



LSS2200-8P

Managed Layer 2 Gigabit Ethernet PoE++ Switch

(8) 10/100/1000Base-T IEEE 802.3bt + (2) 10G/5G/2.5G/1G SFP+ Multi-Gig Slots

MobileApp User Guide

Part Number 33870
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Revision History

Date	Rev.	Comments
10/21/22	A	Initial release at MobileApp FW v1.0.0.0R3.
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1. Introduction

Product Description

The LSS2200-8P is a managed Layer 2+ Gigabit Ethernet switch offering eight (8) 1GBase-T interfaces with full IEEE 802.3bt 90W support, two (2) 10/5/2.5/1GBase-T multi-gigabit SFP+ slots, two (2) programmable Digital Input/Outputs with 12V power output, and one (1) RJ-45 console port.

The LSS2200-8P MobileApp provides a mobile interface via the BLE and NFC interfaces to connect to, configure, and diagnose the switch from a smartphone or tablet.

About This Manual

This manual describes how to obtain, install, and operate the LSS2200-8P MobileApp. Note that this manual may provide links to third party websites for which Lantronix is not responsible.

Related Manuals

- LSS2200-8P Quick Start Guide, 33859
- LSS2200-8P Install Guide, 33860
- LSS2200-8P Web User Guide, 33861
- LSS2200-8P CLI Reference, 33862
- LSS2200-8P REST API User Guide, 33863
- Release Notes (revision specific)

2. Installation

System Requirements

Note that anti-virus and password protection are recommended with BLE operation.

- Tablet : any with Android OS, NFC, and BLE capability
- Smart Phone: any with Android OS, NFC, and BLE capability
- Browser: current version of most popular web browsers

Software Components

The LSS2200-8P interfaces with the following software elements:

- Web UI on a desktop or laptop
- CLI (Command Line Interface)
- Smartphone or tablet via NFC
- Smartphone or tablet via BLE

Automatic Operation

The LSS2200-8P switch performs these operations automatically:

- Shut down the switch if an over temperature condition is detected. If the temperature within the enclosure exceeds 70°C the switch will power off automatically.
- Shut off power to a port in case of a port being over powered. If PD power exceeds power available, ports will shut down according to priority settings (see the `poe priority` command in the CLI Reference).
- Load NFC configuration at boot up. An option exists to disable this feature. See the CLI Reference.
- Update PoE firmware at boot up. This can also be done via CLI and Web UI. The switch will only update PSE firmware automatically if it can correctly determine the current running version. Otherwise, the message *"Unable to determine running PSE firmware version, exiting PSE firmware update"* displays.

3. Operation

Quick Instructions

Following are quick instructions for installing and using the LSS2200-8P Mobile App. For detailed instructions, including screenshots, see “[Detailed Instructions with Sample Screen Shots](#)” starting on page 10.

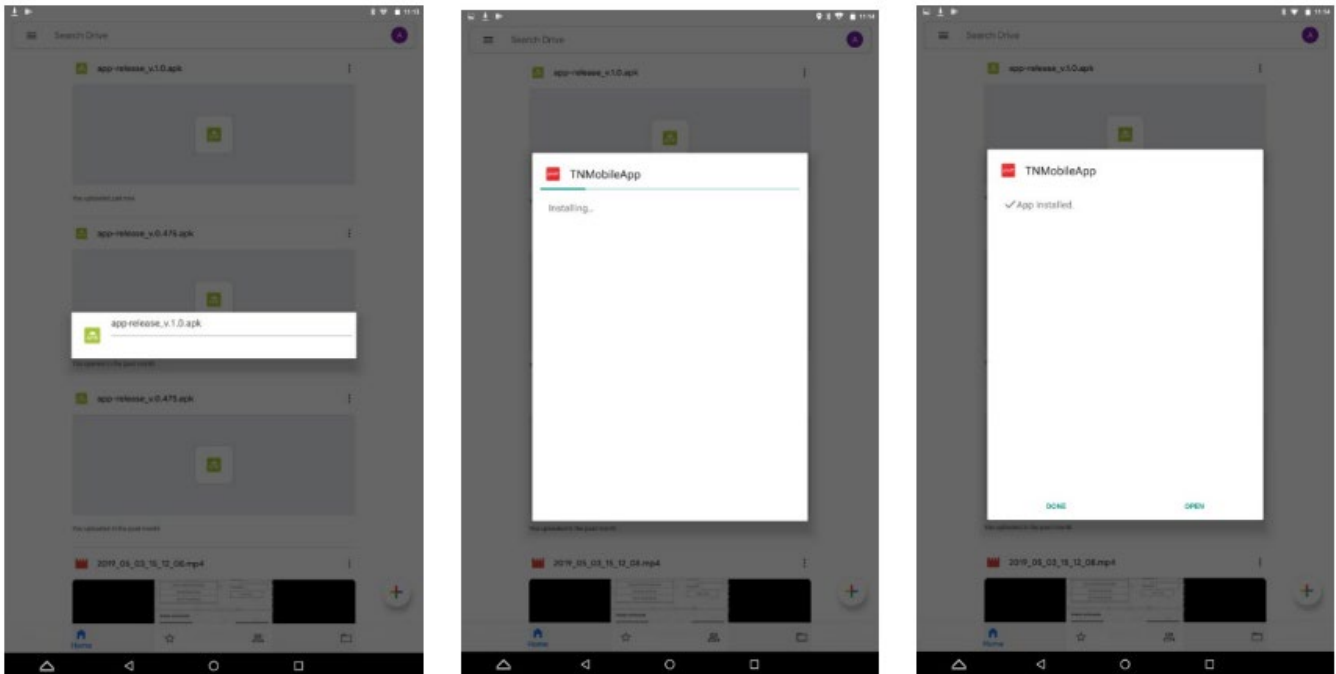
How to Obtain and Install

Lantronix LSS2200-8P Mobile App was designed to allow users to take advantage of the convenience features of Near Field Communications (NFC) and Bluetooth Low Energy (BLE) that are provided in the LSS-2200-8P.

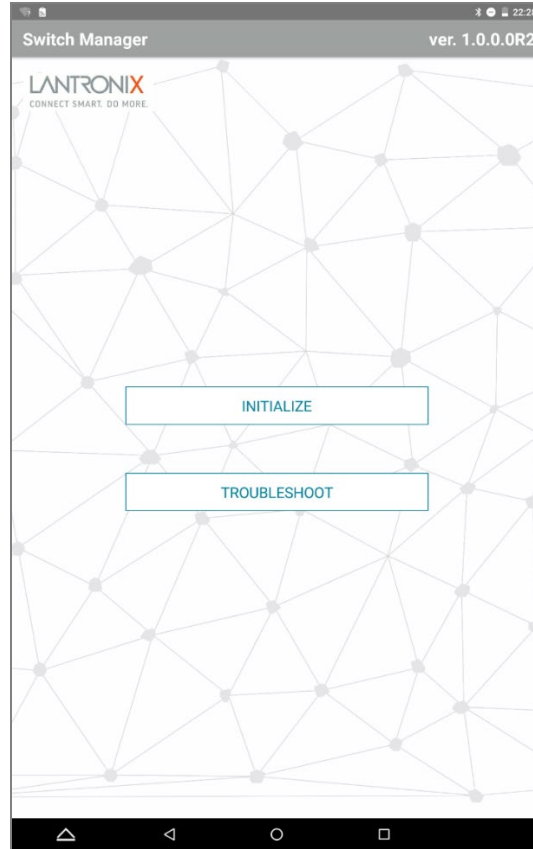
The LSS2200-8P Mobile App can be used on a mobile phone or tablet equipped with an Android-based Operating System, NFC reader, and BLE capability.

To access the LSS2200-8P Mobile App:

1. Using the web browser on your mobile phone or tablet, go to the Download Request page (Log In required).
2. Fill out the form to get the link for download.
3. Read the End User License Agreement; check the box that you have read and agree to the terms and hit Submit.
4. A Lantronix representative will confirm that you are authorized to access the LSS2200-8P Mobile App and send you a link to download. This could take up to 24 hours.
5. Download and save the LSS2200-8P Mobile App (e.g., *eos-mobileapp_1.0.0.0R4*) to a location on your mobile device.
6. When you select the LSS2200-8P Mobile App it will ask you if you want to install it. Select INSTALL. The message “*Installing...*” displays momentarily. When the install is complete the message “*App installed.*” displays.



7. After the install, a prompt displays the options “DONE” and “OPEN”. Click OPEN.
8. To open the LSS2200-8P Mobile App, select the Mobile App button with the Lantronix logo. The Home page displays:



9. From the home page there are two options:

INITIALIZE is used with NFC to pre-configure the switch prior to installation.

TROUBLESHOOT is used with BLE to access the switch to check or change configuration or reboot the switch after installation without having to physically access the switch with a cable.

The options are described in the sections below.

The ideal use case is for the switch to be pre-configured through NFC (the LSS2200-8P Mobile App) prior to installation or bootup. The switch is then installed in an out-of-reach location (i.e., high on a pole/wall). The switch is powered up and the configuration is set in the switch. At this point, the NFC is no longer used for configuration changes (i.e., no one should have to climb the pole to get close enough to make changes - and no unauthorized person should be able to make changes either) All future changes can be made remotely through the GUI or at the site (from the ground) through BLE using the LSS2200-8P Mobile App.

Configure – To create a configuration file follow these steps:

1. Select **Initialize**.
2. Select the *Configure* tab.
3. At the DHCP checkbox, check DHCP for automatic IP address assignment, or leave unchecked to manually enter IP addresses.
4. *Set IP Address*: you can select *Individual* to configure a single switch or *Range* to configure multiple switches using multiple IP addresses.
5. Enter a Sub-net mask and a Gateway IP address for the switch(es) (required).
6. Enable BLE (BLE is enabled by default. Unchecking it will disable access to the switch from the LSS2200-8P Mobile App via BLE after the configuration is installed. This cannot be reversed from the LSS2200-8P Mobile App and can only be done through the web GUI).
7. The *Set User Credentials* fields are optional:
 - a. Enter a *Username*
 - b. Enter a *Password*
8. In the *Set User Information* fields:
 - a. Enter *System Location*
 - b. Enter *System Name*
 - c. Enter *System Contact* person
9. The *File Name Prefix* will default to **config_**. You may change it if desired.
10. Press *Create File* button.

Transfer – is used to transmit the Configuration information into the switch. **Note**: The switch does not need to be powered or connected to do this. Follow these steps:

1. Lift the lid of the packaging box that the switch shipped in.
2. On the LSS2200-8P Mobile App, select **INITIALIZE**.
3. Select *Transfer*. The available configuration files display in the box in the left side box on the screen.
4. Select the LSS2200-8P Mobile App file (the name of the file will be highlighted when selected and the config details are displayed in the right side box on the screen).
5. Press the **TAP AND GO** button.
6. Hold the smart phone or tablet so the NFC reader is directly over the NFC target on the switch (the device must be within about 4 cm of the switch).
7. You will hear a “chime” and see a message “*Config transferred successfully*” when the configuration has been transferred. If you hear a low tone and see a message “*Failed to write, please reposition your device and try again*”, the configuration has not been transferred. Re-select **TAP AND GO** button and re-position the device, being sure to align the NFC reader area of the device directly over the NFC target on the switch.
8. The *Export* button allows you to export the config file to make edits or changes using a different device. (Note: this is a future enhancement and there is currently no capability to export or re-import files.)
9. You may delete a file after the config file has been successfully transferred or is no longer needed. Ensure the file name is highlighted and press *Delete File*.

Read NFC Tag – is used to check the configuration of a switch.

1. On the LSS2200-8P Mobile App, select *Initialize*.
2. Select *Read NFC Tag*.
3. Hold the smart phone or tablet so the NFC reader is directly over the NFC target on the switch. Note: the device must be within about 4 cm (1.57 inches) of the switch.
4. You will hear a “chime” when the configuration has been read. The configuration information displays on the LSS2200-8P Mobile App screen.
5. If you hear a low tone, the configuration was not recognized. Re-position the device and try again. The configuration information displays on the screen when recognized. If the switch has been powered on and the configuration has already been fully transferred into the switch, you will see a message indicating no config info was detected/the tag was detected but no data exists. The NFC is intended for use prior to powering up the switch. After installation and power-up, changes should be made via the web UI.

Troubleshoot – This feature lets you connect with and troubleshoot the switch via the BLE interface.

If you have multiple LSS2200-8P switches in the vicinity you may need the specific BLE MAC Address from the switch in order to pair the LSS2200-8P Mobile App with the correct switch. This can be found via the web UI at the Switch > Security > Management > BLE menu path. **Note:** use the LSS2200-8P Mobile App for Bluetooth pairing; do not use the Android Bluetooth pairing function. Also, the LSS2200-8P Mobile App will not allow you to disable BLE when the device is paired.

1. On the LSS2200-8P Mobile App, select *Troubleshoot*.
2. Pairing - The LSS2200-8P Mobile App should automatically start searching for eligible BLE-enabled devices to pair with. If it does not, select the *Retry Scan* button to initiate the search. You can limit the displayed devices to only LSS2200-8P switches by checking the LSS2200-8P box above the Pairing box (checked by default). If left unchecked, all available BLE devices in the area will be displayed.
3. A list of available BLE devices displays under Pairing in the upper left corner. Locate the one with the BLE MAC Address for the switch you are trying to troubleshoot. Once the devices have successfully paired, the BLE MAC Address of the switch will be highlighted.
4. Enter the *Username* that you selected when configuring the switch.
5. Enter the *Password* that you selected when configuring the switch.
6. Switch Commands - you can perform several simple actions with the touch of a button:
 - a. Set IP Address
 - b. Reboot Device
 - c. Turn PoE Power On/Off for a specific port
7. Alternatively, you can type CLI Commands in the large box at the bottom of the screen.
Note: If the box indicates “*Please do the pairing*”, the BLE pairing step must be done before you can enter any CLI commands (proceed from step 2 above).

For detailed instructions, including sample screen shots, see ‘Detailed Instructions’ below.

Switch Configuration

Switch configuration can also be via:

- Console Port (Serial) (RS-232 RJ-45) (out-of-band)
- Command Line Interface (CLI)
- GUI via Ethernet (in-band)
- NFC (LSS2200-8P Mobile App)

Note that there are BLE commands in Exec mode and Config mode.

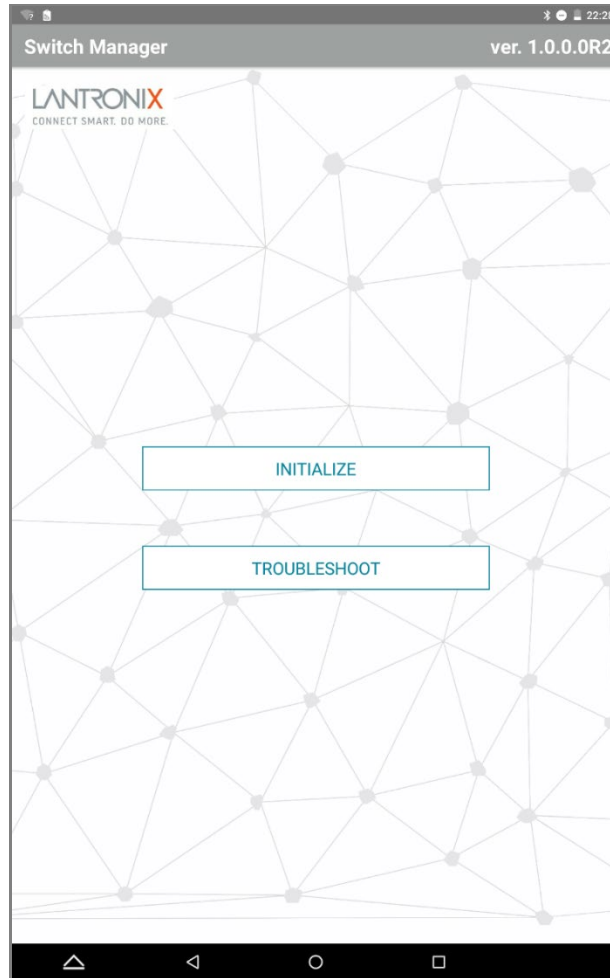
Note: BLE must be enabled to use BLE with the LSS2200-8P Mobile App. The switch ships with BLE enabled, but it can also be enabled via the CLI or via the Web UI. **Note** that the switch has a BLE session timeout; after a minute of inactivity, the CLI session will be logged out and the BLE connection dropped.

Note: The switch ships with NFC enabled by default. You can also enable NFC via the CLI or via the Web UI to be able to use NFC with the LSS2200-8P Mobile App.

Detailed Instructions with Sample Screen Shots

The LSS2200-8P Mobile App interfaces with NFC and BLE to configure and monitor the switch using an Android-based smart phone or tablet.

The LSS2200-8P Mobile App startup page is shown below:



Buttons:

INITIALIZE: Click to use **NFC** (Near Field Communication) to pre-configure the switch before installation.

TROUBLESHOOT: Click to use **BLE** (Bluetooth Low Energy) to access the switch to check change the configuration or reboot the switch after installation without having to physically access the switch with a cable.

NFC Interface

The NFC interface allows easy setup and access. NFC replaces DIP switches and allows a simple configuration process that requires very little training for employees. It also simplifies installation in situations where more than one switch is being installed, since a range of IP addresses can be designated to configure multiple switches at one time. **Note** that anti-virus and password protection are recommended for NFC operation. The NFC module is NFC Forum Type 2 Tag Compliant and ISO/IEC 14443A Compliant.

NFC Configuration

CONFIGURE is used to create a configuration. Select the INITIALIZE button from the Home page. The pages shown below are for creating an individual IP address, a range of IP addresses, or DHCP-assigned IP addresses.

The screenshot shows the 'CONFIGURE' screen with the 'Individual' radio button selected. The 'Set IP Address' section includes fields for IP Address (192.168.1.10), Subnet Mask (255.255.255.0), and Gateway (192.168.1.1). Other fields include Mgmt VLAN (1), Vlan Port Number (1), BLE enabled (checked), Add User credentials (Username, Password), Set User information (System Location, System Name, System Contact), and File Name Prefix (config).

Individual IP Address

The screenshot shows the 'CONFIGURE' screen with the 'Range' radio button selected. The 'Set IP Address' section includes fields for IP Address (192.168.1.1 - 192.168.1.10), Subnet Mask (255.255.255.0), and Gateway (192.168.1.1). Other fields include Mgmt VLAN (1), Vlan Port Number (1), BLE enabled (checked), Add User credentials (Username, Password), Set User information (System Location, System Name, System Contact), and File Name Prefix (config).

IP Address Range

The screenshot shows the 'CONFIGURE' screen with the 'DHCP Enabled' checkbox checked. The 'Mgmt VLAN' and 'Vlan Port Number' fields are set to 1. The 'BLE enabled' checkbox is checked. The 'Add User credentials' section includes fields for Username and Password. The 'Set User information' section includes fields for System Location, System Name, System Contact, and File Name Prefix (config). A 'CREATE FILE' button is visible at the bottom.

DHCP Enabled

Parameter descriptions:

DHCP Enabled: Check the box to allow a configured and running DHCP server to automatically assign IP addresses. Uncheck the box to manually assign IP addresses. The box is unchecked by default.

Set IP Address

IP Address: Check the Individual or Range radio button and enter the individual IP address or the range of IP addresses. The default is 192.168.1.10.

Subnet Mask: Enter the subnet mask. The default is 255.255.255.0.

Gateway: Enter the IP address of the gateway. The default is 192.168.1.1.

Mgmt VLAN: Enter the VLAN ID of the assigned Management VLAN (1-4096).

Vlan Port Number: Enter the port number of the VLAN. The default is 1.

BLE enabled: Check the box to disable the ability to configure the switch via BLE. Configuration will still be allowed via the Web UI or via the CLI commands over a connected console cable. By default the box is checked.

Add / Set User Credentials

Username: Enter the Username that you wish to use to access the switch via the LSS2200-8P Mobile App.

Password: Enter the Password that you wish to use to access the switch via the LSS2200-8P Mobile App.

Set User Information

System Location: Enter text to identify the location of the switch.

System Name: Enter text to identify a name for the switch.

System Contact: Enter text to identify contact information for the switch.

File Name Prefix: Displays “**config.**”. This is the default filename prefix for saving the configuration file(s).

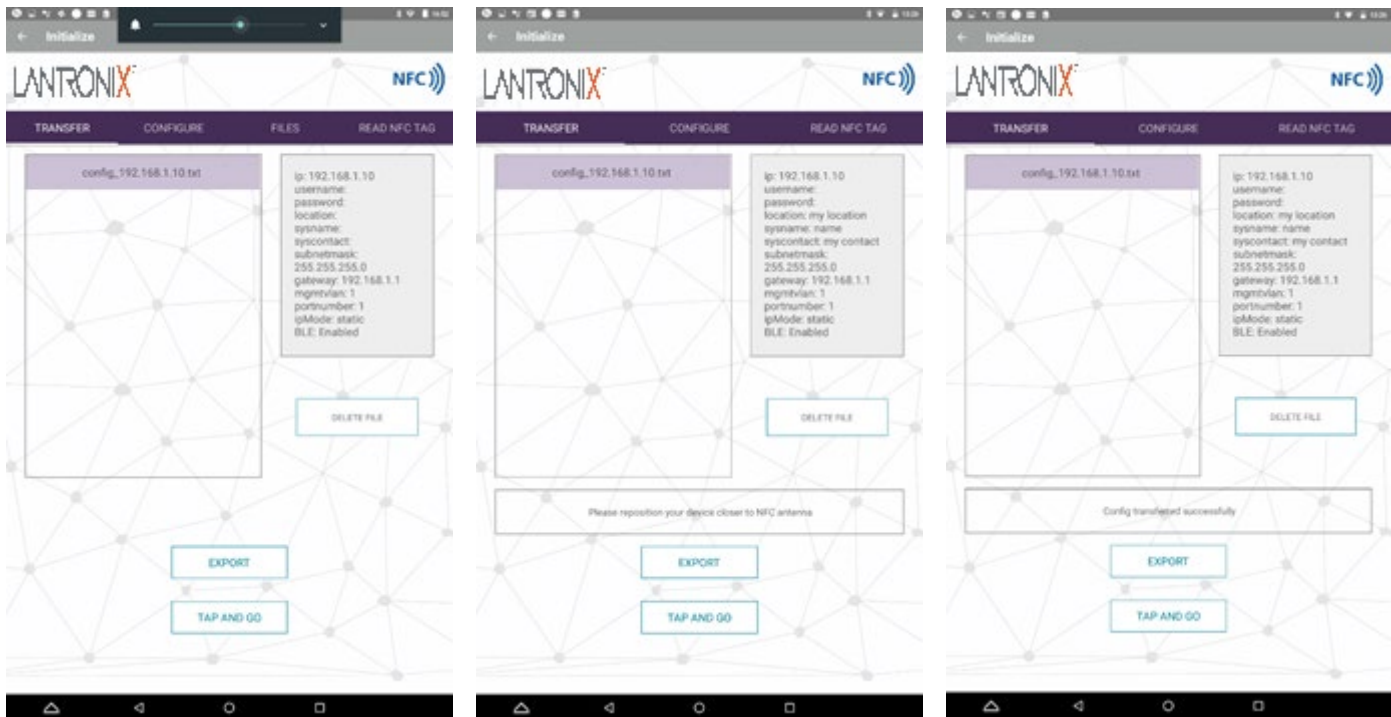
Buttons:

CREATE FILE: Click to save the configuration file(s) to transfer into the switch(es).

← : Click to go back to the Home page.

Message: If the message “*incorrect ip address*” displays, check the parameter descriptions above and re-try the operation.

TRANSFER is used to transmit the saved configuration(s) information into the switch(es). **Note:** the switch does not need to be powered, connected, or even removed from the box to do this. Simply lift the switch box lid and follow the steps. The TRANSFER screens are shown below.



Buttons:

TAP AND GO: Click to transfer the highlighted/selected configuration into a switch. Hold the smartphone or tablet so the NFC reader is directly over the NFC target on the switch. The device must be within about 4 cm of the switch. You will hear a “chime” when the configuration file has been transferred and the LSS2200-8P Mobile App will display the message “*Config transferred successfully*”. If you hear a low tone, the configuration has not been transferred. This is usually because of improper positioning of the device. The LSS2200-8P Mobile App will display a message asking you to *Please reposition your device closer to the NFC antenna* and try again. Select TAP AND GO and reposition the device, being sure to align the NFC reader area of the device directly over the NFC target on the switch.

DELETE FILE: Click to delete the highlighted/selected configuration file after it has been transferred and is no longer needed.

EXPORT: Click to export the highlighted/selected configuration file to make edits and changes using a different device. Note: this is a future enhancement and there is currently no capability to export or re-import files.

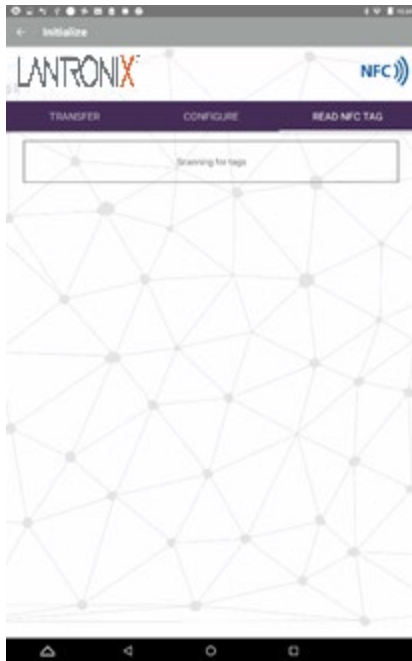
Click ← to go back to the Home page.

EXPORT: → “*Unfortunately MobileApp has stopped*” message displays. Click the OK button to clear the message. The message “*Scanning for tags*” displays, then the Detected tag screen displays (see below).

Read NFC Tag is used to check the configuration that has already been transferred to the switch. Select READ NFC TAG, then hold the smartphone or tablet so the NFC reader is positioned directly over the NFC tag on the switch that you want to check. When successfully read, you will hear a chime and the configuration information will be displayed on the NFC READ NFC TAG Results page as shown below. If the NFC tag was detected but not read, the information below is displayed.

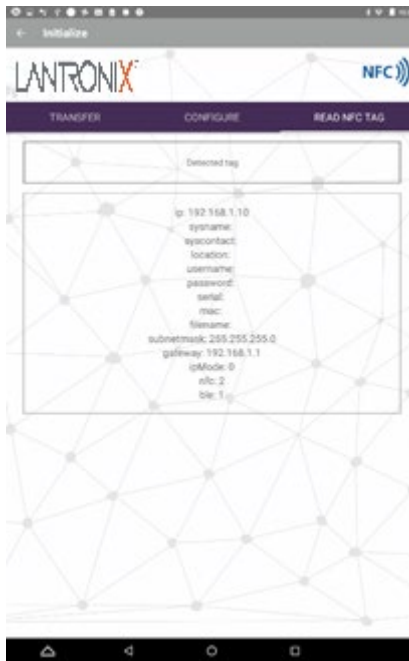
Read NFC Tag start screen

Scanning for tags



Read NFC Tag success

Detected tag



Read NFC Tag Error

Detected tag – Error reading data on tag. Please try again.



Parameter descriptions:

Detected Tag: Indicates the tag was detected. The next box displays the information from the device.

ip: Displays the detected IP address.

sysname: Displays the detected system name.

syscontact: Displays the detected system contact.

location: Displays the detected system location.

username: Displays the detected user name.

password: Displays the detected system password.

serial: Displays the device serial number.

mac: Displays the device MAC address.

filename: Displays the name of the file.

subnetmask: Displays the detected subnet_mask.

gateway: Displays the detected gateway IP address.

ipMode: Displays the detected IP mode (e.g., 0 = Static or 1 = DHCP).

nfc: Displays detected NFC setting (always 2 = Disabled). Always set to disabled when applying a config via NFC.

ble: Displays the detected BLE setting (1 = Disabled or 2 = Enabled).

BLE Interface

The BLE interface allows access to read/change equipment settings without requiring physical access to the switch using a console cable once it is mounted high on a wall or pole. The BLE interface provides alarm/status info, since LEDs and alarms aren't useful when products are located inside cabinets or enclosures, which eases troubleshooting effort and cost.

The BLE feature complies with BLE 4.2. If you do not want the switch to be accessible via BLE, the BLE feature can be disabled using the GUI or in an NFC configuration via the LSS2200-8P Mobile App. **Note:** if BLE is disabled via the LSS2200-8P Mobile App, it can only be re-enabled via the switch GUI or via the CLI.

Although the LSS2200-8P Mobile App can be installed on multiple devices, the switch will only pair with one device at a time.

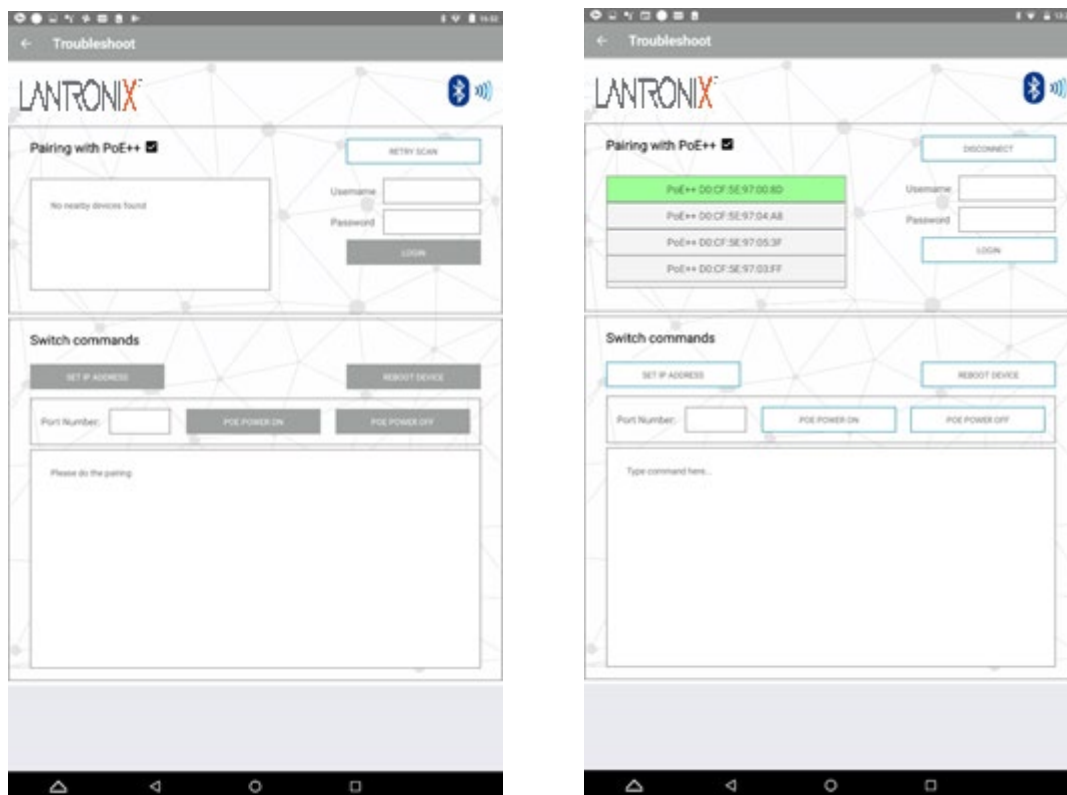
You must re-pair when switching devices/users. Note that anti-virus and password protection are recommended with BLE operation.

BLE Configuration

Troubleshoot is used to connect with and troubleshoot the switch via the BLE interface. BLE must be enabled on the switch and the LSS2200-8P Mobile App paired with the switch. **Note:** use the LSS2200-8P Mobile App for Bluetooth pairing; do not use the Android Bluetooth pairing function.

To use Bluetooth features in an app, you must allow Location permission in your device's Settings menu.

BLE pairing must be disconnected before trying to disable BLE. If you try to disable BLE while a device is paired, BLE will not be disabled. The BLE Pairing page is shown below.



Parameter descriptions:

Pairing

The LSS2200-8P Mobile App should automatically start searching for eligible BLE devices to pair with. If it does not, select the RETRY SCAN button to initiate the search.

Username: After selecting the device to pair with, enter the Username that you selected for the specific switch configuration.

Password: Enter the Password that you selected for the specific switch configuration, then click the LOGIN button.

Buttons:

POE++: check the box to limit the set of available devices displayed to only the available PoE++ devices.

RETRY SCAN: Click to refresh the list of potential devices for Pairing. The button will change to DISCONNECT after the LSS2200-8P Mobile App is paired with a device.

LOGIN: Click after entering Username and Password to access the switch.

STOP SCAN: Click to cancel the Pairing. The button will change to RETRY SCAN for future pairing attempts.

SET IP ADDRESS: Click to change the IP address.

REBOOT DEVICE: Click to reboot the paired device.

POE POWER ON: Enter a port number then click this button to turn PoE power for the port on.

POE POWER OFF: Enter the port number then click this button to turn PoE power for the port off.

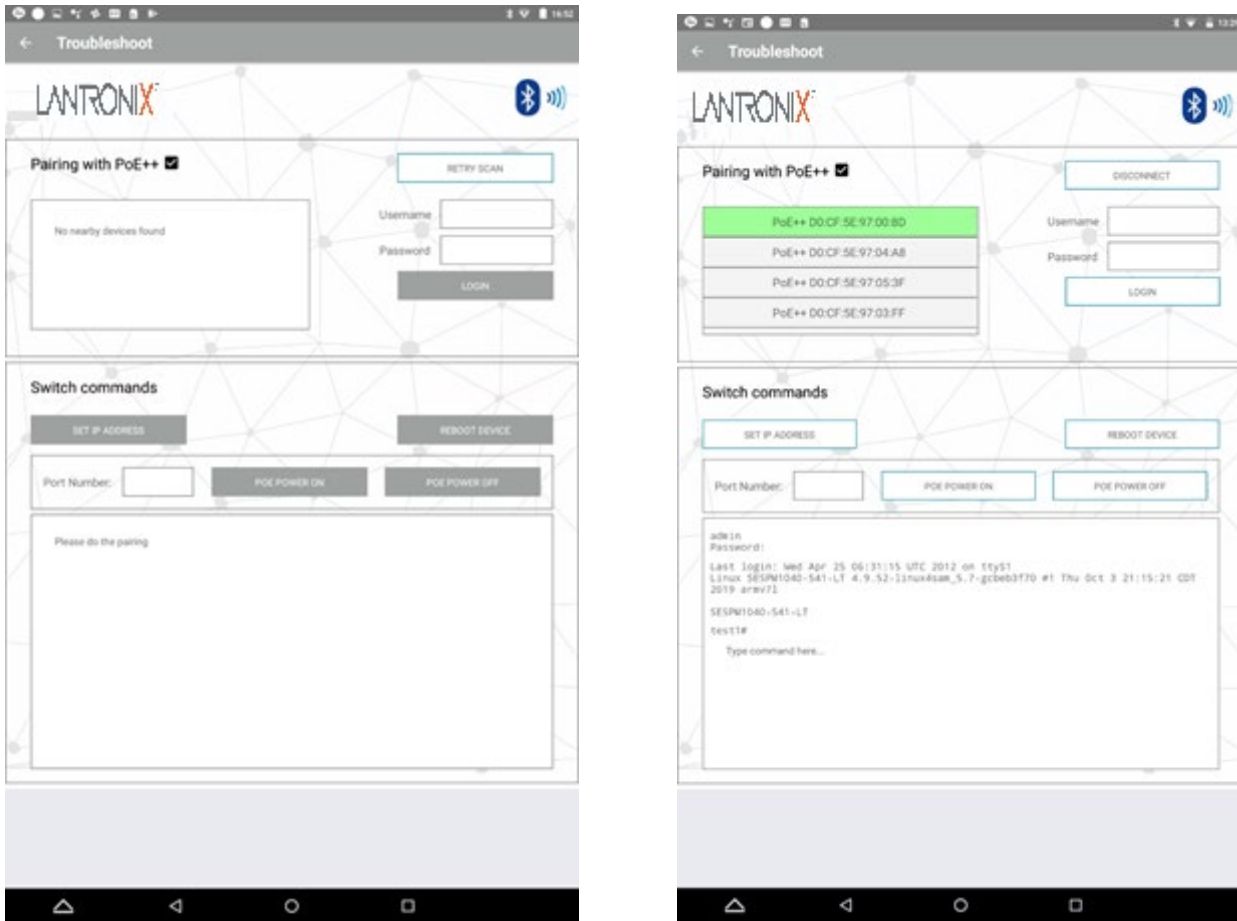
DISCONNECT: Click to cancel the pairing and disconnect from the current device.

Messages:

Message: *Please do the pairing* means the LSS2200-8P Mobile App is not currently paired with a switch.

Message: *Scanning for devices...* means the LSS2200-8P Mobile App is attempting to pair with a switch.

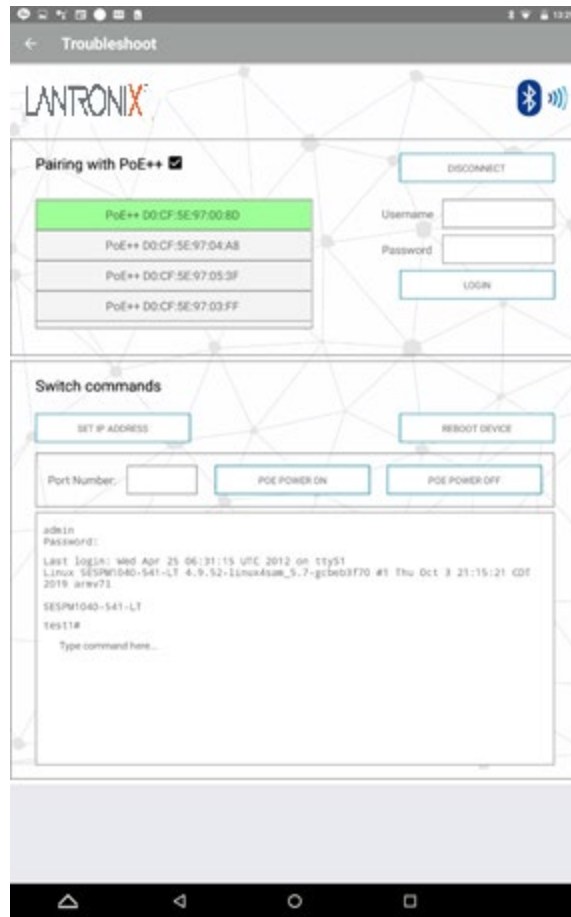
A list of available devices will display in the Pairing box on the BLE Pairing Prompt page as shown below.



Locate the device with the BLE Mac address of the switch you want to troubleshoot. Check if the devices have successfully paired; the switch BLE MAC address will be highlighted in the BLE Pairing section of the page as shown above.

Several common CLI commands have been set up as simple button commands. Alternatively, you can type other CLI commands directly in the large box at the bottom of the screen. You must first log in using Username and Password.

The BLE login page is shown below for a switch that is paired, already logged in, and prompting for an action.



Parameter descriptions:

qwerty keyboard: Keyboard keys for entering CLI commands. See the LSS2200-8P CLI Reference.

LSS2200-8P login: The default Username and Password are **admin**. We recommend changing the login per your organization’s security policy.

Messages:

Login incorrect displays if not logged in or incorrect login information is entered.

Type command here... displays to prompt for CLI command entry.

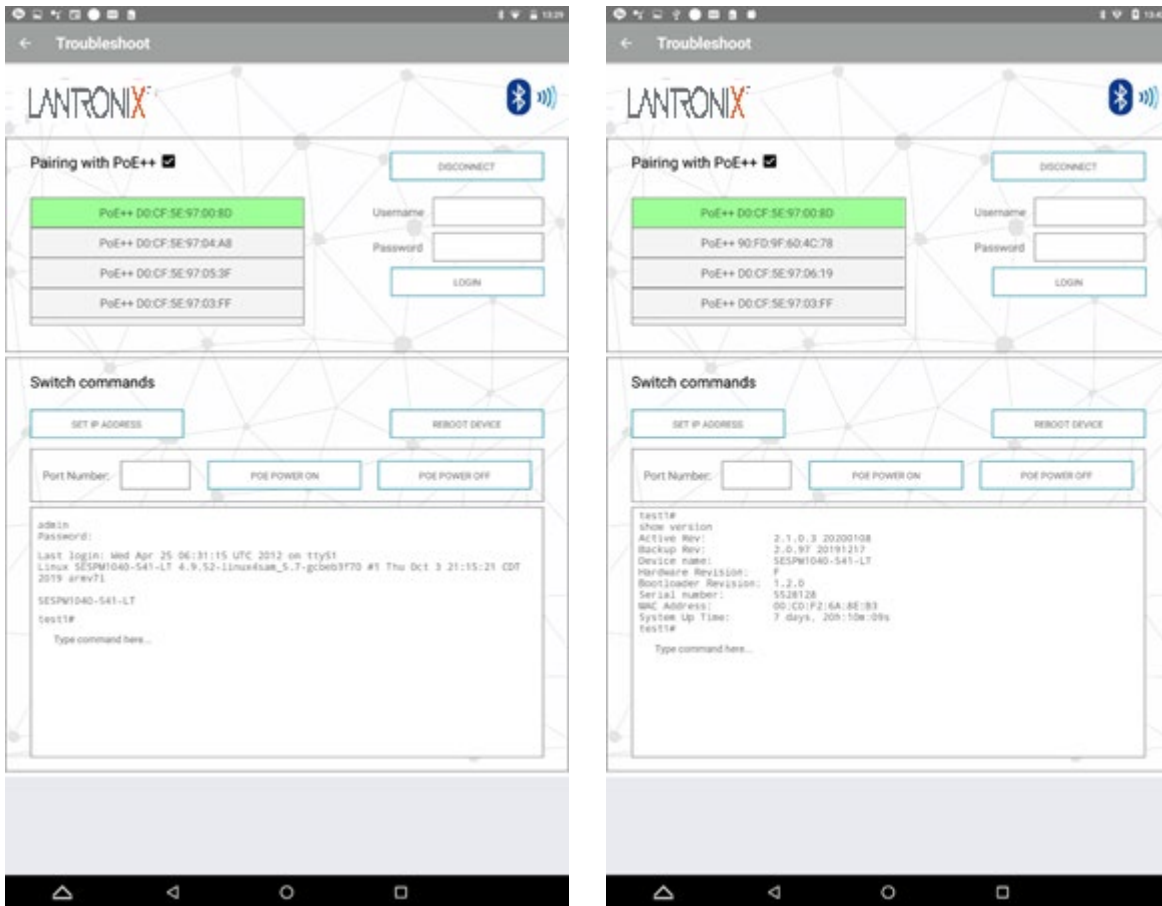
When you click the DISCONNECT button, the BLE Disconnected message displays as shown below.



Message: When the message *Disconnected from <mac address>* displays, click the **OK** button to continue.

Switch CLI Commands

The CLI Command prompt is shown below. See the related manual section for the full set of available CLI commands.

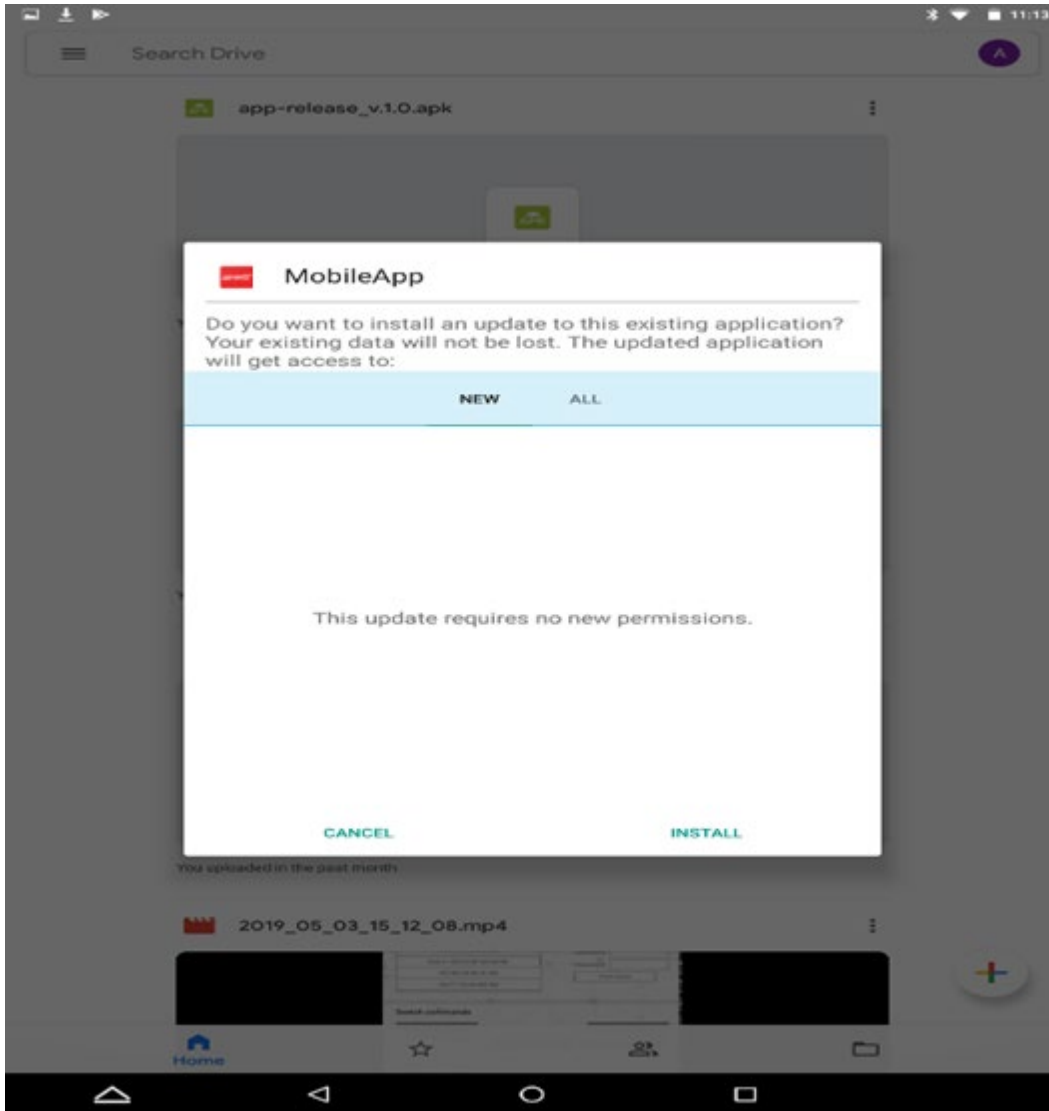


Example: *show version* command

```
LSS2200-8P # show version
Version Information
=====
Model:           LSS2200-8P
Firmware Version: 1.6.0.0R6
Hardware Rev:    325
MAC Address:     00:C0:F2:96:00:B0
Serial Number:   00C0F29600B0
LSS2200-8P #
```

Update Existing Application

To upgrade an existing version of the LSS2200-8P Mobile App, request a new version from the Download Request page on the Lantronix website, and follow the on-screen instructions. Download and save the LSS2200-8P MobileApp (e.g., *eos-mobileapp_1.0.0.0R4*) to a location on your mobile device. This update requires no new permissions.



At the prompt: *“Do you want to install an update to this existing application? Your existing data will not be lost. The updated application will get access to:”* select either NEW or ALL, then click INSTALL. Otherwise click CANCEL.

4. Troubleshooting

Specific Issues

Problem: When reading the NFC tag, the LSS2200-8P MobileApp displays the config in unreadable characters.

Example:

```
LSS2200-8P # show version
Version Information
=====
Model:          LSS2200-8P
Firmware Version: 1.6.0.0R6
Hardware Rev:   DAB
MAC Address:    00:0D:2C:b8:7e:be
Serial Number:  c3084eee738fcc41

EOS mObile App: 1.0.0R4
```



Recovery: 1. Upgrade the LSS2200-8P MobileApp to the latest firmware version (e.g., *eos-mobileapp_1.0.0.0R4*).

Problem: Failed to apply switch config through NFC.

Description: With the phone placed near the NFC tag, the message “*config transferred successfully*” displays, and the `show nfc data` command displays the config data as configured in the LSS2200-8P MobileApp.

```
LSS2200-8P (config)# do show nfc data
NFC Data
=====
system name testing_for_nfc
system contact ashwin
system location hyd
ble broadcast
ntp
snmp
rest-server
LSS2200-8P (config)#
```

Recovery: 1. Wait a few minutes. After switch reload, the config does get applied but with caveat of waiting for a few minutes. 2. If the “_” (underscore character) is not accepted in the system name, upgrade to switch FW 1.6.0.0R6 or above.

Issue: The user experience with the app can vary significantly, depending on the Bluetooth signal quality between the user’s Android device and the LSS2200-8P. As you get further away from the LSS2200-8P, garbled characters can display on the CLI session.

Recovery: For best results, remain as close as possible to the switch while using the LSS2200-8P Mobile App.

General Troubleshooting

Use the NFC app to configure before or during installation. Use the BLE app to troubleshoot after installation.

1. Check the Release Notes for any known issues.
2. Verify your port configuration. See the Install Guide.
3. Verify the “[Console Port Setup](#)” in the Install Guide.
4. Verify the CLI command syntax, parameters, and mode; see the CLI section.
5. Verify the Web UI operation; see the specific Web UI module in the Web User Guide.
6. Re-try the attempted operation from another UI (e.g., try the Web UI).
7. Monitor and document LED conditions; see the LSS2200-8P Install Guide.
8. Verify the switch firmware is the latest version and upgrade if available.
9. If a suspected PoE issue, see the applicable switch user guide.
10. Make sure related hardware (Camera, WAP, SFP, Injector, etc.) is connected and operating correctly. See the related device manuals and helps.
11. Check and update your Android version.
12. Check the Release Notes for your FW version. Note any known issues and check for a more current FW version to upgrade to. Go to the [MyLantronix](#) webpage for firmware and Release Notes.
13. See “[NFC Troubleshooting](#)” on page 22 if an NFC issue.
14. See “[Bluetooth Troubleshooting](#)” on page 23 if a Bluetooth issue.
15. Contact Tech Support.

NFC Troubleshooting

1. Check if you have NFC. Not all phones and tablets have NFC. Check your phone’s Settings menu:
2. On your Android device, tap on Settings.
3. Tap More.
4. Scroll down and you should see NFC and Android Beam options.
5. If your device has NFC, check that the chip and Android Beam are activated so that you can use NFC:
6. Go to Settings > More.
7. Tap on the NFC switch to activate it. The Android Beam function will also automatically turn on.
8. If the Android Beam does not automatically turn on, just tap it and select Yes to turn it on.
9. If you still have issues, see the Android NFC webpage.
10. Check that NFC is enabled on the switch. Using the web UI, go to Security > Management > NFC. If NFC State is Disabled, change it to Enabled, click Apply, and save the configuration.

Bluetooth Troubleshooting

Note: use the LSS2200-8P Mobile App for Bluetooth pairing; do not use the Android Bluetooth pairing function. Also, the LSS2200-8P Mobile App will not allow you to disable the BLE when the device is paired.

If your Bluetooth accessory won't pair or connect to your Android device:

1. On your Android device, go to Settings > Bluetooth and make sure that Bluetooth is on. If you can't turn on Bluetooth or you see a spinning gear, restart your device. Then try to pair and connect it again.
2. Bluetooth or you see a spinning gear, restart your device. Then try to pair and connect it again.
3. Make sure that your Bluetooth accessory and Android device are close to each other.
4. Turn your Bluetooth accessory off and back on again.
5. Make sure that your Bluetooth accessory is on and fully charged or connected to power. If your accessory uses batteries, see if they need to be replaced. If you still can't pair or connect your Bluetooth accessory: check the Android Help webpage.
6. When using the BLE feature on the LSS2200-8P Mobile App: If your configured switch does not appear in the list of Pairing Devices, select Retry Scan. Once paired, the switch configuration should remain highlighted in green until you Disconnect. If you lose pairing, try closing the LSS2200-8P MobileApp, go back into the LSS2200-8P Mobile App and pair again.
7. To use Bluetooth features in an app, you must allow Location permission in your device's Settings menu.
8. Check and update your Android version.
9. Contact your mobile device manufacturer's Tech Support if you still have any of these issues:
 - You can't turn on Bluetooth or the setting is grayed out.
 - You can't connect any Bluetooth accessories with your device.
 - The accessory manufacturer confirmed that your accessory is working correctly.
10. Check that BLE is enabled on the switch. Using the web GUI, go to Security, Management, BLE.
11. If BLE Broadcast is Disabled, change to Enabled, click Apply, and save the configuration.
12. Contact Tech Support for issues with the LSS2200-8P Mobile App or the switch.

Q & A

Q1. What is the LSS2200-8P Mobile App used for?

A1. The LSS2200-8P Mobile App interfaces with the NFC and BLE features to allow switch configuration, remote diagnosis and troubleshooting without having to climb a ladder or scissor lift to connect to the switch.

Q2. What does the BLE feature do?

A2. The Bluetooth Low Energy feature allows remote access to the switch without having to physically connect with a cable, so monitoring and troubleshooting and changes can be made prior to leaving the job site or after ladders or scissor lifts have been removed. The range is approximately 100m.

Q3. Are the BLE and NFC features safe and secure enough for my network?

A3. NFC is considered very secure and is frequently used for contactless payments (e.g., Apple Pay). A secure channel is established and uses encryption for sending sensitive information. However, we always recommend users have antivirus software and passwords on their devices in case they are lost or stolen.

BLE uses Advanced Encryption Standard (AES), 128/256, SHA-1, SHA-2 (SHA-224 and SHA-256) and ECC (Elliptic Curve Cryptography) encryption. It uses an authenticated encryption algorithm designed to provide both authentication and confidentiality. AES was adopted by the US Government in 2002 and is used worldwide.

Glossary of Terms

Note that the mention or definition of a term does not imply that the switch supports that particular feature.

802.11b standard has a maximum raw data rate of 11 Mbit/s, and uses the same media access method defined in the original standard. 802.11b products appeared on the market in early 2000, since 802.11b is a direct extension of the modulation technique defined in the original standard. The dramatic increase in throughput of 802.11b (compared to the original standard) along with simultaneous substantial price reductions led to the rapid acceptance of 802.11b as the definitive wireless LAN technology. Devices using 802.11b experience interference from other products operating in the 2.4 GHz band. Devices operating in the 2.4 GHz range include microwave ovens, Bluetooth devices, baby monitors, cordless telephones, and some amateur radio equipment.

802.11g modulation standard was ratified in June 2003. This works in the 2.4 GHz band (like 802.11b), but uses the same OFDM based transmission scheme as 802.11a. It operates at a maximum physical layer bit rate of 54 Mbit/s exclusive of forward error correction codes, or about 22 Mbit/s average throughput. 802.11g hardware is fully backward compatible with 802.11b hardware, and therefore is encumbered with legacy issues that reduce throughput by ~21% when compared to 802.11a.

802.11n is an amendment that improves on the previous 802.11 standards by adding multiple-input multiple output antennas (MIMO). 802.11n operates on both the 2.4 GHz and the 5 GHz bands. Support for 5 GHz bands is optional. Its net data rate ranges from 54 Mbit/s to 600 Mbit/s. The IEEE has approved the amendment, and it was published in October 2009. Prior to the final ratification, enterprises were already migrating to 802.11n networks based on the Wi-Fi Alliance's certification of products conforming to a 2007 draft of the 802.11n proposal.

APK File and "Sideloading": The .apk (Android Package) is a package file format used by the Android OS for distributing and installing mobile apps. APK files are a type of archive file, specifically in zip format packages, based on the JAR file format, with .apk as the filename extension. APK files can have any name needed, as long as the file name ends in the file extension ".apk".

APK files can be installed on Android-powered devices just like installing software on a PC. When you download and install an Android application, you are installing an APK file on to your device. You can also install an APK file directly to a device (i.e., not via download from the network) from a desktop computer, using a communication program (e.g., adb) or from within a file manager app in a process known as "sideloading".

Installing APK files downloaded outside the Google Play is disabled by default. You can install unknown APK files by enabling "Unknown sources" from "Accounts and Security" in Settings. With Android apps, "sideloading" usually means installing an application package in APK format onto an Android device. Such packages are usually downloaded from websites other than Google play, usually with a computer. Sideloaded apps is only possible if you have allowed "Unknown Sources" in your Security Settings.

Methods to sideload an app on your Android phone / tablet include Manual, ADB, and AirDroid. The process for sideloading varies slightly by Android version.

ADB (Android Debug Bridge) is a versatile command-line tool that lets you communicate with a device. The adb command facilitates a variety of device actions, such as installing and debugging apps, and it provides access to a Unix shell that you can use to run a variety of commands on a device. AirDroid is a free and fast app that helps you manage your Android devices from a web browser, all over the air. AirDroid lets you take complete control of your Android device from a web browser on a PC. AirDroid is a secure comprehensive free download app.

BLE (Bluetooth Low Energy): Bluetooth® Low Energy (LE) enables short-burst wireless connections and uses multiple network topologies. The Bluetooth LE broadcast topology supports localized information sharing and is well suited for beacon solutions, such point-of-interest (POI) information and item-finding and way-finding services. Bluetooth Low Energy ([Bluetooth LE](#), BLE, formerly marketed as "Bluetooth Smart" is a wireless personal area network technology designed and marketed by the Bluetooth Special Interest Group (Bluetooth SIG) aimed at novel applications in the healthcare, fitness, beacons, security, and home entertainment industries. Compared to Classic Bluetooth, Bluetooth Low Energy is intended to provide considerably reduced power consumption and cost while maintaining a similar communication range. Mobile OS support: iOS, Android, Windows Phone, BlackBerry, MacOS, Linux, Windows 8, and Windows 10 natively support BLE. For Windows 11 BLE support see the MS article "[Bluetooth version and profile support in Windows 11](#)".

DFU (Device Firmware Upgrade): An application used to reload the software / firmware of a device.

NDEF: (NFC Data Exchange Format) is a light-weight binary format, used to encapsulate typed data. It is specified by the NFC Forum, for transmission and storage with NFC, however it is transport agnostic. NDEF defines messages and records. An NDEF Record contains typed data, such as MIME-type media, a URI, or a custom application payload. An NDEF Message is a container for one or more NDEF Records.

NFC (Near Field Communication) is a form of contactless communication between devices like smartphones or tablets. Contactless communication allows a user to wave the smartphone over a NFC compatible device to send information without needing to touch the devices together or go through multiple steps setting up a connection. NFC technology lets smartphones and other enabled devices communicate with other devices with an NFC tag. NearFieldCommunication.org is devoted to educating individuals, small businesses, and large companies alike on the merits of near field communication. For more information about the official standards and regulations surrounding near field communication, check out the [NFC Forum](#).

PD (Powered Device): A device that receives power from a PSE over the twisted-pair copper cabling channel (e.g., an IP phone, WAP, or IP camera).

PSE (Power Sourcing Equipment): A device that delivers (sources) power over a twisted-pair copper cabling channel to a powered device (e.g., a switch).

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