

Spectralink 87-Series Wireless Telephone

Installation and Configuration Tool (SLIC)

Administration Guide

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Warranty

The *Product Warranty and Software License and Warranty* and other support documents are available at <http://support.spectralink.com>.

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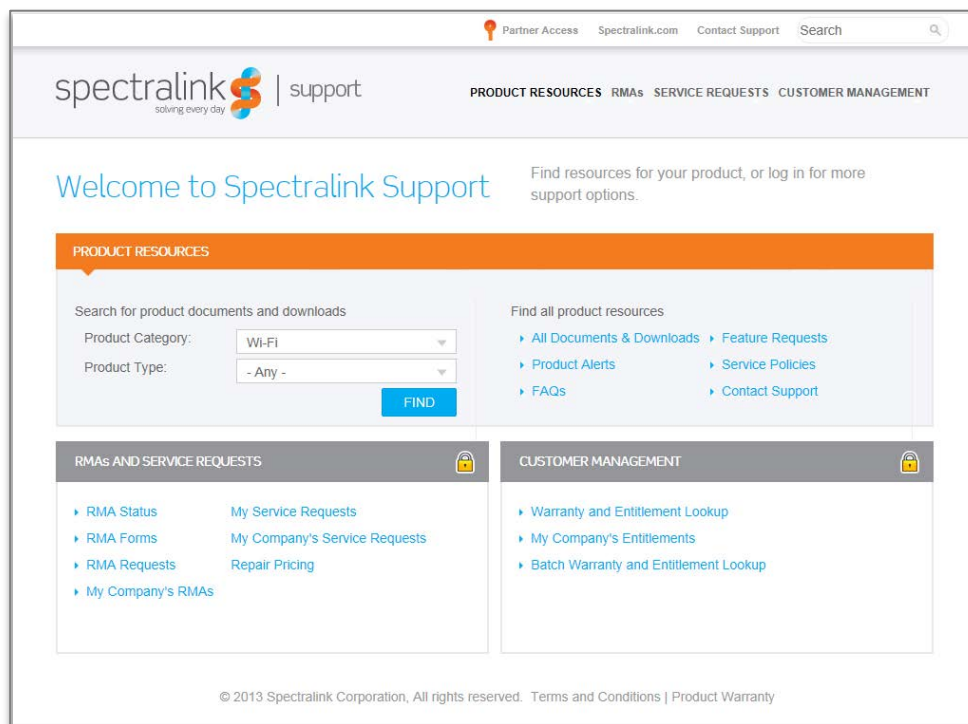
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About This Guide

This document explains how to install and use the Spectralink 84-Series Installation & Configuration (“SLIC”) Tool.

Spectralink References

All Spectralink documents are available at <http://support.spectralink.com>.



To go to a specific product page:

Select the Product Category and Product Type from the dropdown lists and then select the product from the next page. All resources for that particular product are displayed by default under the All tab. Documents, downloads and other resources are sorted by the date they were created so the most recently created resource is at the top of the list. You can further sort the list by the tabs across the top of the list to find exactly what you are looking for. Click the title to open the link.

Specific Documents

AP Configuration Guides show you how to correctly configure access points and WLAN controllers (if applicable) and identify the optimal settings that support Spectralink 87-Series handsets. The guides can be found at the View Certified page.

Spectralink 87-Series Wireless Telephone Administration Guide The Admin Guide provides detailed information about every setting and option available to the administrator on both the CMS and handset menus. Time-saving shortcuts, troubleshooting tips and other important maintenance instructions are also found in this document.

Spectralink 87-Series Wireless Telephone Deployment Guide The Deployment Guide provides sequential information for provisioning and deploying the handsets. It covers deployment using the SLIC tool and CMS as well as manual deployment.

Spectralink 87-Series Wireless Security Guide Wi-Fi security prevents unauthorized over-the-air access to network components and the sensitive data that resides there. This Guide discusses the various methods and explains how to implement each of them.

Spectralink 87-Series Wireless Telephone Applications Installation Guide The Applications Guide provides detailed information about deploying any type of application, using an app store or MDM and manual processes for loading applications on the Spectralink 87-Series handset.

Conventions Used In This Document

Icons

Icons indicate extra information about nearby text.



Note

The Note icon highlights information of interest or important information that will help you be successful in accomplishing a procedure or understanding a concept.



Spectralink recommends:

Our recommendation for a specified aspect of the information.



Caution

The *Caution* icon highlights information you need to know to avoid a hazard that could potentially impact device performance, application functionality, successful feature configuration and/or affect handset or network performance.



Admin Tip

This tip advises the administrator of a smarter, more productive or alternative method of performing an administrator-level task or procedure.



Tip

The Tip icon highlights information that may be valuable or helpful for users to know, such as special techniques, shortcut methods, or information that will make user tasks easier to perform.

Typography

A few typographic conventions, listed next, are used in this guide to distinguish types of in-text information.

<i>Convention</i>	<i>Description</i>
Bold	Highlights interface items such as menus, soft keys, file names, and directories. Also used to represent menu selections and text entry to the handset.
<i>Italics</i>	Used to emphasize text, to show example values or inputs, and to show titles of reference documents available from the Spectralink Support Web site and other reference sites.
<u>Underlined blue</u>	Used for URL links to external Web pages or documents. If you click on text in this style, you will be linked to an external document or Web page.
Bright orange text	Used for cross references to other sections within this document. If you click on text in this style, you will be taken to another part of this document.
<code>Fixed-width-font</code>	Used for code fragments and parameter names.

This guide also uses a few writing conventions to distinguish conditional information.

<i>Convention</i>	<i>Description</i>
<MACaddress>	Indicates that you must enter information specific to your installation, handset, or network. For example, when you see <MACaddress>, enter your handset's 12-digit MAC address. If you see <installed-directory>, enter the path to your installation directory.
>	Indicates that you need to select an item from a menu. For example,

<i>Convention</i>	<i>Description</i>
	Settings > Basic indicates that you need to select Basic from the Settings menu.

Chapter 1: Introducing the SLIC Platform

The Spectralink Installation & Configuration (“SLIC”) Platform utilizes a customized version of a commercially available embedded Linux® Server to simplify the wireless provisioning of your Spectralink 87-Series handsets. When connected to a PC, the SLIC platform provides a wizard that walks you through the wireless configuration parameters you need to set in order for the 87-Series handsets to associate with the wireless LAN.

Once the wizard is completed, a USB connection between the SLIC server and an 87-Series handset loads the wireless parameters into the handset. In addition to configuring the wireless settings, these parameters allow the handset to connect to the CMS server (if used).



Spectralink recommended deployment sequence

Please review *Spectralink 87-Series Wireless Telephone Deployment Guide* before provisioning 87-Series handsets. This document is a subset of information pertaining to a complete and successful deployment process.

Configuration Sequence

The SLIC platform is designed to simplify the configuration of Spectralink 87-Series handsets. The usual sequence is as follows:

- 1 Reset handsets to factory default if any menu options have been changed manually.
- 2 Run the 87-Series Wireless wizard.
- 3 Use SLIC to load the wireless configuration into each handset.
- 4 Connect to the wireless LAN.
- 5 Provision additional configuration with the CMS or manual entry.
- 6 Test the handsets.

Box Contents

The following components are included in the SLIC package:

- The SLIC unit
- US, UK and Euro power adapters

- A USB cable to connect SLIC to the handset
- An Ethernet network cable for the network connection between SLIC and your PC/laptop
- A USB extension cable
- A USB flash drive (note: the flash drive is not required for the 87-Series wireless wizard)
- Spectralink Product Warranty and EULA
- Regulatory information

Connecting to SLIC

Set up the hardware

SLIC is pre-loaded with wizard software. If you need to upgrade the software see [Appendix A: Updating SLIC Software](#).

- 1 Connect the correct power adapter to the SLIC server. The power adapter slides onto the prongs on the back of the unit. You will need to remove the rubber legs if you use the wide UK adapter.
- 2 Plug the provided USB flash drive into the SLIC server. (optional for 87-Series)
- 3 Plug the provided network cable into the Ethernet port of the SLIC server and connect the other end to your PC/laptop.
- 4 Apply power to the SLIC server. It takes about 30 seconds to boot. It is fully booted when all three green LEDs on top are lit (9, 12, and 3 o'clock positions. (The two side LEDs are more yellowish-green.)

Configure your PC/Laptop

These instructions are generic in nature and may need to be adjusted to accommodate the existing configuration of your PC/laptop. The general idea is that you are disconnecting from any existing LAN and setting up a private LAN so that PC/laptop and the SLIC server can talk to each other without interference.

- 1 If necessary, install Firefox® or Chrome® browser on your PC/laptop. Internet Explorer® may work but is prone to interference and is not recommended.
- 2 Disable DHCP for the network port on the PC/laptop you plugged the Ethernet cable into.
- 3 Set the PC/laptop Ethernet interface to use static IP **192.168.0.50**.
- 4 Open Chrome/Firefox and browse to **192.168.0.1**. The wizard screen will appear.



- 5 Version information is at the top of the screen. Ensure that you have the latest version of software by checking the Support website. If necessary, see [Appendix A: Updating SLIC Software](#).



Note

Version 3.16 or later is required for the 87-Series handsets.

Chapter 2: The 87-Series Wireless Wizard

The SLIC tool can configure both 84-Series and 87-Series handsets. This document covers the Wireless wizard for the 87-Series handsets.

The files that are produced by the 87-Series wireless wizard are stored on the SLIC server. A jump drive is not needed to run the wizard or to install the resulting files on the 87-Series handset.



Tip: How to start over

The Wizards permit forward steps only; there is no “Back” button or option.

If you make an error, use the navigation links at the top of the screen to return to the beginning of the wizard.

DO NOT USE THE BROWSER'S BACK BUTTON TO START OVER.

To start at the beginning you may need to open a new browser tab and browse to SLIC again.

Run the 87-Series Wireless wizard

- 1 Click the 87-Series Wireless wizard link. The Admin menu password page opens. The default password is **admin**. Set a new password as needed and click Next.

The screenshot shows the 'Administrator Level Settings Password' screen in the SLIC Wizard v3.13. The Spectralink logo is in the top left. The top navigation bar includes '84-Series Wireless Wizard', '84-Series SIP / Feature Wizard', and '87-Series Wireless Wizard'. The main heading is 'Administrator Level Settings Password' with the instruction 'Set the password for the Admin settings menu in the handset.' Below this is a text input field labeled 'Admin settings password' with a masked password '.....' and a '[?]' icon. A 'Next' button is at the bottom right.

- 2** The CMS page is next. If using a CMS server, ensure the Yes button is checked and click Next.

If not using a CMS server (if you are manually configuring the handsets), ensure the No button is checked and click Next.

The screenshot shows the 'Configuration Management' screen in the SLIC Wizard v3.13. The Spectralink logo is in the top left. The top navigation bar includes '84-Series Wireless Wizard', '84-Series SIP / Feature Wizard', and '87-Series Wireless Wizard'. The main heading is 'Configuration Management' with the question 'Will you be using the Spectralink Configuration Management Server? (aka CMS)'. Below this are two radio button options: 'Yes' (which is selected) and 'No'. A 'Next' button is at the bottom right.

- a** If yes and you will be using a CMS server, this screen is next:

- b** Enter the URL of the CMS server. The network protocol used by the CMS server is either HTTP or HTTPS. The entry in this box must use the complete address starting with http:// or https://.



Caution: If using HTTPS

If you use an address for CMS that starts with https://, you must load an SSL certificate. If you do not load a certificate, the authentication handshake between the handset and the CMS will fail and there will be no connection.

- c** The CMS heartbeat defaults to 60. This is the time interval between “check-ins” between the handset and the CMS. Use the following scale to determine what interval is best for your installation.

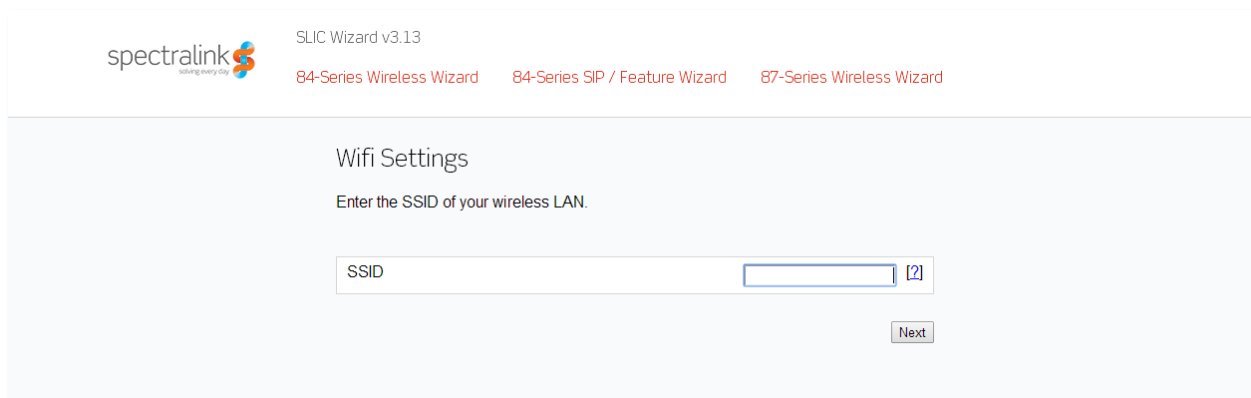
<i>Number of handsets</i>	<i>Heartbeat interval</i>
Up to 1000 handsets	No more frequent than every 1 minute.
Between 1000 and 2000 handsets	No more frequent than every 2 minutes.
Between 2000 and 3000 handsets,	No more frequent than every 3 minutes.
Between 3000 and 4000 handsets	No more frequent than every 4 minutes.
More than 5000 handsets	No more frequent than every 5 minutes.

- d** If using HTTPS as your network protocol, you will need to enter the SSL certificate from the CMS server. Browse to the CMS and navigate to **Home> CMS Administrative> Server Settings> Self Signed Public Key**. Copy the key

(certificate). Paste this key into the SSL Certificate field. Ensure there are no extra white spaces or carriage returns after you paste the public key.

e Click Next.

3 The Wi-Fi Settings page appears:



4 Enter the SSID that you will be using to connect to the wireless LAN and click Next.

Note that if you are using the CMS, you will be able to configure multiple wireless profiles and add to this initial setting if you wish.

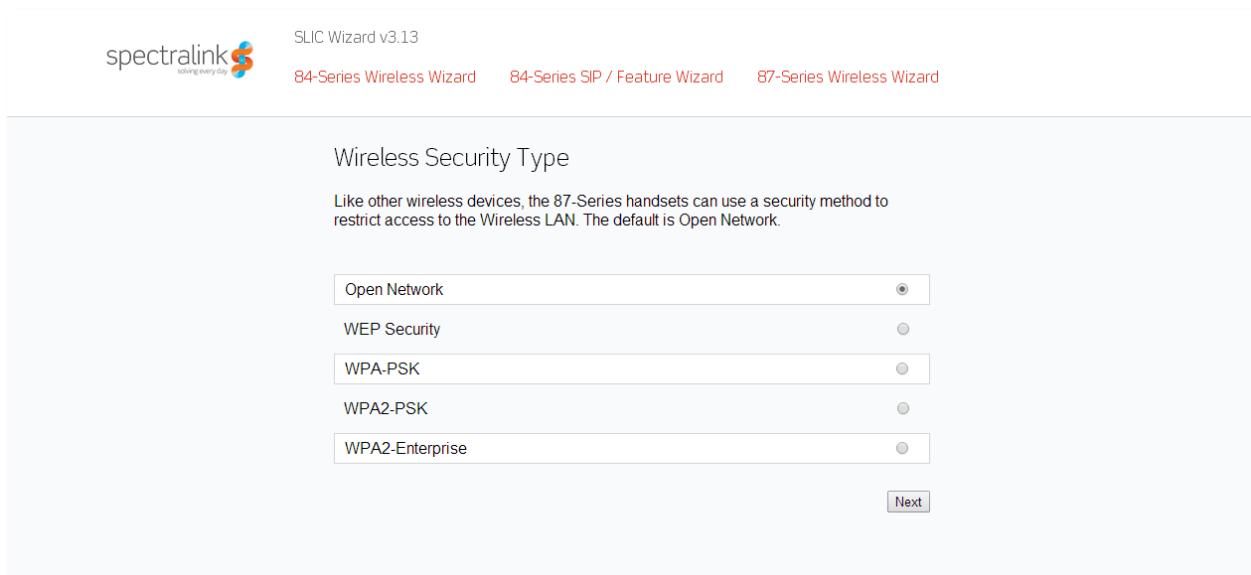
5 Wireless security is the next section.


Note that you can set one security type to initially connect to the wireless LAN and then change it with the CMS once the handset is on the wireless LAN.



Caution: Wireless Security

Because SLIC transfers the security configuration to the handset via a USB cable and not over the air, it is considered to be very secure. If you select a less secure method here and then move to a more secure method using CMS without using HTTPS between CMS and the handsets, be aware that the over-the-air transfer of security information with the CMS is a potential security risk.



spectralink  SLIC Wizard v3.13

84-Series Wireless Wizard 84-Series SIP / Feature Wizard 87-Series Wireless Wizard

Wireless Security Type

Like other wireless devices, the 87-Series handsets can use a security method to restrict access to the Wireless LAN. The default is Open Network.

Open Network ☒

WEP Security ☐

WPA-PSK ☐

WPA2-PSK ☐

WPA2-Enterprise ☐

Next

See the Wi-Fi Security document for instructions about completing these pages.

- 6 Once your Wi-Fi security settings are complete, the configuration is complete and the files are sent to the SLIC server.

Load Wireless Parameters into the Handsets



Spectralink recommends: Use CMS

By far the most efficient way to provision and deploy the handsets is to configure CMS as described in *Spectralink 87-Series Wireless Telephone Deployment Guide*. Please refer to that document before downloading the wireless settings onto handsets.

To load the configuration into the handsets

- 1 Insert a fully-charged Battery Pack into the 87-Series handset.
- 2 (Conditional) If the handset has been modified from out of the box configuration, perform a Reset to Factory. [Navigate to **Settings > Admin Settings > Reset Settings > Factory data reset.**]
- 3 Connect micro-USB cable between the 87-Series handset and SLIC.
- 4 The handset will download the wireless configuration and then the handset will associate with the wireless WLAN and download the rest of its configuration from the CMS server, if it has been configured.
- 5 Disconnect the USB cable from the 87-Series handset.
- 6 If not using a CMS, manually configure the rest of your settings in the handset.

- 7 Test the first few handsets to be sure your configuration is working as desired and then use the Optimizations pointers below if deploying a quantity of handsets.



Spectralink recommends: Load your apps!

Before deploying handsets to individuals, fully complete all configuration steps including loading and testing any apps you will be using. To prevent unauthorized downloads, the ability to load apps can be disabled once the handsets are in the hands of users. See *Spectralink 87-Series Wireless Telephone Applications Installation Guide* for more information about apps deployment.

Optimization Pointers for Quantity Deployment

Once you have proven that one handset can download the CMS updates and come up on your network, speed up the deployment of the rest of the handsets by following these pointers:

- Ensure you have a fully charged battery for each handset.
- All handsets must be in factory default state. If handsets have been modified, return them to the factory default state.
- Install batteries and power up all handsets.
- One at a time, plug in each handset. The handset will download the configuration and associate to the LAN. Unplug the handset and repeat with next handset.

Appendix A: Updating SLIC Software

The software version currently being run on SLIC is noted in the browser page header when you bring it up. To determine if a later version is available, go to the Spectralink Support site and browse to the 84-Series handset page. The SLIC software is located under the Downloads tab with the version included in the link title. If a later version is listed, click the link and download the software.

To upgrade the Spectralink 87-Series Installation & Configuration Tool:

- 1** Download the update from the Spectralink webpage.
- 2** Extract the files from the zip to a convenient location.
- 3** The .img file will have the version number as part of the filename. Rename the image file to SLIC.img" (upper case).
- 4** Copy the SLIC.img file into the root directory of a USB flash drive.
- 5** Insert the USB flash with the SLIC.img file into SLIC.
- 6** Power-cycle the SLIC server.
- 7** SLIC will boot, then go through the upgrade process (blinking LED left, than right), then reboot again.
- 8** Verify the upgrade was successful by starting the browser and viewing the version number in the page header.

Appendix B: Products Mentioned in this Document

Linux is the registered trademark of Linus Torvalds in the U.S. and other countries.

Firefox is a registered trademark of the Mozilla Foundation.

Chrome browser is a trademark owned by Google, Inc.

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