TEXAS INSTRUMENTS

TI-Nspire™ CX Navigator™ Setup and Troubleshooting Tip Sheet

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TI-Nspire™ CX Navigator™ Setup and Troubleshooting

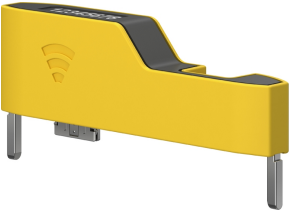## *Setting up the TI-Nspire™ CX Navigator™ Teacher Software*

The TI-Nspire™ CX Navigator™ System provides the hardware and software tools needed to set up a wireless classroom network.
In a wireless classroom environment, the TI-Nspire™ CX Navigator™ Teacher Software enables you to:

- Use **Quick Poll** to send polls to students, receive student responses, and review the poll results with students.
- Use **Screen Capture** to capture screens from student handhelds or computers automatically, or at specific time intervals.
- Use **Live Presenter** to display work as it is being performed on your handheld screen, or on a student handheld screen.
- Use the **Review Workspace** to collect and review student assignments, watch results in real time as students answer questions, and analyze data for the entire class or for individual students.

About the Hardware

Depending on classroom requirements, your TI-Nspire™ Navigator™ System may include the following hardware, which is used to create a wireless communications network so that your computer can communicate with student handhelds:

Hardware Name	Image	Use
TI-Nspire™ Wireless Network Adapter		Attaches to the TI-Nspire™ CX and TI-Nspire™ CX CAS handhelds to enable wireless communication over a 2.4GHz band.
TI-Nspire™ CX Wireless Network Adapter – *v2*		Attaches to the TI-Nspire™ CX and TI-Nspire™ CX CAS handhelds to enable wireless communication over a 2.4GHz or 5GHz band.

Hardware Name	Image	Use
TI-Nspire™ Navigator™ wireless cradle		Attaches to all TI-Nspire™ CX and TI-Nspire™ handhelds to enable wireless communication over a 2.4GHz band.
TI-Nspire™ Navigator™ access point		Connects to the teacher computer to provide a 2.4GHz wireless communication link.
TI-Nspire™ CX Navigator™ access point		Connects to the teacher computer to provide either a 2.4GHz or 5GHz wireless communication link.

Before You Begin

When you launch a new version of the TI-Nspire™ CX Navigator™ Teacher Software for the first time, the TI-Nspire™ CX Navigator™ System Startup wizard opens and guides you through the automated process to set up your wireless classroom. Before you begin the wireless set up process:

- Make sure you have installed and activated the TI-Nspire™ CX Navigator™ Teacher Software on your computer.

- If you are using TI-Nspire™ Navigator™ wireless cradles, make sure each cradle is charged (⬚ LED is solid amber or solid green).

    Note: If you are using TI-Nspire™ wireless network adapters, you do not need to charge them. The wireless network adapters are powered by the handhelds.

- Disconnect the TI-Nspire™ Navigator™ access point or TI-Nspire™ CX Navigator™ access point from your computer.

Automated System Startup

When you launch the software, the Startup wizard guides you through the steps needed to:

- Update all student and classroom handhelds to the latest operating system (OS) version. The OS on the handhelds must match the software version installed on your computer.

    Important! When updating the OS, handhelds must be connected to the computer using a USB cable or TI-Nspire™ CX Docking Station.

- Connect the access point and, if needed, update the access point firmware.

- Name the class network.

- If required, select a channel for the access point.

- Add wireless clients to your network.

- Create a backup copy of the class network configuration.

Updating the Handheld Operating System

When you install or update the TI-Nspire™ CX Navigator™ Teacher Software, the Startup dialog box opens when you launch the software for the first time. You **must** update all student and classroom handhelds to the latest operating system.

Startup

TI-Nspire™ Navigator™ System Startup

All handhelds and desktop software must be updated to version 4.0 to enable wireless connectivity.

Disconnect the access point from the computer.

If the access point is connected to the computer, please **disconnect it now** before connecting your TI-Nspire™ handhelds.

Connect your TI-Nspire™ CX handhelds.

Connect the TI-Nspire™ handhelds to the computer with a docking station or USB cable, and press the "Detect Handheld OS" button to determine if handheld OS updates are required. **NOTE: It may take several seconds after connecting handhelds for the "Detect Handheld OS" button to become available.**

TIP: If you cannot connect all handhelds to the computer at one time, connect as many handhelds as possible and update the OS on those handhelds. After the OS update is complete, disconnect the handhelds and repeat the OS update process until all handhelds are updated.

> Detect Handheld OS

☐ All handhelds are updated to OS version 4.0.

Help   Next

Complete the following steps to ensure all handhelds are updated.

1. Disconnect the access point if it is connected to your computer.
2. Connect the handhelds to the computer.

    You must connect handhelds using a USB cable or connect multiple handhelds using TI-Nspire™ docking stations.

3. Click **Detect handheld OS**.

    • If the OS for all connected handhelds matches the software version, the Handheld OS Update dialog box is displayed informing you that all handhelds are up to date. Click **Close** to return to the Startup dialog box.

    • If the OS on the connected handhelds is not current, the Handheld OS Update Required dialog box is displayed. Click **Update OS**.

    The Add to Transfer List dialog box opens.
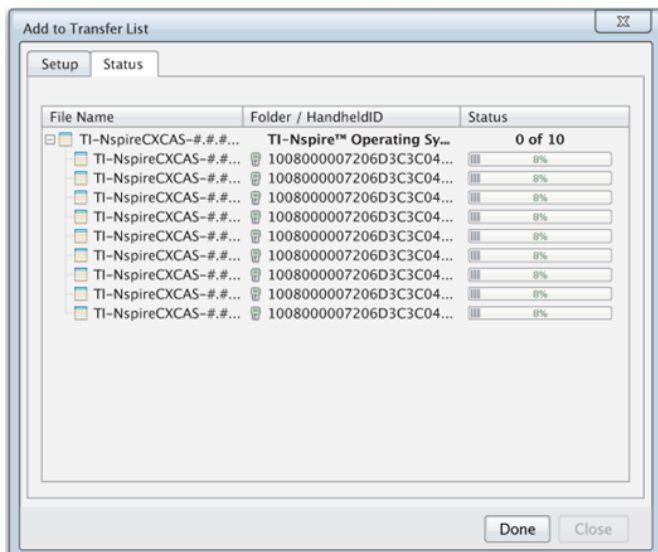
The matching OS files are transferred to the connected handhelds. You can update TI-Nspire™ CX handhelds and TI-Nspire™ handhelds at the same time. If you cannot connect all handhelds at one time, connect as many as possible and update the OS. After the OS update is complete, disconnect the handhelds and repeat the OS update process until all handhelds are updated. The software will detect the OS needed and begin the transfer as you connect the handhelds.

- Click **Done** to stop the transfer process when all handhelds are updated.
    - The Add OS Transfer List closes.
   - The Start Up dialog box is displayed.

4. Select the **All handhelds are updated to OS version 4.2** check box.

5. Click **Next**.

    The Connect Access Point dialog box opens.

### *Connecting the TI-Nspire™ Navigator™ Access Point*

When the operating system update on all handhelds is complete, the next step in the system startup process is to connect the access point. When you connect the access point to your computer, it is powered on and ready to communicate with wireless network adapters and cradles.
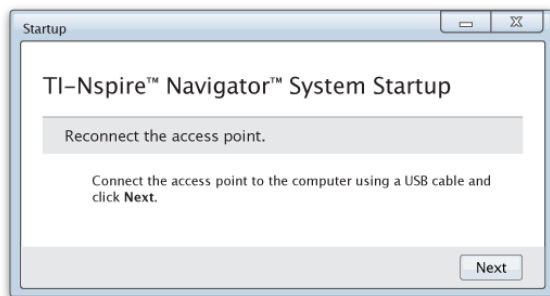
1. Connect the access point to the computer using a USB cable.

   a) Connect the small end of the USB cable to the access point.

      Connect the access point directly to your computer. Do not connect the access point to a USB hub or docking station.

   b) Connect the other end of the cable to the USB port on your computer.

   c) Make sure the access point power light is on. The power light indicates that the access point is receiving power from the computer. The signal light indicates wireless link activity.

TI-Nspire™ Navigator™ access point   TI-Nspire™ CX Navigator™ access point
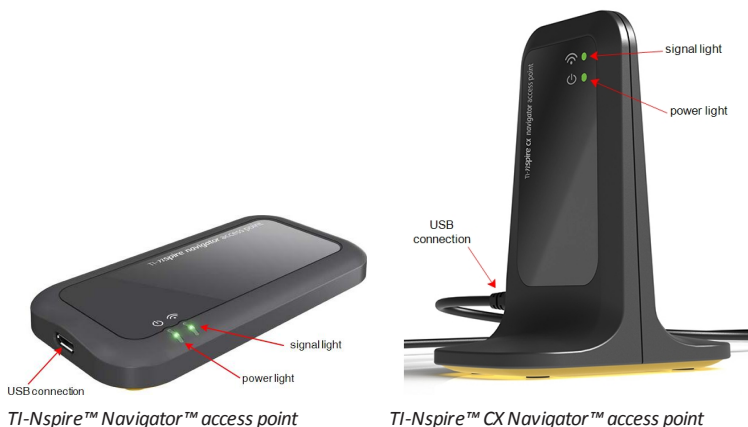
   Note: If the software does not detect a connected access point within one minute, an error message is displayed. Close the error message, and then disconnect and reconnect the access point.

2. Click **Next**.

   The software detects the access point type and checks the firmware version on the access point. If a newer firmware version is available, the software updates the firmware.

Note: It may take up to 60 seconds for the software to detect the access point.

Important! Do not stop the update process or disconnect the access point until the firmware update is complete.

When the update is complete, the software checks the access point for a configured classroom network.

- If a classroom network exists, the software reminds you that you can keep the current setup or make changes.
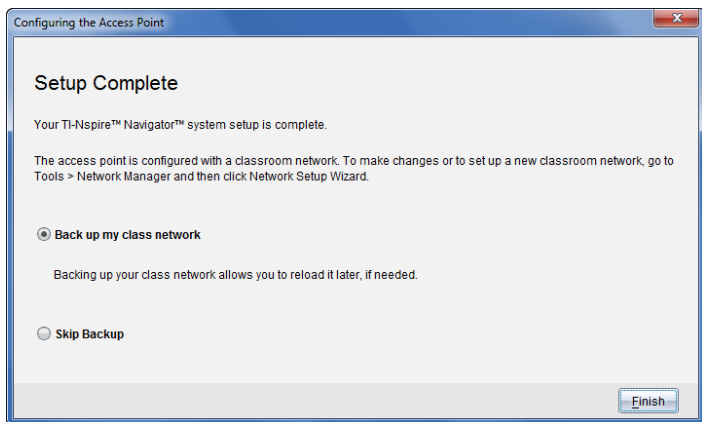
- If no classroom network exists, the software guides you through the Class Network Setup wizard.

3. Select **Back up my class network** to save a copy of your classroom network configuration.

    The saved network information includes the list of wireless client IDs, the network name, and the channel and country selected on the access point.

    Saving a network enables you to reload the configuration at a later time using the Network Manager. By default, the file is saved in the **My Documents/TI-Nspire/Navigator Network** folder.
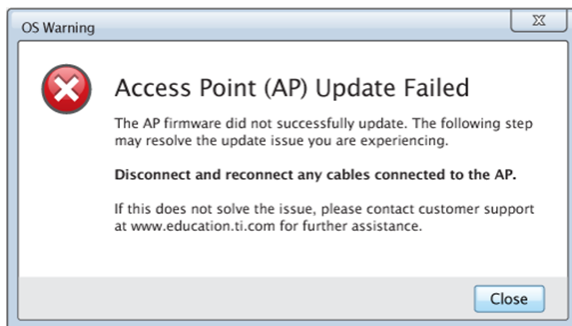
    To finish without saving a backup copy, select **Skip backup**.

4. Click **Finish** to complete the setup.

    Note: You can set up a network at any time, or make edits to an existing network, by using the Network Manager.

Troubleshooting

If the firmware update fails, the OS Warning dialog box opens.

To resolve the problem, disconnect and reconnect any cables connected to the access point, and the software will automatically start the update process. If this does not resolve the issue, contact Customer Support.


Confirming Handheld OS Version

If you did not update handhelds during startup, the wizard asks you to confirm that classroom and student handhelds are updated to the latest OS version. The OS version on the handhelds must match the software version before you can set up the class network.

To check the OS version on a handheld,

1. Press ⟨🏠on⟩ to turn the handheld on.

2. Select **Settings > Status** to open the Handheld Status window.
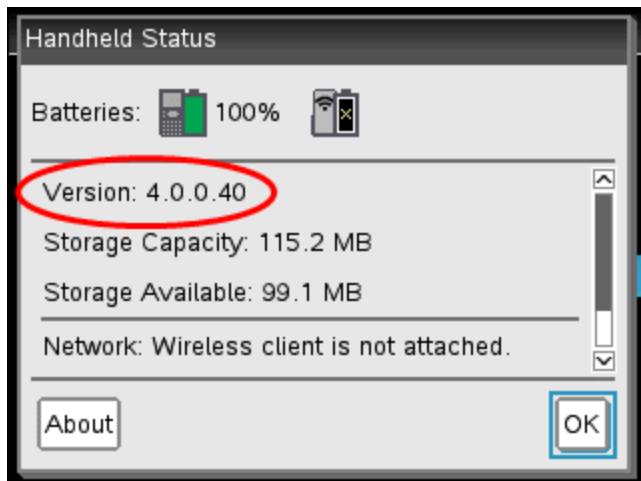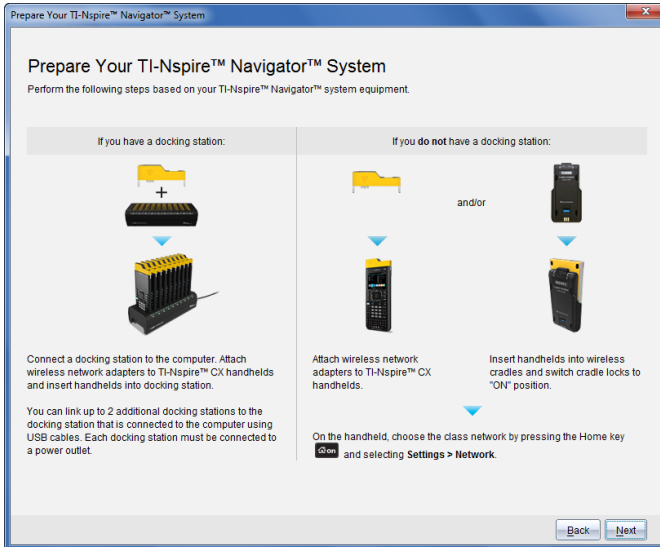

3. Make sure the OS on the handheld matches the software version on your computer.

   • If the OS version is current, select **Yes**.

   • If the OS version is not current select **No**.

4. Click **Next**.

   • If the OS version was not current, the Handheld OS Update Required dialog box is displayed. Click **Update OS** to open the Add OS Transfer Tool and update the handhelds.

   • If the OS version is current, the Class Network Name dialog box opens and you can continue the process to set up the class network.

Adding Wireless Clients to the Network

After you assign a name to your class network and the access points are configured, you must associate your wireless clients (wireless adapters and wireless cradles) with the network. How you complete this process depends on whether you have docking stations that enable you to work with multiple handhelds and wireless clients at one time.
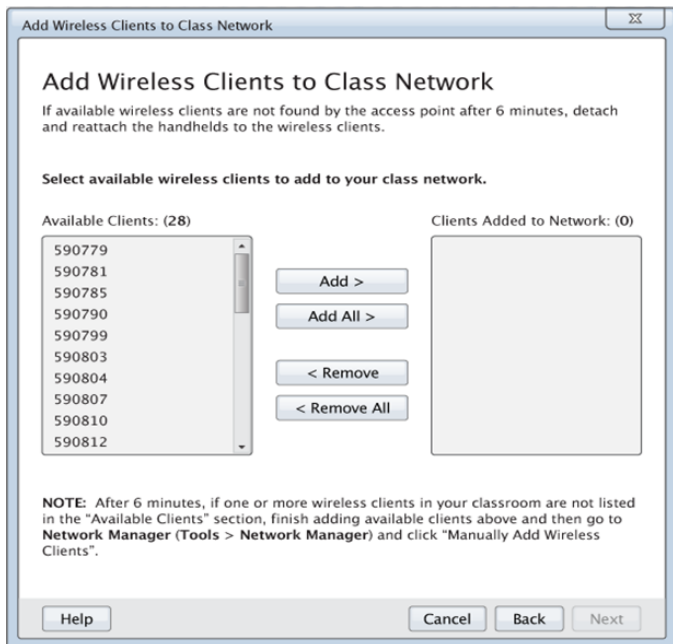
• If you have a docking station, attach the adapters to the handhelds, and then insert the handhelds into a docking station that is connected to your computer. You can link two additional docking stations to the connected docking station.

• If you do not have a docking station, attach the wireless adapters or cradles to the handhelds.

Prepare Your TI-Nspire™ Navigator™ System

Perform the following steps based on your TI-Nspire™ Navigator™ system equipment.

If you have a docking station:	If you do not have a docking station:
Connect a docking station to the computer. Attach wireless network adapters to TI-Nspire CX handhelds and insert handhelds into docking station.	Attach wireless network adapters to TI-Nspire™ CX handhelds.
You can link up to 2 additional docking stations to the docking station that is connected to the computer using USB cables. Each docking station must be connected to a power outlet.	Insert handhelds into wireless cradles and switch cradle locks to "ON" position.
	On the handheld, choose the class network by pressing the Home key and selecting **Settings > Network**.

1. Follow the on-screen instructions to connect the handhelds to their wireless adapters, cradles, and/or docking stations, and then click **Next**.

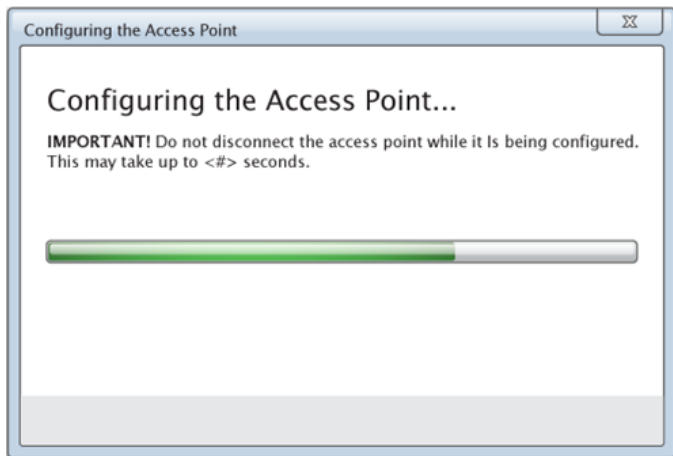   The Add Wireless Clients to Class Network dialog box opens.

   The access point finds the available clients and lists them in the Available Clients box. It can take up to six minutes for the access point to find all available clients. Check the number of available clients to ensure all clients are listed.
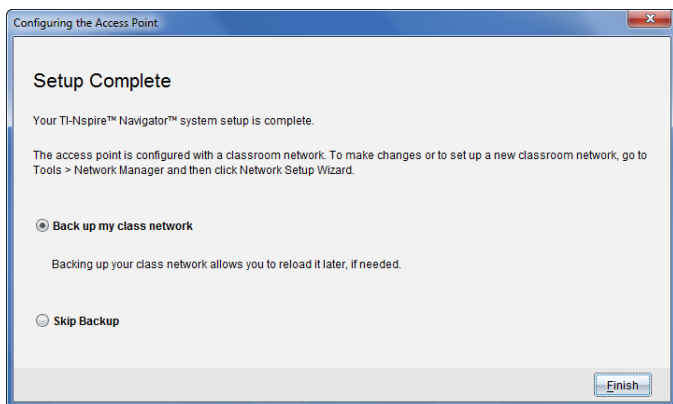
Add Wireless Clients to Class Network

Add Wireless Clients to Class Network

If available wireless clients are not found by the access point after 6 minutes, detach and reattach the handhelds to the wireless clients.

Select available wireless clients to add to your class network.

Available Clients: (28)

590779
590781
590785
590790
590799
590803
590804
590807
590810
590812

Clients Added to Network: (0)

Add >

Add All >

< Remove

< Remove All

NOTE: After 6 minutes, if one or more wireless clients in your classroom are not listed in the "Available Clients" section, finish adding available clients above and then go to **Network Manager (Tools > Network Manager)** and click "Manually Add Wireless Clients".

Help   Cancel   Back   Next

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2. Follow steps **a**, **b**, and **c** on all TI-Nspire™ handhelds that are *not* inserted into a docking station.

   a) Turn on each handheld.

   b) From the Home screen of the handheld, select **Settings > Network**. The handheld lists the available networks that are within range.

   c) Select the name that you assigned to your class network, and click **Connect**.

3. On the Add Wireless Clients to Class Network screen, select the wireless clients you want to add.

   • To add all available clients listed, click **Add All**.

   • To add specific clients, select one client ID at a time, and then click **Add**.

   Important! Clients are not part of the class network until you complete this step to add them.

4. Click **Next** to associate the wireless clients with the classroom network.

The software associates the attached wireless clients with the classroom network. When the process is complete, the Setup Complete dialog opens.

5. Select **Back up my class network** to save a copy of your classroom network configuration.

   The saved network information includes the list of wireless client IDs, the network name, and the channel and country selected on the access point.

   Saving a network enables you to reload the configuration at a later time using the Network Manager. By default, the file is saved in the **My Documents/TI-Nspire/Navigator Network** folder.

   To finish without saving a backup copy, select **Skip backup**.

6. Click **Finish** to complete the setup.

Note: You can add more wireless adapters or cradles to the class network at a later time using the Network Manager.

Connecting the Handhelds to the Wireless Adapters

The wireless network adapters work with the TI-Nspire™ CX and TI-Nspire™ CX CAS handhelds. To connect the handheld to a wireless adapter, follow these steps.

1. Position the wireless adapter on top of the handheld so the connector on the adapter lines up with the connector on top of the handheld.

❶ Connector

❷ Guides for aligning with handheld

❸ Grooves to align wireless adapter
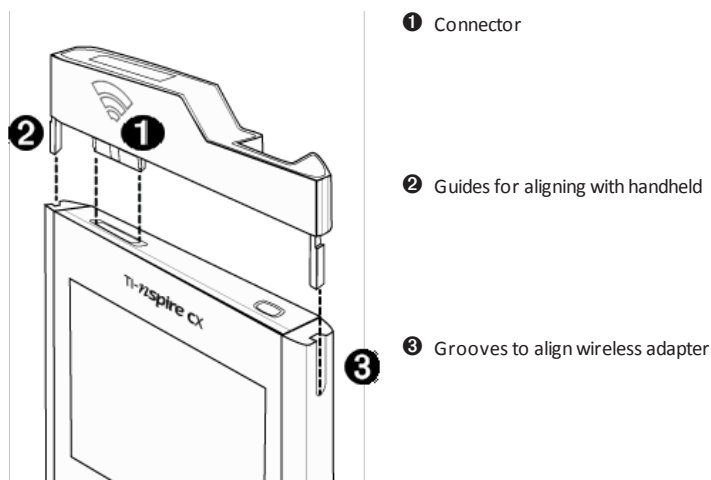
2. Slide the adapter into position, making sure the guides on the sides of the adapter slide into the grooves on the sides of the handheld.
3. Firmly press the adapter into place.

Connecting the Handhelds to Cradles

The wireless cradles work with the TI-Nspire™, TI-Nspire™ CAS, TI-Nspire™ CX and TI-Nspire™ CX CAS handhelds. To connect the handheld to a cradle, follow these steps.

1. Slide the lock on the back of the cradle to the OFF position.

Lock in OFF position

2. To attach the handheld, face the screen upward and slide the handheld onto the top of the wireless cradle. Be sure that both sides of the handheld are inserted into both of the side guides.
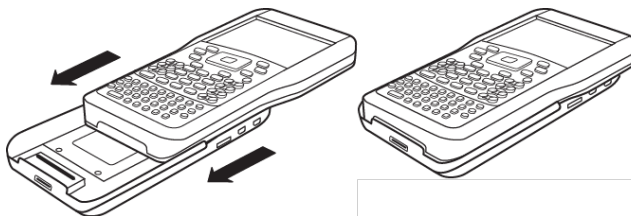
3. Press firmly to make a good connection. When properly connected, the handheld appears to be sitting on top of the cradle.

4. Lock the handheld in place by sliding the lock on the back of the cradle to the ON position.

Lock in ON position

5. Insert each cradle into the charging bay. Make sure the LED is amber.

TI-*nspire*
cradle charging bay

At the end of the school day, return the wireless cradle to the charging bay and charge them overnight. The cradles are charged when all the ⬜ (power status) LEDs are solid green or amber.

Logging In to the TI-Nspire™ CX Navigator™ System from the Handheld

The TI-Nspire™ CX Navigator™ classroom learning system uses both your computer and student handhelds. For you and your students to communicate using the TI-Nspire™ Navigator™ network, students must log in to the network from their handhelds.

Note: You do not have to log in to communicate with student handhelds; you can use the Transfer Tool to delete files or send files and operating systems to student handhelds. However, if you plan to participate from your handheld during the TI-Nspire™ Navigator™ class session, then you must log in to the TI-Nspire™ Navigator™ network from your handheld.

For more information on using a handheld, refer to the handheld guidebooks available at education.ti.com/guides.

Before you log in, make sure these items are ready:

- You have created your teacher account in Teacher Preferences.
- You have started a class session on your computer.
- The TI-Nspire™ handheld is ready for login. (The 🕁 icon is blinking.)

Before your students log in, make sure you complete these items:

- Create student accounts.
- Provide students with the class network name, their user names and, if necessary, their passwords.

Logging In to the TI-Nspire™ Navigator™ Network

1. To log in, do one of the following:

    - From the Home screen of your TI-Nspire™ handheld, select **5:Settings > 5:Login.**
    - From a screen other than the Home screen, press $\boxed{\text{doc}\,\text{v}}$ **> 8:Login**.

    The last network the wireless client was associated with appears on the handheld screen.

    Note: If the handheld is connected to the computer with the USB cable, no network names appear on the screen, and you can continue logging in.

2. If the name of the network that appears is correct, continue with login. If the network is not correct, click **Network**.

    The handheld screens displays all networks it has been connected to, and also displays other networks within range.
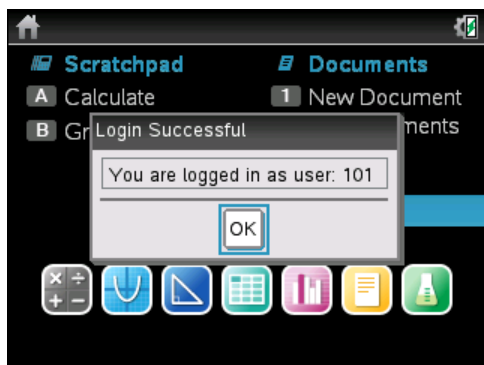
3. Select the network from the list, and then click **Connect**.

   The login screen shows the connection status and displays the network name when the connection is successful.

4. Type your username and password.

5. Select **Login**.

   The Login Successful screen opens.

6. Click **OK**.

TI-Nspire™ Handheld Login Status Icons

The icons on the TI-Nspire™ CX, TI-Nspire™ CX CAS, TI-Nspire™, and TI-Nspire™ CAS handheld screens indicate the communication status between the handheld and the access point, wireless adapter, wireless cradle, or TI-Navigator™ network. The icons indicate status as follows.

Icon	Status	Meaning
No icon		If no icon appears on the handheld, the handheld is not searching for an access point. Unattach and reattach the wireless adapter or cradle.
📶	Blinking	The handheld is searching for an access point.
📶	Solid	The handheld has found an access point.
📶	Solid	The handheld is not communicating with the adapter or cradle. Remove the handheld from the adapter or cradle, wait for the icon to disappear, and then reattach the handheld to the adapter or cradle.
↻	Blinking	The handheld is connected to the network and is ready to login.
↻	Solid	The handheld is logged in to the network.

Troubleshooting

This section describes some problems you may encounter and gives suggestions on how to resolve the problem.

If you need more assistance, contact Customer Support.

The software does not detect all of the handhelds that are connected.

USB 3.0 technology limits the number of handhelds that can be detected by a computer.

To find out if you have a USB 3.0 port:

• On Windows®, go to Device Manager in the Control Panel.

• On Mac®, go to **Apple > About this Mac > More Info > System Report**, and then select **Hardware > USB** on the left panel.

You can connect and update one handheld at a time using a USB cable, or up to 10 handhelds at a time using a TI-Nspire™ CX Docking Station.

During the software setup, the access point update failed.

Disconnect and reconnect any cables connected to the access point. The software automatically starts the update process again.

The updated operating system does not install on the handheld.

Make sure the handheld is fully charged before you start an OS update.

The software did not accept the class network name.

The class network name can be up to 22 characters long. Names can consist of letters (A...Z, a...z), (0...9), and spaces; but cannot contain special characters such as ? " $ \ ! [ ] +. Use a name that is unique, easy to remember, and easy for you to identify. For example: Ms. Smith Math Rm 65

The access point is experiencing connectivity problems.

Make sure no other objects are near the access point when it is plugged in.

The access point operating channel or band may affect connectivity.

Important! Always check with your IT administrator before changing access point channels.

- If the TI-Nspire™ Navigator™ access point is connected, you can select operating channel 1, 6, or 11.

- If the TI-Nspire™ CX Navigator™ access point is connected, and you are using the TI-Nspire™ CX Wireless Network Adapter – *v2* adapters, you can select either a 2.4GHz band or 5GHz band, and you can select a different operating channel.

- If you have a mixture of wireless network adapters, you must select the 2.4GHz band.

  The default operating channel for 5GHz in the United States, Canada, and China is 36. The default operating channel for 5GHz in other countries is 149.

To select a different band or operating channel, go to **Tools > Network Manager** and then click **Change Operating Channel**.

The wireless network is not working.

The OS on the handhelds must match the TI-Nspire™ software version on the computer in order to use the wireless network.