and DC-B.

**Figure 3: Power Connector**

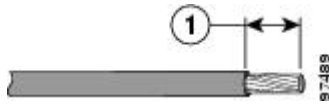


**Step 2** Identify the connector positive and return DC power connections. The "+" is the Positive DC power connection, and the "-" is the Return DC power connection.

**Step 3** Measure two strands of twisted-pair copper wire long enough to connect the power converter to the DC power source. For DC connections from the power converter to the DC source, use 18 to 20 AWG (2.6mm) twisted-pair copper wire.

**Step 4** Using a 18-gauge (1.02mm) wire-stripping tool, strip the ground wire and both ends of the twisted pair wires to 0.25 inch (6.3 mm) ± 0.02 inch (0.5 mm). See [Figure 4: Stripping the Power Connection Wire, on page 5](#), number 1. Do not strip more than 0.27 inch (6.8 mm) of insulation from the wires. Stripping more than the recommended amount of wire can leave exposed wire from the power and relay connector after installation.

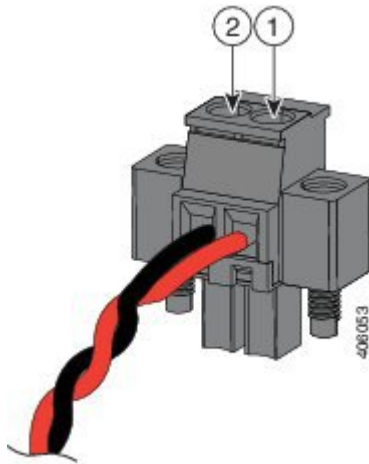
**Figure 4: Stripping the Power Connection Wire**



**Step 5** Remove the two captive screws that attach the power connector to the device, and remove the power connector. Remove both connectors if you are connecting to two power sources.

**Step 6** On the power connector, insert the exposed part of the positive wire into the connection labeled “+” and the exposed part of the return wire into the connection labeled “-”. The “+” is the Power source positive connection, and the “-” is the Power source return connection. See [Figure 5: Inserting Wires into the Power Connector, on page 5](#).

**Figure 5: Inserting Wires into the Power Connector**

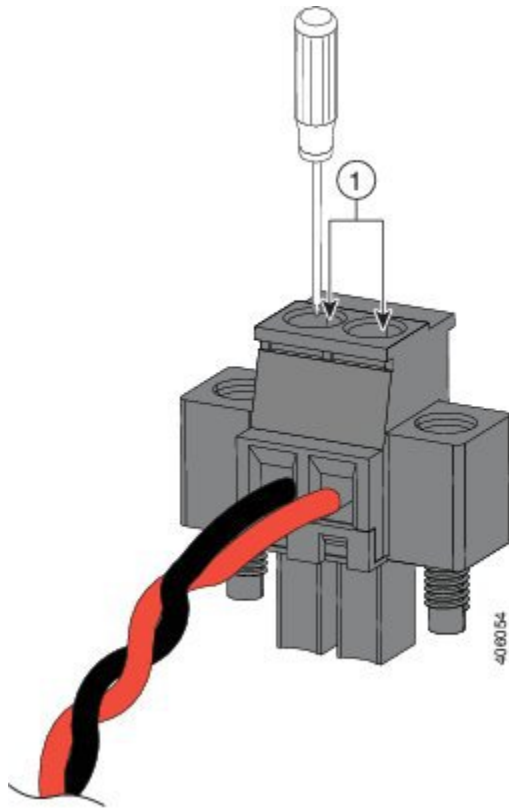


**Note** Ensure that you cannot see any wire lead. Only wire with insulation should extend from the connector.

**Step 7** Use a ratcheting torque flathead screwdriver to torque the power connector captive screws (above the installed wire leads) to 2 in-lb (0.23 N-m). See #1 in [Figure 6: Torquing the Power Connector Captive Screws, on page 6](#).

**Note** Do not over-torque the power connector’s captive screws. The torque should not exceed 2 inch-lbs (0.23 N-m).

Figure 6: Torquing the Power Connector Captive Screws



**WARNING:** An exposed wire lead from a DC-input power source can conduct harmful levels of electricity. Be sure that no exposed portion of the DC-input power source wire extends from the power and relay connector. **Statement 122**

**Step 8** Connect the other end of the positive wire to the positive terminal on the DC power source, and connect the other end of the return wire to the return terminal on the DC power source.

When you are testing the device, one power connection is sufficient. If you are installing the device and are using a second power source, repeat steps 4 through 8 using the second power connector.

## Attaching the DC Power Connectors to the Device

To attach the power connectors to the front panel of the device, follow these steps:

1. Insert one power connector into the DC-A receptacle on the device front panel, and the other into the DC-B receptacle.
2. Use a ratcheting torque flathead screwdriver to tighten the captive screws on the sides of the power connectors to 2 in-lb (0.23 N-m).
3. When you are testing the device, one power source is sufficient. If you are installing the device and are using a second power source, repeat this procedure for the second power connector (DC-B), which installs just below the primary power connector (DC-A).

4. When you are installing the device, secure the wires coming from the power connector so that they cannot be disturbed by casual contact. For example, use tie wraps to secure the wires to the rack.

**WARNING:** Failure to securely tighten the captive screws can result in an electrical arc if the connector is accidentally removed. **Statement 397**

**WARNING:** When you connect or disconnect the power and/or alarm connector with power applied, an electrical arc can occur. This could cause an explosion in hazardous area installations. Be sure that all power is removed from the device and any other circuits. Be sure that power cannot be accidentally turned on or verify that the area is nonhazardous before proceeding. **Statement 1058**

