SDPE OS Recovery Upgrade

A recovery upgrade of allows you to do a complete install of the software in the event that the system becomes unresponsive and cannot be upgraded normally.

To complete this procedure you will need a bootable microSD™ or microSDHC™ card with the latest recovery software. Each SDPE blade should have come with one installed.

If you are recovering the SDPE in Carbonite mode, you will also need to create an upgrade USB with the latest switcher software, and then boot the switcher from the recovery microSD™ memory card.

If you are recovering the SDPE in Acuity® mode, the Acuity CPU will provide the upgrade files.

microSD™ and microSDHC™ are trademarks of SD-3C, LLC.

To Create a Bootable Memory Card

The bootable memory card replaces the internal memory of the switcher to provide a temporary bootable operating system.

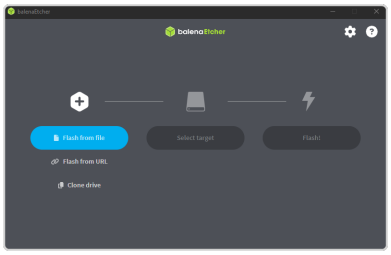
> ***Note:*** *The SDPE blades come with a microSD™ memory card installed. You only need to create a new bootable memory card if the existing one is missing or has become corrupted. Before creating a new bootable memory card, check if the existing memory card is installed. If the existing memory card is installed but the recovery upgrade process fails, it may have become corrupt and needs to be re-imaged.*

> ***Tip:*** *If you have more than one SDPE blade in the system, you can use the microSD™ card out of any of these blades.*

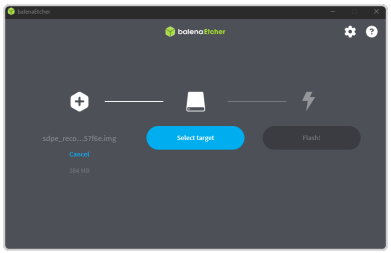
To create the bootable memory card you need the following:

- A PC with a microSD™ card reader.
- A blank microSD™ or microSDHC™ card of at least 128MB.
- The `SDPE_recovery_xxx.img` recovery image file from Ross Technical Support.
- A disk imaging utility. We recommend Balena Etcher.

1. Save the recovery image file to your PC.
2. Insert the blank microSD™ memory card into the card reader of your PC.
3. Start Balena Etcher imaging utility and select the image and target you want to flash the image onto.

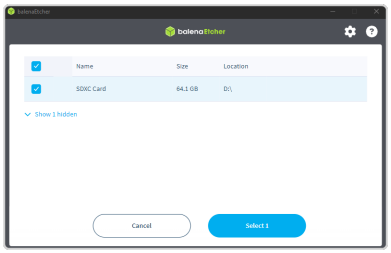


4. Click **Flash from file** and select `SDPE_recovery_xxx.img` recovery image.

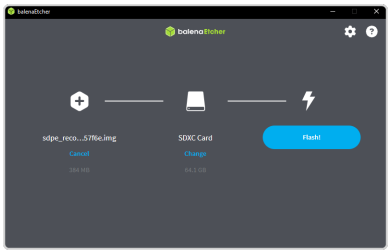


5. Click **Select target** and select the microSD™ you want to flash.

> ***Tip:*** *You can flash more than one microSD™ at a time if you multiple card readers.*



6. Click **Flash!** to flash the image to the disk.



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To Create an Upgrade USB (Carbonite Only)

The recovery USB drive is a blank USB that contains the latest Carbonite software upgrade file.

To create the recovery USB drive you need the following:

- A blank USB drive of at least 2GB.
- The `upgrade-xxxx.ultx_carb` file.

1. Ensure that the USB drive is blank. You may have to re-format the drive if necessary.
2. Copy the upgrade file to the root directory of the USB drive.

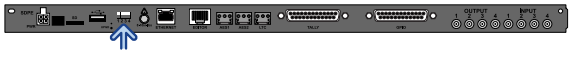
To Perform a Recovery Upgrade

The recovery upgrade forces the SDPE blade to boot from the microSD™ memory card.

> ***Tip:*** *If you need to upgrade multiple SDPE blades, you can perform all the upgrades at the same time. Configure each blade as described below but only perform the power cycle when all the blades are ready.*

1. Ensure the recovery microSD™ memory card into the **SD** port on the back of the switcher.

2. If you are recovering a Ultrix Carbonite, insert the upgrade USB drive into the USB port. If you are performing a recovery upgrade on an Acuity® the USB is not required. Acuity® will pull the upgrade file from the CPU.
3. Set DIP 4 switch to ON (down).
   - DIP 4 — forces the blade to perform a recovery upgrade next time it boots.



4. Power cycle the Ultrix™ router.

The SDPE blade will boot from the recovery microSD™ memory card and perform an upgrade from the USB. If you are performing a recovery upgrade on an Acuity® the USB is not required. Acuity® will pull the upgrade file from the CPU.

> ***Note:*** *As of recovery image 187, logs of the upgrade are stored on the upgrade USB.*