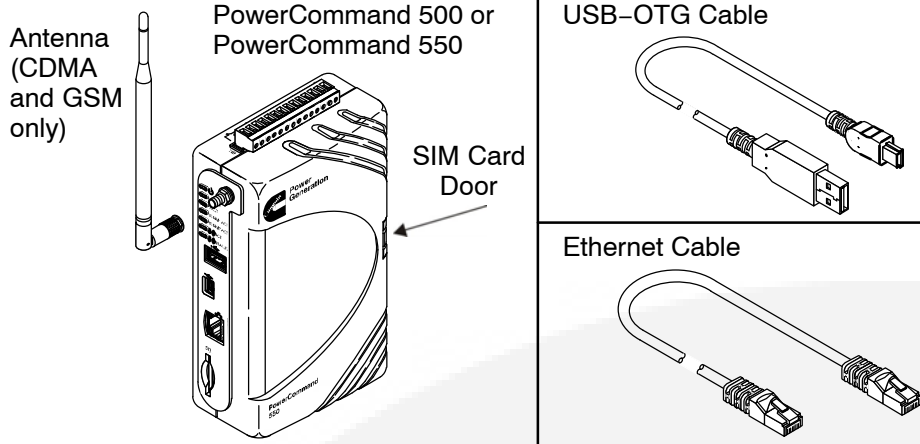


Verify Hardware Contents



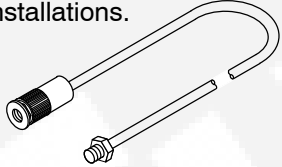
Verify Additional Hardware Needed

Modbus Cable – Required shielded twisted pair cable, 24 AWG or larger, used to connect PowerCommand 500/550 to monitored device.

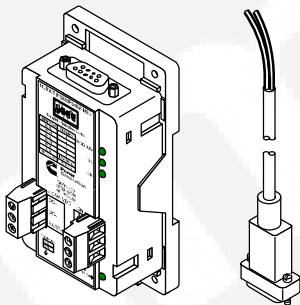


Power Supply (12–24V, 2A) – Required for all installations.

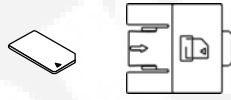
Antenna Extension – Required for cabinet installations.



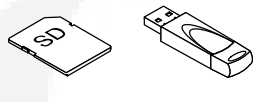
ModLon II Gateway Kit and ModLon Connection Cable (A040T087) – Required for legacy controls (PCC2100, 3100, 3200, and 3201 generator set controls and OTPC, BTPC, OHPC, and CHPC transfer switch controls).



SIM Card – Required for GSM cellular modem (needs to be obtained from your local service provider).



Secure Digital (SD) Memory Card or USB Flash Drive (Optional) – Used as external memory for data logs.



Connections

PORTS:

External USB Memory: Insert a USB flash drive as external memory for data logs.

USB Mini: This direct connection to PC is used to access User Interface during initial configuration.

Ethernet: Used to connect to the network; it supports both IEEE 10 BASE-T and 100 BASE-TX standards.

SD Card Slot: Insert an SD card as external memory for data logs.



TB1 – INPUT/OUTPUT CONNECTIONS:

Input +: 12–24 VDC power supply or B+ battery.

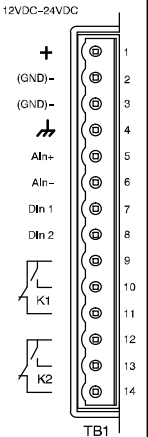
Negative Ground (GND)-: GND from power supply or B- battery.

Chassis Ground: Connect to an earth grounded metal surface.

Analog Resistive Input (AIn+ and AIn-): Connection for a resistive sensor into the PowerCommand 500/550 (600–2500 ohms).

Discrete Inputs (DIn 1 and DIn 2): Two isolated ‘open-collector’ type discrete inputs. These inputs are activated when connected to the PowerCommand 500/550 GND (B- or power supply ground).

Discrete Outputs (K1 and K2): Pins 9 and 12 are common. Pins 10 and pins 14 are normally open. Pins 11 and 13 are normally closed. Each output is rated at 1A 30 VDC, 0.3A 125 VAC (resolve load).



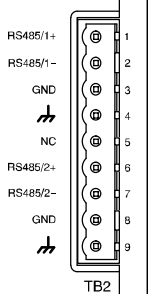
TB2 – COMMUNICATIONS TERMINAL:

RS485/1+ and RS485/1-, RS485/2+ and RS485/2-: Two sets of connections are used to support Modbus communications with PowerCommand controls on generator sets, transfer switches, or AUX 101/102. Both the control and the PowerCommand 500/550 must have the same Modbus configuration (baud rate, parity bit, and stop bit). Connections are made using the Modbus communication cable.

GND (Ground): Ground reference between PowerCommand 500/550 and controls, depending on power supply configuration (see **External Connectivity Diagrams**).

Chassis Ground: Connect to shield of the Modbus cable.

NC: Not used

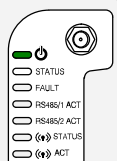


Verify System Requirements

- PC or Macintosh computer with CD drive
- Browser: Internet Explorer 8 or later is recommended
- Operating System: Microsoft Windows, Mac OS X, or Linux
- Microsoft Silverlight software, version 5.0 or later
- Minimum Screen Resolution: 1024 x 768
- Windows Mobile Device Center

1 Connect to Power Supply

1. Connect the PowerCommand 500/550 to a power supply. Refer to the **Connections** topic.
2. Check the Power LED to confirm power is available.



Note to Installer/Customer

Software setup (steps 2 through 10) can be completed before arriving at the site and prior to physical installation.

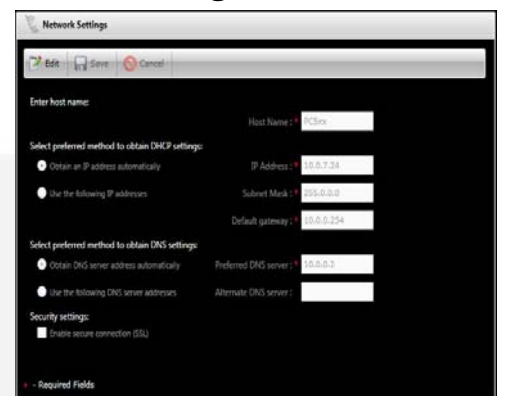
2 Access the Home Page



1. Turn on the computer.
2. Connect PC500/550 to the Internet using an Ethernet cable.
3. Connect the USB-OTG cable from the PowerCommand 500/550 to the computer. The computer automatically installs a software driver. If not, install “Windows Mobile Device Center” manually.
4. Open an Internet browser window and go to **Tools > Internet Options > Connections > LAN Settings**. Under **Proxy Server**, uncheck the box for **Use a Proxy server for your LAN**.
5. In Internet browser address bar, enter the following IP address: 169.254.0.1 to load PowerCommand 500/550 login screen.
NOTE: Use https when SSL is enabled or http when it is disabled.
6. Enter the user name (admin) and password (admin).

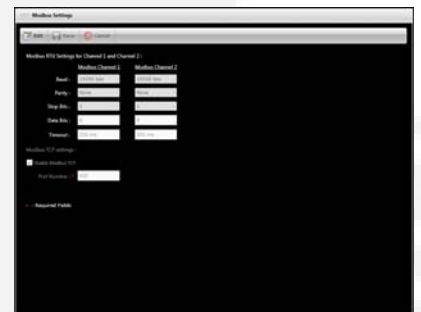
3 Enter Network Settings

1. Once the Home page appears, select **Setup** on the menu bar.
2. Select **Network Settings** in the **Setup** menu.
3. Select **Edit**.
4. Enter network setting information obtained from your IT network administrator or local service provider.
5. Select **Save**.



4 Modify Modbus Settings

1. Navigate to **Modbus Settings** in the **Setup** menu. Default information is displayed.
2. If any information needs to be changed, select **Edit**.
3. Enter the Modbus Channel-1 and Channel-2 information. Obtain from service tool or applicable control HMI. Also, enter the port number for Modbus TCP.
4. Select **Save**.
5. All devices connected to same Modbus channel must have same Modbus Configuration (baud rate, parity, stop bits).



5 Enter Date and Time Settings

1. Navigate to **Date and Time Settings** in the **Setup** menu.
2. Select **Edit**.
3. Select time method and enter any required information.
4. Select **Save**.



Additional Information

If you have any questions regarding the installation, contact your nearest authorized Cummins distributor or dealer. For additional information, refer to the PowerCommand 500/550 Owner Manual available on the Technical Publications CD. For more information on Cummins products and services, go to www.power.cummins.com.

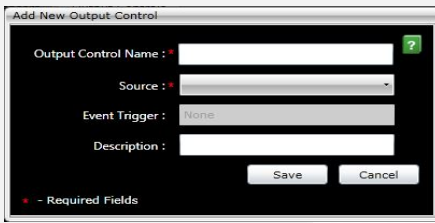
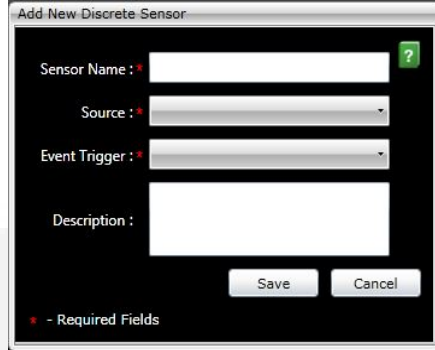
6 Add Devices

1. Navigate to **Device Configuration** in the **Setup** menu.
2. Select **Add New Device**.
3. Select the device type (Genset, ATS, I/O Device) and enter the required information for setting up the device.
4. Select **Save**.
5. Repeat steps 2 through 4 for each additional Modbus device.
6. To view the devices, select **Home** on the menu bar.



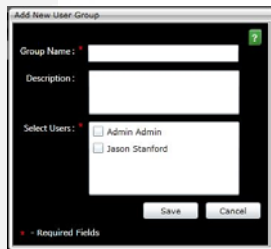
7 Add Sensors and Outputs

1. Navigate to **Sensors and Outputs** in the **Setup** menu.
2. To add a sensor, from the **Inputs** tab, select **Add New Sensor**.
 - a. Select the sensor type (Discrete or Analog) and enter sensor information.
 - b. Select **Save**.
3. Repeat step 2 to add additional sensors.
4. To add an output, from the **Outputs** tab, select **Add New Output**.
 - a. Enter output information.
 - b. Select **Save**.
5. Repeat step 4 to add additional outputs.



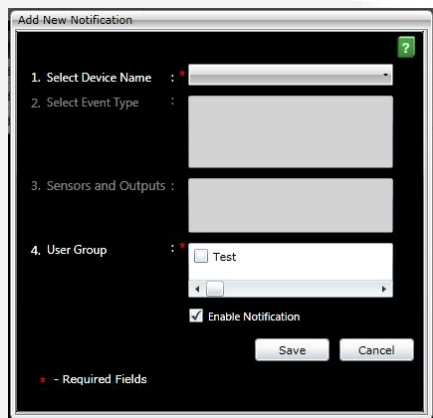
8 Enter User/User Group Information

1. Navigate to **User Profile Settings** in the **Setup** menu.
2. From the **Users** tab, select **Add New User**.
3. Enter the appropriate user information.
4. If the user is to receive notifications, select the appropriate methods.
5. Select **Save**.
6. Repeat steps 2 through 5 to add additional users.
7. To create a group (for notifications), select the **User Groups** tab.
8. Select **Add New User Group**.
9. Enter the user group name and select the users to be included.
10. Select **Save**.
11. Repeat steps 7 through 10 to add additional user groups.



9 Enter Notification Information

1. Navigate to **Notifications** in the **Setup** menu.
2. Select **Add New Notification**.
3. Select a Device Name and Event Type.
4. To receive notifications, select a user group and make sure **Enable Notifications** is checked.
5. Select **Save**.
6. Repeat steps 2 through 5 to add additional notifications.



10 Enter Mail Settings Information

1. Navigate to **Mail Settings** in the **Setup** menu.
2. Select **Edit**.
3. Enter the SMTP server information.
4. Select **Save**.



11 Complete the Installation

1. After all configurations are complete, unplug the USB-OTG cable from the PowerCommand 500/550. Then move PowerCommand 500/550 to the installation site.
2. Connect the Ethernet cable from the PowerCommand 500/550 to the site's network (Ethernet hub/switch).
3. For the wireless option only (GSM or CDMA cell modems),
 - Open Installations – Attach antenna to the SMA connector on the PowerCommand 500/550.
 - Metal Cabinet Installations – Choose a location for the antenna, preferably near the top of the cabinet. Create a 9/32-inch (7mm) hole and install the bulkhead end of the antenna extension cable. Connect the other end to the SMA connector on the PowerCommand 500/550. Attach the antenna to the connector on the outside of the cabinet.
 - Activate the modem. Refer to the Owner Manual for the appropriate Modem Activation Process.
4. For installations that use legacy controls, install a ModLon II Gateway for interfacing LonWorks to Modbus RTU communications. (See instructions in Instruction Sheet C673.)
5. For wiring up the Modbus communication over RS-485, use 24 AWG or larger, shielded, twisted pair cable. Both Modbus channels are located on the TB2 connector.

Using a twisted pair of the Modbus cable, connect the RS-485 signal wires from the generator set, ATS, or AUX101 control to the corresponding points on the PowerCommand 500/550 terminal block. Either channel is acceptable, provided it is consistent with information from step 7 (Add Devices).

Note: All devices wired to the same Modbus channel must have the same Modbus configuration (baud rate, parity, stop bits). Multiple devices can be wired over daisy chain before connecting to Channel-1 or Channel-2).

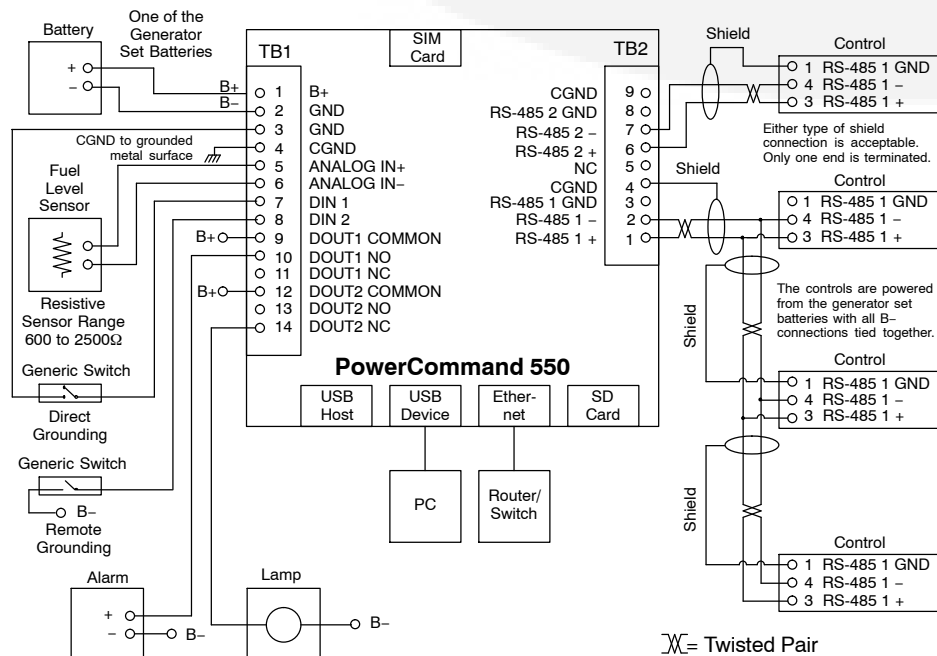
A ground reference wire may be necessary depending on the power supply configuration. If the PowerCommand 500/550 is powered from the same source as the connected PowerCommand Control, a ground wire is not needed. If the PowerCommand 500/550 uses a separate power supply, a ground reference wire should be connected.

Connect the cable shield to either CGND on the PowerCommand 500/550, or the ground pin on the generator set, ATS or AUX101 control, but not both. Refer to the **External Connectivity Diagrams** for more information.

6. If needed, use standard 24 AWG or larger wire to complete the following PowerCommand 500/550 TB1 connections.
 - Wire the Analog Resistive Inputs to an appropriate sensor (for example, a fuel sensor).
 - Wire Discrete Input(s) and Discrete Output(s) to the desired device(s).
- Refer to the **External Connectivity Diagrams** for common examples.
7. If needed, insert an SD card or USB flash drive as external memory for data logs.
 8. Connect the PowerCommand 500/550 to a 12/24VDC generator set battery or an isolated DC power supply.
 9. Mount the PowerCommand 500/550 on a DIN rail or place on flat surface (rubber feet are provided underneath base).

External Connectivity Diagrams

Common Power Supply:



Separate Power Supply:

