



# Luna PED Firmware 2.6.0-6

## UPGRADE INSTRUCTIONS

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## Overview

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This document describes how to upgrade the firmware on your Luna PED from version 2.5.0-3, to version 2.6.0-6.

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**CAUTION:** This upgrade applies to Luna PEDs running firmware 2.5.0-3. Do not attempt to apply this upgrade to a Luna PED running firmware prior to 2.5.0-3. Doing so can cause the pre-2.5.0-3 Luna PED to lose functionality, with no rollback option.

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The files and instructions necessary to get a Luna PED from version 2.4.0-3 to version 2.5.0-3, before you begin the upgrade from 2.5.0-3 to 2.6.0-6 (in this present instruction), are available in the **firmware** folder in the root of the LunaClient installation media, or can be downloaded from the SafeNet Support portal.

## Files Included in this Upgrade Package

The update package includes the following files. All of the files are required to successfully perform the update:

- **ped-2.5.0-IPL.bin**
- **ped-2.6.0-6-full-real.bin**
- **LunaPED\_Update.exe**

## Preparing For the Upgrade

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Before you can install the new firmware, you must configure the PED to accept the upgrade.

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**CAUTION:** It is strongly recommended that both your computer and Luna PED be protected by an uninterruptible power supply during the upgrade operation. A power failure while any of the file images is being applied to the PED can result in loss of function that might require repair at a SafeNet facility.

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## Prepare Your Computer For the Upgrade

The needed upgrade files, including these instructions, are provided in an archive file named for the PED upgrade part number.

```
\630-010317-002\  
    \LunaPED_Update.exe  
    \ped-2.5.0-IPL.bin  
    \ped-2.6.0-full-real.bin  
    \007-012337-002_ped_upgrade_2-6-0-6.pdf
```

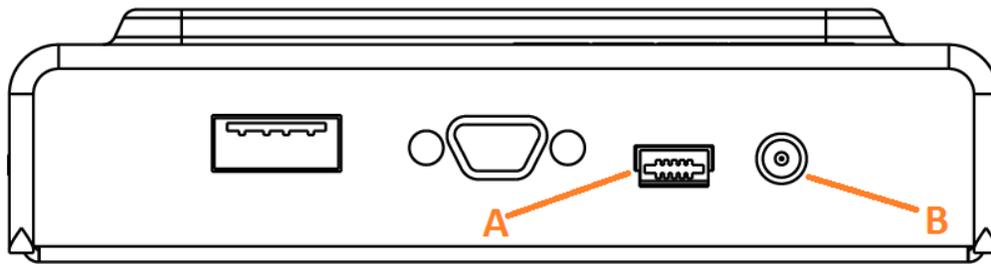
Extract those files to the Windows PC that is connected to the Luna PED that you are upgrading.

1. On your Windows PC, open a command prompt window and move to the directory where you copied the files in the upgrade package.

## Prepare the Luna PED For the Firmware Upgrade

1. Ensure that the Luna client, including the Remote PED option, is installed on your Windows PC. To verify, ensure that the following files/directories are installed:
  - C:\Program Files\SafeNet\LunaClient\RemotePEDDriver
  - C:\Program Files\SafeNet\LunaClient\pedserver.exe

2. Connect power to the Luna PED (using the SafeNet-supplied power block to connector **B** in the illustration) and connect the USB cable between the Luna PED (connector **A**) and your Windows PC.



3. Allow the PED to boot normally until it reaches the default “Local PED mode Awaiting command...”.
4. Press the < key to display the **Mode** menu.
5. Verify the PED version – the bottom line of the PED display should say “PED V.2.5.0-3”.

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**CAUTION:** If any other version is shown, stop, acquire and install the necessary upgrades to reach version 2.5.0-3, then return and resume these instructions.

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6. Select **4** to display the **Admin** menu.
7. Select **7** for **Software Update**.
8. Select **0** to reset the PED and immediately press and hold the < key while the PED is resetting. Continue to hold the < key until the **Select Mode** menu is displayed.
9. Select **USB Mode (4)** when prompted to **Select Mode**. The PED displays **USB mode**.

## Upgrading the Luna PED Firmware to Version 2.6.0-6

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During this procedure, each of the .bin files is individually uploaded from your computer to the Luna PED, and then saved into permanent memory as the new version of that component. Individual responses are required at the PED to accept and load each file.

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**CAUTION:** Complete the instructions in the order provided, or the PED could be left in an unusable state.

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Once you start transferring/uploading a file to the PED, pay attention and promptly respond to the PED messages to acknowledge the upload and then to confirm installation of that new file. The individual PED operations do impose a timeout. However, you can pause before the next file transfer step, as there is no time restriction from one file upload to the next.

### Step 1: Transfer and Confirm the New Initial Program Loader **ped-2.5.0-IPL.bin**

1. In a command prompt window, on your Windows PC, from the directory where you copied the files in the upgrade package, execute the following command:

```
prompt> LunaPED_Update.exe ped-2.5.0-IPL.bin
```

2. At the Luna PED keypad, select **Yes** in response to the following prompt:

**Software update. Upload Image? YES/NO.**

This is a medium-sized file, in this context, so transfer should be complete after approximately one minute. While the transfer is in progress, the PED display shows:

```
USB Mode
Software update
Uploading image...
```

3. The output of the update command in the Windows command prompt should be similar to the following:

```
LunaPED_Update v2.1.0-0 Nov 25 2013 12:44:48
PED operation is required (to upload image)...
(Sent 928562 bytes in 72571000 microseconds).
PED operation is required (to save image)...
```

4. If the image has transferred correctly, Luna PED displays the following message:

```
USB Mode
Software update
** WARNING **
A power failure during save is unsupported!
Save Image? YES/NO"
```

Select **Yes** to save the new image.

5. Wait approximately 20 seconds. The PED displays the following message:

```
USB Mode
Software update
Success
Press ENTER
```

Press the **Enter** key on the PED to continue.

6. If Luna PED displays an error "(SOCKRX)" this is most likely due to failure to respond to PED prompts in time. Press **Enter** on the PED to return to USB Mode, and try again to transfer the file and then save the image on the PED, responding more quickly to PED prompts. Similarly, if you receive an error at the Windows command prompt that is similar to one of the following messages, take the appropriate action, as indicated:

Error message	Description
ERROR: rx error (-1) #2	This error might occur if there is a connection error, for example, if Luna PED prompts are not answered in time, or if there is a bad USB connection or cable. Repeat the upgrade operation. If it continues to fail, try using a different cable, or change the cable location to reduce interference. Ensure that you respond to the PED prompts in a timely fashion.
ERROR: software update was cancelled (-1)	This error might occur if you attempt to transfer files and update PED components out of order.

7. Unplug all cables from the PED and then reconnect to restart the PED.
8. As the PED boots, verify that the following message is displayed:

```
BOOT 1.0.6-2
```

Once rebooted, you may see a message `Nothing to Upgrade!`. Please ignore this message, and proceed to "Step 2: Transfer and Confirm **ped-2.6.0-6-full-real.bin**", below.

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**Note:** The PED displays **IPL V.2.5.0-0** on the **Select Mode** screen.

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## Step 2: Transfer and Confirm **ped-2.6.0-6-full-real.bin**

The second file is larger and takes a little longer to transfer and install.

1. Allow the PED to boot – after successful completion of the steps in the previous section, the PED should boot directly to “USB Mode”.
2. In the command prompt window, execute the following command:

```
prompt> LunaPED_Update.exe ped-2.6.0-6-full-real.bin
```

3. At the Luna PED, select **Yes** in response to the prompt: **Software update. Upload Image? YES/NO.**

Wait approximately six minutes. While transfer is in progress, the command line shows a progress indicator (remaining bytes to transfer), and the PED display shows:

```
USB Mode
Software update
Uploading image...
```

4. The output of the update command in the Windows command prompt should be similar to the following:

```
LunaPED_Update v2.1.0-1 Nov 25 2013 12:44:48
PED operation is required (to upload image)...
(Sent 4196354 bytes in 327977000 microseconds).
PED operation is required (to save image)...
```

5. If the image has been sent correctly, Luna PED displays the following message:

```
USB Mode
Software update
** WARNING **
A power failure during save is unsupported!
Save Image? YES/NO"
```

Select **Yes** to save the new image.

6. Wait for 20-30 seconds. When the PED displays the following message:

```
USB Mode
Software update
Success
Press ENTER
```

Press the **Enter** key on the PED keypad to return to USB mode.

7. Unplug all cables from the PED and then reconnect to restart the PED.
8. As the PED starts booting, it should display the following messages

```
BOOT V.1.0.6-2,
loading PED..
Local PED Mode Awaiting command..
```

If you press “<” to exit to “Select Mode” menu, the bottom of the PED screen should now show “PED V.2.6.0-6”.

## Done

Luna PED is now updated and ready to use. Repeat the above sequence for each Luna PED that you own.

## Troubleshooting

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This section provides guidance for resolving problems you may encounter when upgrading the PED firmware.

### No PED Prompts

You must attend to the PED when image files are being applied. If no prompts appear on the PED shortly after you issue the **LunaPED\_Update.exe** command, re-check your connections, as follows:

- The PED power block must be connected to mains AC power and to the power socket on the PED.
- A solid USB connection must be made between a USB port on the sending computer and the USB-mini port on the PED (immediately beside the power socket).
- The PED must be powered on, and in USB mode.

### Files Uploaded in the Wrong Order

If you attempt to upload the files in the wrong order, the PED performs some verification at the end of a file upload.

If the PED displays a message similar to the following, it is a good indication that you uploaded the wrong file first:

```
Failure (VERIFY) (7)
Press Enter
```

You are not given an opportunity to attempt to install/confirm the file if the upload does not verify.

To resolve the issue, restart the process from the beginning of these instructions, ensuring that you follow the sequence in these instructions, taking the upgrade files in the order specified.

If that does not correct the problem, contact SafeNet.

### Upgrade Failed Message (or Similar)

If the PED displays an `Upgrade Failed` message, or any message that does not say `Upgrade in Progress` followed by `Upgrade Complete`, before the Admin menu appears, stop the upgrade process immediately.

To resolve the issue, you can take the following actions:

- Reboot the PED by disconnecting and then re-connecting the PED cables. This may clear the problem. If the problem clears, the PED displays a `Nothing to Upgrade` message. In this case, try the upgrade again.
- If the PED shows, `Upgrade in Progress` followed by `Upgrade Failed!` every time you reboot it, then stop trying and contact SafeNet.
- You can re-upload the file and try again if the upload action failed to complete, or if you failed to acknowledge it on the PED, with the following caution.

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**CAUTION:** Attempting to re-upload the file to try again, after an upgrade failure (the step where the file is applied after upload), you risk losing Remote PED capability, if your PED was remote capable.

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## Trademarks and Disclaimer

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Although we have attempted to make this document as complete, accurate, and useful as possible, we cannot guarantee its contents. Errors or omissions will be corrected, as they are identified, in succeeding releases of the product. Information is subject to change without notice.

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