



Firmware Upgrade Procedure

For products **FarLinX X25 Gateway**
 FarLinX XOT Gateway
 FarLinX Mini Gateway

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1 INTRODUCTION

This procedure describes how to upgrade the firmware of a FarLinX Gateway (X25, XOT or Mini). It describes the following steps:

- How to obtain the firmware
- Pre-update activities
- Performing the firmware update
- Post-update activities

There are three different types of FarLinX Gateway:

- FarLinX Mini Gateway



- FarLinX X25 Gateway and FarLinX XOT Gateway (1U enclosure)



- FarLinX X25 Gateway and FarLinX XOT Gateway (original enclosure)



Note that this document covers only **Firmware Upgrade**, not the System Updates (patches) that are available for the FarLinX X25 Gateway and FarLinX XOT Gateway. The FarLinX Mini Gateway permits only Firmware Upgrades, not System Updates (patches).

Firmware Upgrades for the FarLinX X25 Gateway and FarLinX XOT Gateway are not compatible with the FarLinX Mini Gateway. Firmware Upgrades for the FarLinX Mini Gateway are not compatible with the FarLinX X25 Gateway or FarLinX XOT Gateway. Please check that you have the firmware upgrade image file for the appropriate model before attempting a firmware upgrade.

2 Obtaining the Firmware Update

Not all FarLinX Gateway Firmware Updates can be downloaded directly from the FarSite Communications website. The FarSite web site will allow you to download software directly or in some cases will require you to complete a form to request access to an updated firmware image.

2.1 Determine the current Firmware Version

In order to determine if your Gateway product has an available Firmware Upgrade, you will need to know the current software version installed in the product. This is available by clicking on the **Support Info** link on the Gateway's **Administration** menu.

FarLinX X.25/XOT Gateway

[Config AUX Port](#)
[System Restart](#)
[System Status](#)
[Support Info](#)

FarLinX Mini Gateway

[AUX Port Settings](#)
[Shutdown/Restart](#)
[System Status](#)
[Support](#)

An example screenshot is shown below for the X.25/XOT Gateway, which has a **System Version Number** of **2.4.7**

Support Information

This page provides the system version and serial numbers, and may be requested by a support engineer if you need to contact customer support.

System Version Number	2.4.7
Farsync Driver	1.09.04-patch02-b23
Java Applet UI	2.8.3.3
PHP	2.4.0.28
Fsx25	3.59-01
X.25 Tap	1.6.7b
Fsx25d	3.08.07
Fsmgmtsrverd	3.07.08.0
Fsxotd	3.0.10.0
Fsgatewayd	2.4.5.101
Flxlcd	1.4.2.4
Farxotgd	1.0.0.4
Fstrapd	2.0.1.3
Heart Beat	1.0.0.3
padtty	1.0.1.30
padmated	1.0.0.11
IPsec tools	0.7
Configure	3.0
System Serial Number	F003/0003

The corresponding screenshot for the Mini Gateway shows a **System Version Number** is **2.3.5**

Support Information

Module	Version
System version	2.5.3
Java applet	2.8.6.18
Web interface	2.5.0.84
FarSync Serocco driver	1.7a
FarSync X.25 driver	3.60-03a
X.25 Tap	1.6.7d
X.25 daemon	3.09.02.0
Management Server daemon	3.07.12.2
XOT daemon	3.02.01.12
Gateway daemon	2.5.5.171
LCD daemon	2.0.0.20
System manager daemon	2.0.0.10
SNMP daemon	2.0.1.5
PAD TTY	1.0.3.34
PAD redirect daemon	2.0.0.13
IPSec tools	0.7.1
System monitor	2.8
Configure	3.4
Serial number	G100/0072

Please also note the **System Serial Number** of your Gateway, as this may be needed for the download.

2.2 Starting the Download Process

Visit the **Software Downloads** section of the FarSite Communications website, the URL for this is as follows:

http://www.farsite.com/custsupp/Download_Software.htm

In case the link has been changed, navigate using the menu bar to **Support** then **Software downloads**.

This will display a screen similar to the following:

The screenshot shows the FarSite Communications website. The browser address bar displays 'farsite.com/custsupp/Download_Software.htm'. The page features the FarSite logo and a navigation menu with links for HOME, PRODUCTS, SERVICES, SUPPORT, NEWS, HOW TO BUY, CONTACTS, ABOUT US, CAREERS, and SITE MAP. A red banner at the top reads 'Download software and upgrades for FarSite Communications Products'. Below this, several software categories are listed with brief descriptions: FarSync Software, FarSync Flex Firmware, FarSync X.25 Software, FarSync XOT Software, FarLinX X25 Gateway Software, FarSync BERT Software, and FarSync card test software. A date '27-Jan-2015' is visible at the bottom left of the page content.

Click on the link labelled **FarLinX X.25 Gateway Software**.

The screenshot shows the FarSite Communications website page for 'FarLinX X25 Gateway software'. The browser address bar displays 'farsite.com/custsupp/Download_FarLinX_Gateway_software.htm'. The page features the FarSite logo and a navigation menu. A red banner at the top reads 'FarLinX X25 Gateway software'. Below this, an 'Upgrade Guide' section provides instructions for upgrading FarLinX Gateways. It includes sections for 'Current Release' and 'Older Releases', each with a list of software versions and patches. A date '27-Jan-2015' is visible at the bottom left of the page content.

Check for the availability of a firmware upgrade. The example screen above shows that the FarLinX Mini Gateway has an available upgrade to version 2.5.4. While the FarLinX X25 Gateway and FarLinX XOT Gateway have a later version than 2.4.7 available (version 2.6.18).

Click on the link for the software version required.

If you have never downloaded any software from the FarSite Support area before then you will need to register with the download server. If you have registered before, then just enter your email address and the User Id that was provided to you when you registered. If you cannot locate this information then simply register again.

2.3 Downloading or Requesting a Firmware Upgrade Image

A summary of the New Features that are available in the version you are downloading will be displayed. If the firmware upgrade image file is directly downloadable then the link will be on this page, otherwise there will be a form for you to request download of the Firmware Upgrade image file. To request the Firmware Upgrade image file complete the form shown on the screen and you will be contacted with the appropriate download details.

The following sections assume you have directly downloaded the upgrade image file or received it another way following completion of a download request form.

3 Pre-upgrade procedures

If your Gateway is currently in a live environment it will have a configuration that will need to be imported after the upgrade is complete. Therefore the first action is to perform a **Backup** of your configuration so that it can be **Restored** when the Gateway has been upgraded. The upgrade process will carry across the basic networking information, i.e. the IP Address and Gateway Name.

If your Gateway has never been used and has no configuration, but is replacing one that is currently in service, then you can **Import** a backup taken from the old Gateway.

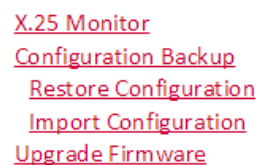
3.1 Backing up the configuration

From the **Administration Menu**, select the **Backup Config** link.

FarLinX X.25/XOT Gateway



FarLinX Mini Gateway



This will present the following page for the FarLinX X.25/XOT Gateway.

FarLinX X25 Gateway

Backup Configuration

The package containing all the configuration of this gateway has been generated.
Please download it to your local machine.

This package could be used to [Restore Config](#) to the same gateway which generated this package.
Or be used in [Import Config](#) of another gateway to clone the configuration.

[farlinx_x25gw.fcfg](#)

Clicking on the **farlinx_x25gw.fcfg** link will download the backup configuration file to your computer. You may wish to rename this file for convenience, but do not change the file name extension from .fcfg.

The following will be presented for the FarLinX Mini Gateway.

Download Configuration Backup

This page generates a backup copy of this gateway's current configured state. It can be downloaded to your local system.

The backup can be completely restored to this system using the [restore configuration](#) page. The backup can also be used to clone certain settings to other gateway systems using the [import configuration](#) page.

[Download configuration](#)

Clicking on the **Download configuration** link will download the backup configuration file to your computer. You may wish to rename this file for convenience, but do not change the file name extension from .fcfg.

3.2 Taking the Gateway out of service

Performing the upgrade will involve the Gateway being restarted, so it is a good idea to ensure that there is no live traffic running through the Gateway while the Firmware update is in progress. There may be a number of ways that you could do this, for example you may be able to change a router to redirect TCP calls to an alternative Gateway.

You could also stop the X.25 lines to prevent new sessions being established

3.3 Restarting the Gateway

It is recommended to restart the Gateway just prior to performing the Firmware Update to ensure that the Gateway will restart after the update is complete.

Then you are ready to perform the upgrade itself.

4 Performing the Firmware Update

Do not attempt a firmware upgrade over an unreliable TCP network connection or if there is concern over continuity of the power supply as flash memory corruption could occur.

4.1 Upload the 2.6.18 Firmware Update image file

For the FarLinX X.25 or FarLinX XOT Gateway follow the instructions below.

From the **Administration** menu, choose the **Firmware Upgrade** link.



[System Update](#)
[Firmware Upgrade](#)
[Config AUX Port](#)

This will present the following page.

Firmware Upgrade

This process updates the firmware in the Gateway to a complete new version. The system update page for minor updates is [here](#).

Are you sure you wish to perform a complete Firmware Upgrade? If so, please [backup](#) the X.25 configuration, and then [restore](#) it when the Firmware Upgrade is complete. And please ensure that you have downloaded the Firmware Upgrade file then click below to proceed to the Upgrade page. Selecting this option will clear all current log files to ensure there is space available for the update to succeed, so if you wish to save these log files click [here](#) to save the log files then return to this page later.

[Proceed with Firmware Upgrade](#)

Click on the **Proceed with Firmware Upgrade** link. This displays the following:

Firmware Upgrade

Please use the browse button below to select your firmware package.

Press the **Upload And Start** to start the upgrading.

The upgrading process will take a couple of minutes. Do not refresh the web browser during processing.

No file chosen

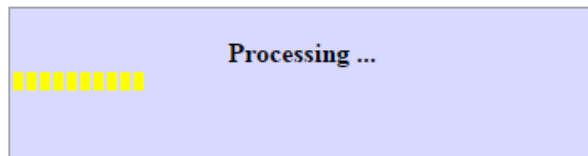
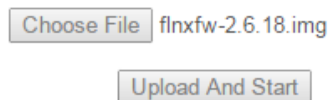
Click on the **Chose File** button and then browse to where the FarLinX firmware upgrade image has been saved on your computer.

Then click the **Upload and Start** button which will display a screen similar to the following:

FarLinX X25 Gateway

Firmware Upgrade

Please use the browse button below to select your firmware package. Press the **Upload And Start** to start the upgrading. The upgrading process will take a couple of minutes. Do not refresh the web browser during processing.



The firmware is now being uploaded and processed and may take some time to complete. **Please do not navigate away from this screen.** After a while you should see a screen confirming the upgrade is complete.

Firmware Upgrading Success

New system configurations:

IP Address: 10.0.96.72
Netmask: 255.0.0.0

Rebooting system...

Your Gateway firmware upgrade is now complete.

4.2 Upload the 2.5.4 Firmware Update image file

For the FarLinX Mini Gateway follow the instructions below.

From the **Administration** menu, choose the **Upgrade Firmware** link.

[Upgrade Firmware](#)

[AUX Port Settings](#)

[Shutdown/Restart](#)

This will present the following page.

Firmware Upgrade

This process updates the entire firmware in the FarLinX Mini Gateway to a new version.

Are you sure you wish to perform a complete firmware upgrade?

[Proceed with firmware upgrade](#)

Click on the **Proceed with Firmware Upgrade** link. This displays the following:

Firmware upgrade

Use the buttons below to select a file to upload. The file should be of the form **fmgfw-[version].img** where *[version]* corresponds to the version of the firmware you wish to apply.

The process will begin automatically upon upload of a valid file.

During the upgrade do not:

Power off the FarLinX Mini Gateway

Refresh the browser window

Navigate away from this page

Interrupting the upgrade process could leave your FarLinX Mini Gateway in an inconsistent state.

No file chosen

Click on the **Chose File** button and then browse to where the FarLinX firmware upgrade image has been saved on your computer.

Then click the **Upload...** button which will display a screen similar to the following:

Firmware upgrade

Use the buttons below to select a file to upload. The file should be of the form **fmgfw-[version].img** where *[version]* corresponds to the version of the firmware you wish to apply.

The process will begin automatically upon upload of a valid file.

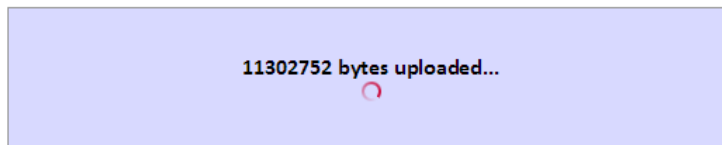
During the upgrade do not:

Power off the FarLinX Mini Gateway

Refresh the browser window

Navigate away from this page

Interrupting the upgrade process could leave your FarLinX Mini Gateway in an inconsistent state.



The firmware is now being uploaded and processed and may take some time to complete. **Please do not navigate away from this screen.** After a while you should see a screen confirming the upgrade is complete.

Firmware upgrade

Use the buttons below to select a file to upload. The file should be of the form **fmgfw-[version].img** where *[version]* corresponds to the version of the firmware you wish to apply.

The process will begin automatically upon upload of a valid file.

During the upgrade do not:

Power off the FarLinX Mini Gateway

Refresh the browser window

Navigate away from this page

Interrupting the upgrade process could leave your FarLinX Mini Gateway in an inconsistent state.

File uploaded. Unpacking...
Files verified. Beginning upgrade...
Selecting partition...
Selected partition mtd4. Erasing partition...
Partition successfully erased. Writing new image to flash...
Image written successfully. Mounting block device...
Verifying new partition...
Write successful. Backing up config files for current version...
Config replicated. Saving changes...
Changes saved successfully. Preparing to flash new kernel...
Kernel file prepared, erasing write location...
Kernel partition mtd2 erased. Writing new kernel...
New kernel written successfully. Adjusting boot parameters...
Boot parameters set.
File conversion completed and temporary files cleaned up.
Upgrade complete.
Rebooting System...

Your Gateway firmware upgrade is now complete.

5 Post-update procedures

This stage will confirm that the Firmware version is as expected and will restore the Gateway configuration that was saved before the upgrade took place.

5.1 Check System Version Number

Once the Gateway has restarted, login once again and from the **Administration** menu select the **Support Info** link.

Check that the **System Version Number** is the new version number you were expecting.

5.2 Restore your saved configuration

Use the **Restore Config** link to read and apply the configuration you saved before the upgrade. If you are applying the configuration from a different Gateway device then use **Import Config** instead.

[X.25 Monitor](#)

[Configuration Backup](#)

[Restore Configuration](#)

[Import Configuration](#)

[System Updates](#)

This will display a screen similar to the following:

Restore Configuration

This page is used to restore a backed-up configuration file after a factory reset or in the event of a misconfiguration. It is designed to restore every setting from a configuration file to the same gateway it was downloaded from.

If you wish to clone the settings of a different gateway's configuration file to this system, use the [import configuration](#) page instead.

Use the form below to browse to the file generated by the [configuration backup](#) page. Click 'restore' to begin restoring the settings.

Please note: this gateway's IP address will be changed to the IP address saved in the configuration file.

Value	Setting
Select file	<input type="button" value="Choose File"/> No file chosen
<input type="button" value="Restore"/>	<input type="button" value="Revert"/>

Use the Choose File button to locate the saved configuration file and then the Restore button to restore the configuration. Please refer to the specific version release notes for the Firmware Update that has been applied for any further migration steps that might be required.

5.3 Download and apply available patches

For the FarLinX X25 Gateway or FarLinX XOT Gateway there may be some patches available for the new firmware version to which you have upgraded. If so, then these patches should be applied at this time. This does not apply to the FarLinX Mini Gateway.

Re-visit the **Software Downloads** section of the FarSite Communications website, and look for **patches** for your new firmware version. Follow the instructions on the website to download and apply these patches.

5.4 Switching back to the previous firmware

After a successful upgrade, a "Switch Back" option is available on the "Firmware Upgrade" page. This can be used to switch back to the previous version of the Gateway software, i.e. the version that was running before the upgrade was applied. Before switching firmware versions, you should stop directing all traffic/transactions through the Gateway.

Switch Back

Press the "Switch Back" button to switch the system firmware back from the current version (**2.6.18**) to version **2.4.7**.

Switch Back

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