# FarSync Flex Firmware Update Procedure (Windows)

The *FarSync Flex* ships with at least a *Factory Default* version of firmware and may also ship with a later version; by default, the later version will always run. The *ffflash* tool allows a user to check, erase and reprogram the FLASH memory in the *Flex*.

The file to be downloaded to the *Flex* is usually named *ff_image_XXXX.hex*, where *XXXX* is the version number. The executable that downloads the code to the *Flex* is called *ffflash(.exe)*. In order to update the *Flex* you must have previously installed the *Flex* driver, then follow this procedure:

1. Copy the *ff_image_XXXX.hex* and *ffflash.exe* to a convenient folder on the host PC.

2. Attach the *Flex* and identify the SDCI number associated with it. This can be found from the *fsinfo* or *fswdemo* test applications (if you installed them), or direct from Device Manager under *FarSync WAN Adapters*.

3. Enter *ffflash* ***–n****SDCIx* ***–i****ff_image_XXXX.hex* at the command prompt.
Where "x" is the SDCI/sync number identified above and “XXXX” is the version number of the supplied file.

4. Enter "C" to check the current FLASH content. You should see something like this:

```
 C:\Temp>ffflash -nSDCI3 -iff_image_0208.hex

 FFFlash Version 1.1.0

Path: \\.\SDCI3\0

FarSync Flex FFFlash Version 1.1.0
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C.............Check

E.............Erase

P............Program

Select C, E or P. Q to Quit

Block   Address Version Status  Attribute
 0      0x00000  . . .  used    r-x-
 1      0x04000  . . .  used    r---
 2      0x06000  . . .  free    r---
 3      0x08000  . . .  used    r-x-
 4      0x10000  . . .  used    r-x-
 5      0x20000 0.2.0.8 used    r-x-
 6      0x30000  . . .  used    rwxd
 7      0x40000  . . .  free    rwxd
 8      0x50000  . . .  free    rwxd
 9      0x60000  . . .  free    rwxd
10      0x70000  . . .  free    rwxd
```

5. FLASH Block 5 will always contain the Factory Default code, Blocks 6 – 10 may be free or could already contain other versions. Blocks 0 – 5 are write-protected and cannot be erased. In order to download a new version there must be at least one free block available. If necessary, one or more blocks can be erased to make space at this stage. To erase a block, enter “E” and select the block to be erased.

Firmware versions 0.2.0.0 and later require 2 adjacent blocks. If you request ffflash to erase a block containing part of a firmware image then the complete image will be erased.

6. Now, program the new code by entering "P" and selecting the destination starting block number. You should see something like:

```
Enter Block to Program (0...10): 7
Programming FLASH (block 7 @ 0x00040000)
File                    ff_image.hex
Start Address           0xFFFFFFFF
Checksum                0xFFFFFFFF
FLASH minAddress        0x00000000
FLASH maxAddress        0x00014ADF
FLASH used              84704 bytes
FLASH flashAddress      0x00040000
FLASH flashEndAddress   0x00060000
```

7. If you enter "C" again you should see the new code in the selected destination Block:

```
Block   Address Version Status  Attribute
 0      0x00000  . . .  used    r-x-
 1      0x04000  . . .  used    r---
 2      0x06000  . . .  free    r---
 3      0x08000  . . .  used    r-x-
 4      0x10000  . . .  used    r-x-
 5      0x20000 0.2.0.8 used    r-x-
 6      0x30000  . . .  used    rwxd
 7      0x40000 0.3.0.0 used    rwxd
 8      0x50000  . . .  used    rwxd
 9      0x60000  . . .  free    rwxd
10      0x70000  . . .  free    rwxd
```

8. Enter "Q" to quit, then unplug and replug the *Flex* to activate the new code.

9. The updated *Flex* can now be run under *Windows* or *Linux* as desired.