

# FLEXid<sup>®</sup> Driver Installation Instructions

## Version 2.0

### Overview

A FLEXid is a serialized hardware key, also referred to as a dongle, used to lock software access to the machine on which it is physically installed. It works in conjunction with FLEXnet Licensing as a form of a hostid — just like an ethernet address can be a form of a hostid. You supply your end user with the appropriate FLEXid hardware devices and drivers.

If you choose to incorporate the FLEXid hostid type into your licensing model, you need to do the following:

- Decide on the specific type or types of FLEXid dongles you want to support based on the platforms on which you deploy your FLEXenabled application. See [Table 1](#) for a list of supported FLEXid types.
- Ship the appropriate FLEXid driver installer along with installation instructions to your end user. See “Installation Instructions” for suggested installation instructions.
- Ship a quantity of FLEXid dongles to your end user. Dongles are obtained only through Macrovision; dongles obtained directly from the manufacturer will not function as FLEXnet Licensing hostids.
- Issue a FLEXnet license locked to the specific FLEXid dongles you shipped to your end user. See “Issuing FLEXnet Licenses” for more information.

This document provides support information and installation instructions for FLEXid drivers included with the FLEXnet Licensing toolkit. It contains the following sections

- [FLEXid Device Support](#)
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## FLEXid Device Support

**Table 1** below lists the FLEXid® devices supported in FLEXnet Licensing. These devices are available only through Macrovision.

*Table 1: Supported FLEXid Devices*

Operating System	FLEXnet Licensing Platform	Hostid Keyword	Manufacturer/Device
Mac OS® X v10.1	ppc_mac10	FLEXID=9	Aladdin Knowledge Systems HASP® 4 M1 USB memory key
Microsoft® Windows® 32-bit, only: 98/Me/NT/ 2000/XP/ Server 2003	i86_n3	FLEXID=6 (Replaces FLEXID=7)	Rainbow Technologies/SafeNet, Inc. Parallel-based iKey™ authentication token
		FLEXID=7 (No longer available, replaced by FLEXID=6)	Rainbow Technologies/SafeNet, Inc. Parallel-based iKey™ authentication token
		FLEXID=8	Dallas Semiconductor/Maxim Integrated Products, Inc. 1-Wire® parallel port adapter
		FLEXID=9	Aladdin Knowledge Systems HASP® 4 M1 USB memory key (except NT)
Red Hat® Linux Version 7 and 8, 32- bit only	i86_r6	FLEXID=9	Aladdin Knowledge Systems HASP® 4 M1 USB memory key
Red Hat® Linux Version 9, 32-bit only	i86_r9	FLEXID=9	Aladdin Knowledge Systems HASP® 4 M1 USB memory key
Red Hat® Enterprise Linux Version 3, 32- bit only	i86_re3	FLEXID=9	Aladdin Knowledge Systems HASP® 4 M1 USB memory key
SuSE® Linux Enterprise Server 8.1, 32-bit only	i86_s8	FLEXID=9	Aladdin Knowledge Systems HASP® 4 M1 USB memory key

## Installation Instructions

This section provides general installation instructions for each platform for which FLEXid hostids are supported. Ship similar instructions to your end user. You may wish to tailor them to your particular needs. The installers are available in the *platform* folder of the FLEXnet Licensing toolkit or from the Macrovision product download site.

### Microsoft Windows Platforms

The FLEXid installer, `FLEXidInstaller.exe`, is provided for use on Microsoft Windows platforms and is implemented with InstallShield. It is located in the *platform* folder of your FLEXnet Licensing toolkit installation. It supports the following modes of operation:

- [Full Interactive Mode](#)
- [Quiet Mode](#)
- [Silent Mode](#)

## USAGE

Full interactive mode:

```
FLEXidInstaller.exe [/v"/Force"]
```

Quiet mode:

```
FLEXidInstaller.exe /v"/Drivers=driver1[,...] [/Reboot] [/Force]"
```

Response mode:

```
FLEXidInstaller.exe /r
```

Silent mode:

```
FLEXidInstaller.exe /s /fl"response_file"
```

where:

/v	Allows you to specify one or more FLEXid-specific installation sub-options, listed below:
/Drivers= driver1[, ...]	Specifies one or more drivers to install, where <i>driver1</i> can be: <div style="margin-left: 40px;">FLEXid6_7 FLEXid8 FLEXid9</div> <p>The use of this sub-option triggers the installer to operate in quiet mode. In quiet mode, all GUI screens are displayed in sequence as in full interactive mode, but are automatically responded to by the installer.</p>
/Force	Forces the installer to attempt to overlay an existing installation of the specified driver with the same or greater version. The driver is specified either with the /Drivers sub-option in quiet mode or from within the GUI in full interactive mode. Existing drivers installed by a previous version of the FLEXid installer are not affected.
/Reboot	Forces the system to restart automatically after the specified drivers are installed. Must be used with the /Drivers sub-option.
/r	Denotes response mode. In this mode the installer records all keystrokes into a response file, located at %SystemRoot%\setup.iss, that can be played back later with the /s option. This is used to preconfigure the installation options such that they can be replayed later in silent mode.

<code>/s</code>	Denotes silent mode; the installer operates without displaying any GUI screens. In this mode the installer takes its direction from keystrokes previously recorded in a response file (see <code>/r</code> option above). Use <code>/f1</code> to specify the response file. See <a href="#">"Silent Mode"</a> for further information.
<code>/f1"res_file"</code>	Specifies the response file; only used in conjunction with the <code>/s</code> option. The response file is created by a previous installer invocation during which the <code>/r</code> option was specified.

The options, `/r`, `/s`, and `/f1`, are standard InstallShield options. Further information on their operation can be found in the InstallShield knowledge base article [#Q102394](#).

## LOG FILE

The FLEXid installer logs every action and decision into a file regardless of the mode in which it operates. The log file is created at the following location:

```
%ProgramFiles%\Macrovision\FLEXid Drivers\install.log
```

Log entries are appended to this file for each subsequent invocation of the installer such that a history of operations is maintained.

## EXAMPLES

To install all drivers in quiet mode:

```
FLEXidInstaller.exe /v"/Drivers=FLEXid6_7,FLEXid8,FLEXid9"
```

To install just the FLEXid 8 driver, forcing the overlay of any FLEXid 8 driver that may exist on the machine:

```
FLEXidInstaller.exe /v"/Drivers=FLEXid8 /Force"
```

To install both the FLEXid 8 and FLEXid 9 drivers and then automatically restart afterward:

```
FLEXidInstaller.exe /v"/Drivers=FLEXid8,FLEXid9 /Reboot"
```

## FULL INTERACTIVE MODE

1. Locate the installer, `FLEXidInstaller.exe`, in the *platform* folder of your FLEXnet Licensing toolkit installation.
2. Invoke `FLEXidInstaller.exe`. The welcome screen is displayed.
3. Click Next on the welcome screen to continue the installation.  
If the installer detects drivers installed by a previous version of a FLEXid installer, the installer displays a message to this effect and exits. You must cleanup the previously installed drivers before proceeding. See ["Cleaning Up Previous FLEXid Driver Versions."](#)
4. Select the particular driver or drivers you wish to install and click Next to continue the installation. Use [Table 1](#) to help you decide which ones to install.  
If the installer detects the same or a newer version of the selected driver is already installed on your system, possibly from a different source, it does not perform the installation for that driver. Control returns back to the selection screen with your choice deselected. At this point, either select a different driver or click cancel to exit the installer. See information about the `/Force` option in ["Usage"](#) for specifying alternate behavior.
5. Click Install to initiate the installation.  
A progress bar is displayed showing the steps of the installation.

6. Notification is displayed when the installation is complete. Decide whether or not you want the installer to restart your system and click Finish to exit the installer.

The installer keeps track of all its actions in a log file located at  
`%ProgramFiles%\Macrovision\Macrovision FLEXid Drivers\install.log`.

7. If not done by the installer, restart your system. This is required to complete the installation.

### SILENT MODE

In the silent mode, the FLEXid installer is invoked, executes, and returns control to the command line without any noticeable output. It is suitable for incorporating as a step in an over-arching installation procedure you provide to your end user for which no interaction is required.

Running the FLEXid installer in silent mode requires you first create a response file at your location from which the installer gets its direction. The response file, together with the FLEXid installer, is shipped to your end user.

To create the response file:

1. Select a machine on which no previous versions of the FLEXid installer has been run.  
Alternatively, use `platform_dir\FLEXidCleanUtility.exe` to scour the machine from previous installer effects.
2. Run the FLEXid installer in response mode, responding to each GUI screen as you will on the actual installation machine:

```
FLEXidInstaller /r
```

This creates a response file located at `%SystemRoot%\setup.iss`.

3. Copy the response file to the same location as the installer resides.
4. Consult `%ProgramFiles%\Macrovision\FLEXid Drivers\install.log` to confirm installer's actions.

Now, on the machine where the actual FLEXid installation is to take place:

1. Make sure all remnants of previous FLEXid installations have been removed. Use `platform_dir\FLEXidCleanUtility.exe` as appropriate.
2. Locate the response mode file previously created, which corresponds to the desired configuration for this installation.
3. Invoke the FLEXid installer in silent mode, passing in the name of the response file:

```
FLEXidInstaller /s /f1"path_to_iss_file"
```

This causes the installer to play back the response file, automatically issuing the same responses as were made when the file was created.

Note: even though `setup.iss` resides in the same folder as the installer at this point, you must provide its full path name, represented here by `path_to_iss_file`, to the installer.

4. Consult `%ProgramFiles%\Macrovision\FLEXid Drivers\install.log` to confirm the installer's actions.
5. If not done by the installer, restart your system. This is required to complete the installation.

### CLEANING UP PREVIOUS FLEXid DRIVER VERSIONS

To uninstall and clean up all FLEXid drivers installed by a previous version of a Macrovision-supplied FLEXid installer,

1. Remove all FLEXid dongles from the machine before running the cleanup utility.
2. Invoke `platform_dir\FLEXidCleanUtility.exe`.

3. Consult `%ProgramFiles%\Macrovision\FLEXid Drivers\install.log` to confirm the clean-up utility's actions.
4. Restart your system. This is required to complete the cleanup.

### UNINSTALLING

To uninstall drivers installed by this version of the FLEXid installer, select Macrovision FLEXid Drivers from Add/Remove Programs on the system Control Panel.

During installation, if a request has been made to install a driver that already exists from a non-Macrovision source, that driver is not reinstalled. During subsequent uninstall requests, such drivers are not uninstalled. Only drivers that were installed by this version of the FLEXid installer are uninstalled. This is to guard against inadvertently uninstalling drivers that non-Macrovision software depends on.

Consult `%ProgramFiles%\Macrovision\FLEXid Drivers\install.log` for a definitive list of drivers previously installed.

## Mac OS Platforms

1. Locate the file, `HDD_Unified_Installer_sit.hqx`, in the *platform* folder of your FLEXnet Licensing toolkit installation.
2. Using StuffIt Expander or a similar utility, access the file's contents:
  - `aksusb_installer` — The driver installer
  - `README.txt` — Installation instructions
3. Following the instructions detailed in `README.txt`, invoke `aksusb_installer` to proceed with the installation.

## Linux Platforms

Locate the instructions below specific to your Linux platform. You must be superuser (`root`) in order to install these components.

### RED HAT LINUX, VERSION 7

1. Locate the file, `HDD_Linux.tar.gz`, in the *platform* folder of your FLEXnet Licensing toolkit installation.
2. Using the `gzip` and then `tar` utilities, access the file's contents.
3. Follow the instructions detailed in the file, `INSTALL`, to install both the kernel-mode driver, `aksparlrx.o`, and the daemon, `aksusbd`.

### RED HAT LINUX, VERSION 8, 9, AND ENTERPRISE 3

1. Locate the file, `aksusbd-redhat-1.5-1.i386.rpm`, in the *platform* folder of your FLEXnet Licensing toolkit installation.
2. Use the package manager utility, `rpm`, to install the driver:

```
rpm -i aksusbd-redhat-1.5-1.i386.rpm
```

### SUSE LINUX ENTERPRISE SERVER 8.1

1. Locate the file, `aksusbd-suse-1.7-2.i386.rpm`, in the *platform* folder of your FLEXnet Licensing toolkit installation.
2. As super-user, use the package manager utility, `rpm`, to install the driver:

```
rpm -i aksusbd-suse-1.7-2.i386.rpm
```

## Testing the FLEXid Installation

You can verify the FLEXid driver installation by following these steps.

1. Make sure to restart your system after the installation is complete.
2. Install the appropriate dongle onto your machine.
3. From a command prompt, run the lmhostid utility:  

```
lmhostid -flexid
```
4. Verify that a legitimate value is returned. The output should look something like the following:  

```
lmhostid - Copyright (c) 1989-2004 by Macrovision Corporation.
All rights reserved.
The FLEXnet Licensing host ID of this machine is "FLEXID=9-0abcd123"
```

The hostid corresponding to the FLEXid dongle in this example is 9-0abcd123. Use this value any place a hostid can be specified.

## Issuing FLEXnet Licenses

Each FLEXid dongle has a unique identification number. The unique identification number is the value to which the FLEXnet license is locked. To determine the FLEXid dongle identification number, use the FLEXnet Licensing utility, lmhostid:

1. Attach the dongle to the machine.
2. Issue the following at a command line prompt:  

```
lmhostid -flexid
```

This returns the unique identification number of the dongle. A value is returned for each dongle attached to the machine. Use this value any place a hostid can be specified.

FLEXid hostids can be used in SERVER lines and FEATURE/INCREMENT lines.

### SERVER LINE USAGE

The following shows how a FLEXid hostid would appear in a SERVER line. This is used for concurrent licensing models to control on which machine the license server system can run:

```
SERVER myhost FLEXID=8-5E70000558F7
```

This locks the server system to the machine that has a FLEXid dongle of type 8 with id of 5E70000558F7.

### FEATURE/INCREMENT LINE USAGE

The following shows how a FLEXid hostid would appear in a FEATURE or INCREMENT line template. This is used for node-locked license models.

```
FEATURE f1 benzd 1.00 01-dec-2000 uncounted HOSTID=FLEXID=8-5E70000558F7
SIGN=0
INCREMENT f2 wild 1.01 1-oct-2003 uncounted HOSTID=FLEXID=6-1234ABCD
SIGN=0
```

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