



Spectralink Quick Network Connect

## Release Notes

Spectralink QNC Software 2.1.0.55

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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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# Introduction to Quick Network Connect

Advances in supporting technology has allowed Spectralink to simplify the provisioning process making it more efficient and foolproof. Quick Network Connect, or QNC, is the latest offering in this family of provisioning products.

Quick Network Connect utilizes a customized version of a commercially available Raspberry Pi server to simplify the wireless provisioning of your Spectralink 84-Series handsets and 87-Series smartphones. CMS and QNC are designed to work together to provide a complete deployment solution.



When connected to a PC, QNC provides a browser-based GUI that provides you with the wireless configuration parameters you need to set in order for your Spectralink phones to associate with the wireless LAN.

Once the configuration is completed, a connection between QNC and your Spectralink 84-Series handset(s) or 87-Series smartphone(s) loads the wireless parameters into the handset.



## **Admin Tip: Set up CMS first**

If using CMS, please set up CMS first so that the account key and certificate can be captured and provided to the devices through QNC configuration.



## **Caution: Internet access (PIVOT only)**

If you need to configure PIVOT without access to the internet, use QNC for initial wireless connectivity to a closed WLAN using the locally-configured SSID. Simply skip over any internet connectivity prompts.

QNC documents and software can be found at: <http://support.spectralink.com/products/wi-fi/qnc>

# Chapter 1: QNC Software 2.1.0.55

QNC Version 2.1.0.55

For use with the following versions:

84-Series

- 84-Series 6.4.1 or 7.5.1
- CMS Version: 3.1.0
- If using FTP as provisioning server, any 84-Series software version



## Caution: Do not use 2.1.0.55 with earlier hardware models

The QNC release 2.1.0.55 is only available for Raspberry Pi 3. The label on your QNC will say Rev B if you are using Raspberry Pi 3.

Software	Rev B
Used on	Pi 3
Part Number	AQN80001
Case	White
Appearance	Internal Wi-Fi dongle (not visible)
Label	Shows Rev B, RP132
Label example	



## Caution: Only deploy one QNC per location

When using Wi-Fi mode with Spectralink phones (PIVOT only), only one QNC should be used in the same location. The QNC has a known SSID that the PIVOT devices search for on boot.

If multiple QNCs are powered up in the same location, the phone may not attach to the correct one when using the wireless method (PIVOT only).

Multiple QNCs can be used to configure 84-Series handsets (or Pivot devices using the USB method). If multiple QNCs are used, then only the USB method should be used to configure devices or the above issues will occur.



**Caution: Do not power off phone or QNC while QNC is uploading APKs**

Do not turn off power while QNC is uploading APKs otherwise files may become corrupted. Corrupt APKs will not function properly on devices.

If APK files become corrupted in power shutdown, upload APK files again and wait to shut down the QNC until after file upload are complete.

## New Features

### Provisioning Server Setup

#### Self-signed certificate

QNC now has a field to add a self-signed certificate. Navigate to **Provisioning Server Setup> Using CMS=Yes> Are you using a self-signed certificate?=Yes**. Enter the certificate.

The screenshot shows a web form for 'Provisioning Server Setup'. It contains several sections: 'Are you using CMS?' with 'Yes' selected; 'Config Management Server URL' with a placeholder text 'An absolute Secure URL (usually starts with https://)'; 'Config Management Heartbeat' with a placeholder text 'Enter in number of seconds'; 'Are you using a self-signed certificate?' with 'Yes' selected; and 'SSL certificate' with a large text area for input.

Are you using CMS?

☒ Yes

☐ No

Config Management Server URL

An absolute Secure URL (usually starts with https://)

Config Management Heartbeat

Enter in number of seconds

Are you using a self-signed certificate?

☒ Yes

☐ No

SSL certificate

# Chapter 2: QNC Software 2.1.0.54

QNC Version 2.1.0.54

For use with the following versions:

84-Series

- 84-Series 5.3 for CMS
- CMS Version: 2.3.x
- If using FTP as provisioning server, any 84-Series software version



## Caution: Do not use 2.1.0.54 with earlier hardware models

The QNC release 2.1.0.54 is only available for Raspberry Pi 3. The label on your QNC will say Rev B if you are using Raspberry Pi 3.

Software	Rev B
Used on	Pi 3
Part Number	AQN80001
Case	White
Appearance	Internal Wi-Fi dongle (not visible)
Label	Shows Rev B, RP132
Label example	



## Caution: Only deploy one QNC per location

When using Wi-Fi mode with Spectralink phones (PIVOT only), only one QNC should be used in the same location. The QNC has a known SSID that the PIVOT devices search for on boot.

If multiple QNCs are powered up in the same location, the phone may not attach to the correct one when using the wireless method (PIVOT only).

Multiple QNCs can be used to configure 84-Series handsets (or Pivot devices using the USB method). If multiple QNCs are used, then only the USB method should be used to configure devices or the above issues will occur.



**Caution: Do not power off phone or QNC while QNC is uploading APKs**

Do not turn off power while QNC is uploading APKs otherwise files may become corrupted. Corrupt APKs will not function properly on devices.

If APK files become corrupted in power shutdown, upload APK files again and wait to shut down the QNC until after file upload are complete.

## New Features

### One Touch Provisioning (OTP) method

During the bootup process, the Spectralink 84-Series feature phone presents an option to use One Touch Provisioning (OTP). Activating OTP enables the phone to receive its configuration from QNC wirelessly (over the air or OTA). Per QNC-86

Note that PIVOT models do not support OTP and cannot use OTA provisioning.

### QNC time

Add ability to use time from the browser in QNC for customers that use device certificates. Per QNC-87, -81

### SCEP configuration parameters

SCEP parameters are a new addition to Spectralink 84-Series feature phones. Currently undergoing beta trials, once released, all configuration information will be in the *Spectralink 84-Series Administration Guide*. If you do not use SCEP, ignore these settings. Your Spectralink 84-Series handsets will not attempt to configure options it does not recognize. Contact your Spectralink service representative for more information.



# Chapter 3: QNC Software 2.1.0.49

QNC Version 2.1.0.49

For use with the following versions:

## 84-Series

- 84-Series 5.3 for CMS
- CMS Version: 2.3.x
- If using FTP as provisioning server, any 84-Series software version

## PIVOT

- PIVOT 1.8 and later (for Wi-Fi method)
- PIVOT 1.4 and later (for USB method)



**Caution: Do not use 2.1.0.49 with earlier hardware models**

The QNC release 2.1.0.49 is only available for Raspberry Pi 3. The label on your QNC will say Rev B if you are using Raspberry Pi 3.

Software	Rev B
Used on	Pi 3
Part Number	AQN80001
Case	White
Appearance	Internal Wi-Fi dongle (not visible)
Label	Shows Rev B, RP132
Label example	



### **Caution: Only deploy one QNC per location**

When using Wi-Fi mode with Spectralink phones (PIVOT only), only one QNC should be used in the same location. The QNC has a known SSID that the PIVOT devices search for on boot.

If multiple QNCs are powered up in the same location, the phone may not attach to the correct one when using the wireless method (PIVOT only).

Multiple QNCs can be used to configure 84-Series handsets (or Pivot devices using the USB method). If multiple QNCs are used, then only the USB method should be used to configure devices or the above issues will occur.



### **Caution: Do not power off phone or QNC while QNC is uploading APKs**

Do not turn off power while QNC is uploading APKs otherwise files may become corrupted. Corrupt APKs will not function properly on devices.

If APK files become corrupted in power shutdown, upload APK files again and wait to shut down the QNC until after file upload are complete.

## **New Features**

### **Wi-Fi method enhancement**

Now PIVOT devices using the Wi-Fi method are provisioned serially---one after the other---rather than concurrently. This method avoids contention and increases overall provisioning throughput. Devices must use the Wi-Fi method for provisioning and the default “Spectralink” SSID.

## **Fixed Issues**

<i>Issue</i>	<i>Description</i>
Q-79	QNC fails to connect via USB
Q-78	Shutdown corruption
Q-77	Limited number of handsets can be provisioned
Q-76	No indication of when APK upload is complete
Q-75	APKs fail to install
Q-74	Wi-Fi signal too strong
Q-6	If update config is selected before all APKs are loaded they are missing from the zip

# Chapter 4: QNC Software 2.1.0.18

QNC Version 2.1.0.18

For use with the following versions:

## 84-Series

- 84-Series 5.3 for CMS
- CMS Version: 2.3.x
- If using FTP as provisioning server, any 84-Series software version


## PIVOT

- PIVOT 1.8 and later (for Wi-Fi method)
- PIVOT 1.4 and later (for USB method)



### Caution: Do I use Rev A or Rev B?

With QNC release 2.1.0.18 you will see that the software is available in two versions; Rev A and Rev B. Use Rev A when deploying Raspberry Pi 2. Use Rev B when deploying Raspberry Pi 3. Look at the label if you are not sure which Pi version you have.

Software	Rev A	Rev B
Used on	Pi 2	Pi 3
Part Number	AQN80000	AQN80001
Case	Either black or white	White
Appearance	External Wi-Fi dongle	Internal Wi-Fi dongle (not visible)
Label	Shows two FCC modules, RP121	Shows Rev B, RP132
Label example		



### **Caution: Only deploy one QNC per location**

When using Wi-Fi mode with Spectralink phones (PIVOT only), only one QNC should be used in the same location. The QNC has a known SSID that the PIVOT devices searches for on boot.

If multiple QNCs are powered up in the same location, the phone may not attach to the correct one when using the wireless method (PIVOT only).

Multiple QNCs can be used to configure 84-Series handsets (or Pivot devices using the USB method). If multiple QNCs are used, then only the USB method should be used to configure devices or the above issues will occur.

## **New Features**

### **84-Series**

This version adds Spectralink 84-Series configuration. It is specifically designed for handset R5.3 used with CMS version 2.3 and above.

When deploying 84-Series handsets using an FTP server as the provisioning server, this version is backwards compatible with earlier versions of handset software. If a parameter is not available in earlier software versions, the phone will ignore the setting.

### **Wi-Fi method**

P2 had an external dongle so disabling Wi-Fi was as simple as removing the dongle. P3 includes an internal dongle so a UI preferences option was added for Wi-Fi noise alleviation.

This is especially useful when multiple QNCs are being used to deploy Spectralink devices simultaneously using the USB method.

# Chapter 5: QNC Software 2.0.x

QNC Version 2.0.0.314

For use with the following versions:

- PIVOT 2.1.0.17257
- PIVOT 2.0.0.15757
- PIVOT 1.8.0.17256
- CMS Version: 2.0.0



## **Caution: QNC 2.0 compatibility**

QNC 2.0 is designed to operate with PIVOT R1.8, R2.0 or R2.1 and above and CMS 2.0.

QNC 2.0 also operates with Spectralink 84-Series handsets for wireless provisioning only.

## **New Features**

QNC now supports wireless configuration for the 84-Series handsets. The feature set for wireless configuration of 84-Series devices is similar to the original SLIC, with the following caveats:

- QNC does not support the TFTP transport type for a provisioning server. This protocol is considered unreliable by Spectralink and is not recommended for provisioning the phones.
- QNC currently does not support the SIP wizard that allowed users to generate configuration files for the 84-Series handsets by walking through a wizard-style user interface.
- QNC only supports the USB interface for provisioning 84-Series handsets. The wireless provisioning that is available on the Pivot devices is not currently available for the 84-Series handsets.
- Only one 84-Series handset can be configured at a time via USB. It is not possible to connect multiple 84-Series devices to the QNC, even though there are multiple USB ports.



### Caution: Only deploy one QNC per location

When using Wi-Fi mode with Spectralink phones, only one QNC should be used in the same location. The QNC has a known SSID that the PIVOT devices searches for on boot.

If multiple QNCs are powered up in the same location, the phone may not attach to the correct one.

Multiple QNCs can be used to configure 84-Series handsets (or Pivot devices using USB). If multiple QNCs are used, then only the USB should be used to configure devices or the above issues will occur.

## Fixed Issues

Issue	Description
SLIC-29	SLIC uses deprecated parameter for regulatory domain
SLIC-31	Identity field for EAP-TLS should allow blank entry for 8400
SLIC-32	Remove password field for EAP-TLS on 8400
SLIC-33	Errors are displayed on 84-Series handsets after using SLIC Box for wireless configuration
SLIC-76	Cannot add/upload certificate to SLIC for HTTPS provisioning (8400)
SLIC-104	SLIC: A bad value in wireless proxy bypass causes proxy to no longer work.
SLIC-163	QNC on port 80 cannot reliably upload larger apks
SLIC-164	Pivot gets stuck "transferring APKs" when pushing APK from QNC
SLIC-168	Pivot phone only loaded one of the apks that were installed in QNC
SLIC-169	Pivot phone did not install apks over USB
SLIC-197	Ethernet is being disabled after ~5min on QNC from the factory
SLIC-199	When loading APKs at customer site, device acquires but loses SLIC connection
SLIC-201	Upgrade failures with some memory sticks
SLIC-203	Enterprise username, password not required on 8400

# Chapter 6: QNC Software 1.0.x

QNC Version 1.0.81

For use with the following versions:

- PIVOT 2.1.0.17257
- PIVOT 2.0.0.15757
- PIVOT 1.8.0.17256
- CMS Version: 2.0.1496.1665



## **Caution: QNC 1.0 compatibility**

QNC 1.0 is designed to operate only with PIVOT R1.8, R2.0 or R2.1 and above and CMS 2.0.

## **New Features**

The QNC replaces the Spectralink SLIC product. The following features are new to the QNC as compared to SLIC.

- An enhanced user interface
- Deployment of initial configuration to PIVOT phones through Wi-Fi
- Support of multiple concurrent downloads through Wi-Fi



## **Caution: Only deploy one QNC per location**

When using Wi-Fi mode with the PIVOT devices, only one QNC should be used in the same location. The QNC has a known SSID that the PIVOT devices searches for on boot.

If multiple QNCs are powered up in the same location, the phone may not attach to the correct one.

## **Fixed Issues**

QNC is a complete redesign of the SLIC product, with new hardware and a more responsive and intuitive user interface.

## Known Issues

<i>Issue</i>	<i>Description</i>
S-128	Presence of USB stick will prevent writing to the sdcard If a USB stick is put in a QNC, the QNC will preferentially use the USB stick to store configs instead of the sdcard. On subsequent boots it will still be looking for the USB stick and won't write out the sdcard. This is existing behavior for the SLIC device.
S-151	QNC does not boot properly when USB connections changed during boot Don't insert or remove USB devices from the QNC while it is booting

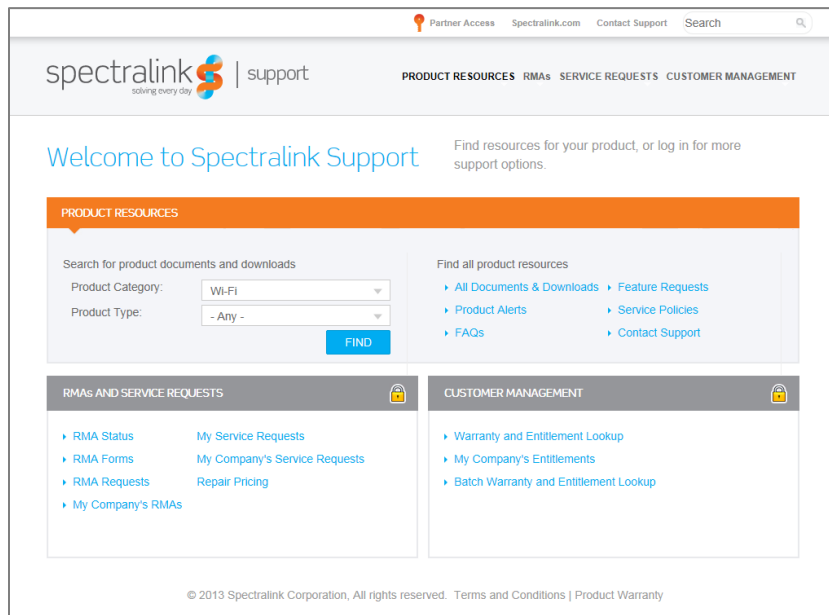


# Chapter 7: Reference Documents

Please consult your support representative for all questions and issues about this product.

## Spectralink References

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



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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. PIVOT documents are available at <http://support.spectralink.com/pivot>.

### 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.

*Quick Network Connect Administration Guide* QNC provides step-by-step instructions for configuring wireless settings required for the handsets to associate with the wireless LAN.

*Spectralink 87-Series Smartphone Deployment Guide* The Deployment Guide provides sequential information for provisioning and deploying the handsets. It covers deployment using QNC and CMS as well as manual deployment.

*PIVOT by Spectralink Configuration Guide* The PIVOT Configuration Guide provides detailed information about PIVOT menu items that have been developed specifically for the PIVOT handset.

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

*Spectralink 87-Series Wi-Fi Security Implementation 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 method and explains how to implement each of them.

*Spectralink 87-Series Smartphone Application Installation Guide* The Applications Installation 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.

*Spectralink 87-Series Smartphone User Guide* The User Guide provides detailed information about using the features of the 87-Series handsets.

*Spectralink 87 Series Wireless Telephones Web Developer's Guide* The Web Developer's Guide provides Web application creators with information for developing and deploying Web applications that interface with Spectralink handsets.

For information on IP PBX and softswitch vendors, see *PIVOT by Spectralink Call Server Interoperability Guide*.

\*\*\*\*END OF DOCUMENT\*\*\*\*