

-?

To: [HINSTALL Command Line Switches](#)

**Purpose**

Display the HASP Device Driver command line switches.

**Syntax**

hinstall -?

**See Also:**    [-help](#)

# -autodetect

To: [HINSTALL Command Line Switches](#)

## Purpose

Allows you to enable or disable automatic parallel port detection within the system.

## Syntax

hinstall -autodetect=<mode>

Mode = Y|Yes|N|No

## Special Considerations

- Automatic detection is performed whenever the HASP Device Driver is loaded.
- Changes the AutoDetect value in the system registry to <mode>.
- This switch applies to Windows NT only.
- The **-autodetect** switch is used only with administrator privileges.

**See Also:**     [-lpt](#)

# -computertype

To: [HINSTALL Command Line Switches](#)

## Purpose

Informs the HASP Device Driver about which platform it is installed on. Usually the HASP Device Driver installation utility automatically recognizes the platform on which it is installed. Use this switch only when the platform is not recognized.

## Syntax

hinstall -computertype=<type>

where <type> can be any of the following:

- |            |  |
|------------|--|
| <b>IBM</b> | Specifies the platform as an IBM computer. |
| <b>NEC</b> | Specifies the platform as a NEC computer.  |

## Special Considerations

- Changes the computertype parameter in the system registry.
- To make these changes take effect, you must restart the system. Applicable to Win95 and Win32s systems.
- In Windows NT the **computertype** switch is used only with administrator privileges.

# -driverpath

To: [HINSTALL Command Line Switches](#)

## Purpose

Allows specifying the path of the HASP Device Driver. This path is used when loading the HASP Device Driver.

## Syntax

hinstall -driverpath=<pathname>

PathName is the location of HASP Device Driver.

## Special Considerations

- Changes the **ImagePath** value in the system registry to <PathName>.
- This switch applies to Windows NT only.
- The **-driverpath** switch is used only with administrator privileges.

**See Also:**     [-i](#)

## -help

To [HINSTALL Command Line Switches](#)

### **Purpose**

Displays the HASP Device Driver command line switches.

### **Syntax**

hinstall -help

**See Also:**    [-?](#)

**-i**

To: [HINSTALL Command Line Switches](#)

### **Purpose**

Installs the HASP Device Driver.

### **Syntax**

hinstall -i

### **Special Considerations**

- After installation you must restart the system. Applicable to Win95 and Win32s systems.
- In Windows NT the **-i** switch is used only with administrator privileges.

#### **See Also:**

[-r](#)

[-is](#)

[Installing the HASP Device Driver](#)

[-driverpath](#)

# -info

To: [HINSTALL Command Line Switches](#)

## **Purpose**

Displays installation status information such as the installation date and the version number.

## **Syntax**

hinstall -info

## **Special Considerations**

- This switch does not support Win32s.

# -is

To: [HINSTALL Command Line Switches](#)

## Purpose

Installs the NetHASP License Manager Loader.

For more information about the NetHASP License Manager Loader, see [Loading the NetHASP License Manager Automatically](#).

## Syntax

hinstall -is

## Special Considerations

- This switch applies to Windows NT only.
- The **-is** switch is used only with administrator privileges.
- Before using this switch make sure that the HASP Device Driver is installed.

### See Also:

[-rs](#)

[-i](#)

[-serverpath](#)

[-serverswitches](#)



# -iu

To: [HINSTALL Command Line Switches](#)

## Purpose

Allows updating an existing driver.

The difference between the -iu switch and the -i switch is that the -i switch rebuilds the system registry, whereas the -iu switch does not, but only adds new parameters if they do not exist. Using the -iu switch will preserve your settings while updating the HASP Device Driver.

## Syntax

hinstall -iu

## Special Considerations

- Writes a new HASP Device Driver to the disk.
- Applicable to Win95 and Win32s systems.
- In Windows NT the **-iu** switch is used only with administrator privileges.
- To make these changes take effect in Win95 systems you must restart the system.

**See Also:**     [-f](#)

[-i](#)

# -lpt

To: [HINSTALL Command Line Switches](#)

## Purpose

Enables you to specify the parallel port address where the HASP Device Driver searches for a HASP key.

## Syntax

lpt[x]=<address>

x = 1 | 2 | 3

Example: Hinstall -lpt1=378

## Special Considerations

- Changes the following parameters in the system registry:
  - (1) LPTx gets the <Address> value (Hex)
  - (2) AutoDetect gets the NO value
- This switch applies to Windows NT only.
- The **-lpt** switch is used only with administrator privileges.

**See Also:**     [-autodetect](#)

# -nomsg

To: [HINSTALL Command Line Switches](#)

## **Purpose**

Disables message display. No messages are displayed when this switch is used.

## **Syntax**

hinstall -nomsg

## **Special Considerations**

- Use this switch if you want to call HInstall.exe from your own installation utility and if you do not want messages displayed.

# -portmode

To: [HINSTALL Command Line Switches](#)

## Purpose

Informs the HASP Device Driver about the configuration of the parallel port when printing.

## Syntax

hinstall -portmode=<type>

where <type> can be any of the following:

<b>Normal</b>	One-way communication from the Host (PC) to the peripheral (printer).
<b>ECP</b>	The parallel port is in ECP mode during printing.
<b>BiDi</b>	The parallel port is in BiDi mode during printing.
<b>Auto</b>	Works automatically (default).

## Special Considerations

- Changes the portmode parameter in the system registry.
- To make these changes take effect, you must restart the system. Applicable to Win95 and Win32s systems.
- In Windows NT the **-portmode** switch is used only with administrator privileges.

**-r**

To: [HINSTALL Command Line Switches](#)

### **Purpose**

Removes the HASP Device Driver.

### **Syntax**

hinstall -r

### **Special Considerations**

- When the HASP NT Loader service is installed, an appropriate warning is given if you try to remove the Hasp Device Driver. Without the driver, the NetHASP License Manager cannot access the NetHASP key.
- In Windows NT the **-r** switch is used only with administrator privileges.
- To make these changes take effect, you must restart the system. Applicable to Win95 and Win32s systems.

#### **See Also:**

[-i](#)

[-rs](#)

[-is](#)

## -rs

To: [HINSTALL Command Line Switches](#)

### **Purpose**

Removes the HASP NT Loader.

### **Special Considerations**

- This switch applies to Windows NT only.
- The **-rs** switch is used only with administrator privileges.

**See Also:**    [-is](#)

# -serverpath

To: [HINSTALL Command Line Switches](#)

## Purpose

Allows specifying the path of the NetHASP License Manager. This path is used when [Loading the NetHASP License Manager Automatically](#).

## Syntax

hinstall -serverpath=<pathname>

PathName is the location of NetHASP License Manager.

## Special Considerations

- Changes the **ServerPath** value in the system registry to <PathName>.
- The HASP NT Loader uses the <PathName> when automatically loading the NetHasp License Manager.
- This switch applies to Windows NT only.
- The **-serverpath** switch is used only with administrator privileges.

### See Also:

[-is](#)

[-serverswitches](#)

# -serverswitches

To: [HINSTALL Command Line Switches](#)

## Purpose

Allows specifying the NetHASP License Manager command line switches. These switches are used when automatically loading the NetHASP License Manager.

## Syntax

hinstall -serverswitches="<SwitchList>"

Note: The quotation marks are required.

"<switchList>" List of switches

Example: -serverswitches="-tcpip -portnum=12"

## Special Considerations

- Changes the **ServerSwitches** value in the system registry to "<SwitchList>".
- This value is used as a command-line switch when the HASP NT Loader automatically loads the NetHASP License Manager.
- This switch applies to Windows NT only.
- The **-serverswitches** switch is used only with administrator privileges.



# API Functions - Error Messages

To: [Custom API - Function List](#)

Each topic includes the list of all possible API error codes, for each specific API function.

[HDDInstall\(\)](#)

[HDDInstallEx\(\)](#)

[HDDRemove\(\)](#)

[HIGetOSType\(\)](#)

[HIGetInfo\(\)](#)

[HISetAutoDetect\(\)](#)

[HISetPortAddress\(\)](#)

[HISetComputerType\(\)](#)

[HIInstallLoader\(\)](#)

[HIRemoveLoader\(\)](#)

[HISetLicenseManagerParameters\(\)](#)

[HISetPortMode\(\)](#)

# Configuration File Settings Under Win32s

When you install the HASP Device Driver on Win32s, the following values are assigned in the *system.ini* file:

## [HASPDD] Section:

Key	Sample Value	Description
<b>Version</b>	3.3	The version of the HASP Device Driver.
<b>Date</b>	November 5, 1997	The date the HASP Device Driver was installed.
<b>AutoDetect</b>	Y	Automatic detection of the port mode. For additional information, see <a href="#">-autodetect</a> .
<b>COM1</b>	0x3F8	The I/O address of the COM1 serial port.
<b>COM2</b>	0	The I/O address of the COM2 serial port.
<b>COM3</b>	0	The I/O address of the COM3 serial port.
<b>COM4</b>	0	The I/O address of the COM4 serial port.
<b>ComputerType</b>	IBM	The type of computer on which your HASP Device Driver is installed. For additional information, see <a href="#">-computertype</a> .
<b>LPT1</b>	0x378	The LPT1 address.
<b>LPT2</b>	0	The LPT2 address.
<b>LPT3</b>	0	The LPT3 address.
<b>PortMode</b>	AUTO	The parallel port mode. For additional information, see <a href="#">-portmode</a> .
<b>ProcessorType</b>	X86	The type of processor used by your computer.
<b>UseCLI</b>	No	Disables interrupts through the CLI OP code.
<b>UseCompaq</b>	No	Enables working with Compaq docking station.

## [386Enh] Section:

device = <windir>\system\HASP.386

# Contents

## HASP Device Driver Installation

To read a help topic, point to it and click the left mouse button. For more information about using Windows Help press F1.

[HASP Installation Help Conventions](#)

[What is a HASP Device Driver?](#)

[When Do I Need a HASP Device Driver?](#)

[HASP Device Driver for Windows](#)

[HASP Device Driver for Win32s](#)

[HASP Device Driver for Windows 95](#)

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# Custom API - Function List

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[HDDInstall\(\)](#)

[HDDInstallEx\(\)](#)

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[HIGetOSType\(\)](#)

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[HILastError\(\)](#)

[HISetAutoDetect\(\)](#)

[HISetPortAddress\(\)](#)

[HISetPortMode\(\)](#)

[HISetComputerType\(\)](#)

[HIInstallLoader\(\)](#)

[HIRemoveLoader\(\)](#)

[HISetLicenseManagerParameters\(\)](#)

[API Functions - Error Messages](#)

DOS applications access the DOS Device Driver. The DOS Device Driver accesses the Kernel Device Driver through the Virtual Device Driver.

# DRIVERS Directory

To: [List of Files](#)

The DRIVERS directory contains the following HASP Device Drivers (files) for various operating systems:

<b>HASP.386</b>	Windows Virtual Device Driver for Windows 3.x and Win32s.
<b>HASP95.VXD</b>	Static Virtual Device Driver for Windows 95.
<b>HASPDOS.SYS</b>	DOS Device Driver for Windows NT.
<b>HASPNT.SYS</b>	Kernel Device Driver for Windows NT.
<b>HASPUT16.DLL</b>	Universal Thunk DLL for Win32s.
<b>HASPVDD.DLL</b>	Virtual Device Driver for Windows NT.
<b>HASP95DL.VXD</b>	Dynamic Virtual Device Driver for Windows 95.
<b>HARDLOCK.VXD</b>	Dynamic Virtual Device Driver for Windows 95.
<b>HSRVLDR.EXE</b>	Loader module of the NetHASP License Manager.

The DRIVERS directory also contains the following subdirectory:

<b>NEC</b>	HASP Device Drivers for Japanese NEC computers.
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The NEC subdirectory contains the following file:

<b>HASP.386</b>	Windows Virtual Device Driver for Windows 3.x and Win32s specially customized for Japanese NEC computers.
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**See Also:**    [INSTALL Directory](#)

# Disabling the HASP NT Loader

To: [Utilizing Installation Parameters](#)

If you do not want the HASP NT Loader to be activated when you reboot your system, you can disable it.

## To Disable the HASP NT Loader

- (1) In the Control Panel, double-click the **Services** icon
- (2) In the **Service** list select the **HASP Loader**
- (3) Click the **Startup** button  
The **Service** dialog box appears.
- (4) In the **Service** dialog box, **StartUp** section, select the **Disabled** radio button

# Error 9121 under Windows NT

To: [Troubleshooting](#)

If you try to activate HINSTALL.EXE under Windows NT to install the HASP Device Driver, but you do not have administrator privileges, you receive error 9121.



# HASP Device Driver Dynamic Installation Sample for Borland C

Following are the files needed to install the HASP Device Driver dynamically:

<b>hidemo.c</b>	Sample API usage.
<b>hidemo.h</b>	Sample API usage header file.
<b>hiapi.h</b>	Interface header file for the HASP Device Driver API.
<b>hierr.h</b>	API error codes.
<b>hisuberr.h</b>	API suberror codes.
<b>hinstd.dll</b>	The actual API code - dynamic linked library.
<b>hinstd.lib</b>	Library for the linking process.
<b>hinstl.lib</b>	The actual API code - statically linked library.
<b>makefile</b>	Makefile to build the sample application.

# HASP Device Driver Dynamic Installation Sample for Borland Delphi

Following are the files needed to install the HASP Device Driver dynamically:

<b>hidemo.pas</b>	Sample API usage.
<b>dphasp.dpr</b>	Delphi project file.
<b>dphasp.res</b>	Resource file.
<b>dphasp.dof</b>	Compiler and linker parameters file.
<b>hidemo.dfm</b>	Delphi form file.
<b>hinstd.dll</b>	Actual API code - dynamic linked library.

# HASP Device Driver Dynamic Installation Sample for InstallShield

Following are the files needed to install the HASP Device Driver dynamically:

<b>setup.rul</b>	Sample HASP Device Driver installation for InstallShield.
<b>setup.ins</b>	Compiled sample.
<b>build.bat</b>	Compilation batch file.
<b>makefile</b>	Makefile.
<b>setup.exe</b>	HASP Device Driver Installation Wizard (setup utility to run the sample installation program).
<b>ctl3d32.dll</b>	Files used by the <i>setup.exe</i> program.
<b>setup.h</b>	
<b>uninst.exe</b>	
<b>_inst32i.ex_</b>	
<b>_isdel.exe</b>	
<b>_isres.dll</b>	
<b>_setup.dll</b>	
<b>_setup.lib</b>	
<b>hinstd.dll</b>	HASP Device Driver Win32 API in DLL format.
<b>read.me</b>	Read me file.

# HASP Device Driver Dynamic Installation Sample for InstallShield (Win16)

Following are the files needed to install the HASP Device Driver dynamically:

<b>setup.rul</b>	Sample HASP Device Driver installation for InstallShield.
<b>setup.ins</b>	Compiled sample.
<b>build.bat</b>	Compilation batch file.
<b>setup.exe</b>	HASP Device Driver Installation Wizard (setup utility to run the sample installation program).
<b>ctl3d.dll</b>	Files used by the <i>setup.exe</i> program.
<b>setup.h</b>	
<b>uninst16.exe</b>	
<b>_inst16.ex_</b>	
<b>_isdel.exe</b>	
<b>_isres.dll</b>	
<b>_setup.dll</b>	
<b>_setup.lib</b>	
<b>hinstd.dll</b>	HASP Device Driver Win32 API in DLL format.
<b>hinstd16.dll</b>	HASP Device Driver Win16 API in DLL format.

# HASP Device Driver Dynamic Installation Sample for Microsoft C

Following are the files needed to install the HASP Device Driver dynamically:

<b>hidemo.c</b>	Sample API usage.
<b>hidemo.h</b>	Sample API usage header file.
<b>hiapi.h</b>	Interface header file for the HASP Device Driver API.
<b>hierr.h</b>	API error codes.
<b>hisuberr.h</b>	API suberror codes.
<b>hinstd.dll</b>	The actual API code - dynamic linked library.
<b>hinstdmt.dll</b>	Multi-thread dynamic linked library.
<b>hinstd.lib</b>	Library for the linking process.
<b>hinstdmt.lib</b>	Multi-thread library.
<b>hinstl.lib</b>	The actual API code - statically linked library.
<b>hinstlmt.lib</b>	Multi-thread static library.
<b>makefile</b>	Makefile to build the sample application.

# HASP Device Driver Dynamic Installation Sample for Microsoft C (Win16)

Following are the files needed to install the HASP Device Driver dynamically:

<b>hidemo.c</b>	Sample HASP Device Driver installation for Microsoft C.
<b>hidemo.h</b>	Sample header file.
<b>hidemo.def</b>	Sample definition file.
<b>hidemo.dlg</b>	Sample dialog resource.
<b>hidemo.rc</b>	Sample resource file.
<b>makefile</b>	Makefile to build the sample application..
<b>hiapi.h</b>	HASP Device Driver API interface files.
<b>hierr.h</b>	
<b>hisuberr.h</b>	
<b>hinstd.dll</b>	HASP Device Driver Win32 API in DLL format.
<b>hinstd16.dll</b>	HASP Device Driver Win16 API in DLL format.
<b>hinstd16.lib</b>	Library for <i>hinstd16.dll</i> .

# HASP Device Driver Dynamic Installation Sample for Visual Basic

Following are the files needed to install the HASP Device Driver dynamically:

<b>hidemo.vbp</b>	Visual Basic project file.
<b>hidemo.bas</b>	Visual Basic source file.
<b>hidemo.frm</b>	Visual Basic source file.
<b>hinstd.dll</b>	Actual API code - dynamic linked library.

# HASP Device Driver Dynamic Installation Sample for Watcom C

Following are the files needed to install the HASP Device Driver dynamically:

<b>hidemo.c</b>	Sample API usage.
<b>hidemo.h</b>	Sample API usage header file.
<b>hiapi.h</b>	Interface header file for the HASP Device Driver API.
<b>hierr.h</b>	API error codes.
<b>hisuberr.h</b>	API suberror codes.
<b>hinstd.dll</b>	The actual API code - dynamic linked library.
<b>hinstd.lib</b>	Library for the linking process.
<b>hinstl.lib</b>	The actual API code - statically linked library.
<b>makefile</b>	Makefile to build the sample application.



# Viewing the HASP Device Driver Parameters in the Windows NT Registry Editor

To: [Utilizing Installation Parameters](#)

Changes in the HASP Device Driver parameters can be made using hinstall. If the procedure fails, you can use the Registry Editor to view and edit the HASP Device Driver parameters.

## To View and/or Edit HASP Device Driver Parameters

### For Windows NT 3.5x

- (1) From the Program Manager click on File.
- (2) In the drop-down menu click on Run.
- (3) In the Command Line enter: REGEDT32  
Four frames open up.
- (4) Follow steps (3) through (9) as for Windows NT 4.0, listed below.

### For Windows NT 4.0

- (1) Choose Run from the Start menu.
- (2) Enter REGEDT32.  
Four frames open up.
- (3) Switch to the frame labeled **HKEY\_LOCAL\_MACHINE**
- (4) Click on the **System** directory
- (5) Click on the **CurrentControlSet** directory
- (6) Click on the **Services** directory  
A list containing all of the installed device drivers is displayed. The list is alphabetical in ascending order.
- (7) Search for the item **Haspnt**
- (8) When found click **Haspnt**  
On the right side of the frame information is displayed about the HASP Device Driver for Windows NT.
- (9) You can see additional information under the **Parameters** key.

Note: You can edit each parameter by either double-clicking the parameter or first selecting the parameter and then pressing <Enter>.

## See Also

[Registry Settings for the HASP Device Driver under Windows NT](#)



# HASP Device Driver for Win32s

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The HASP Device Driver for Win32s is composed of two driver files.

<b>Driver File:</b>	HASP.386 (Windows Virtual Device Driver)
<b>Location after installation:</b>	Windows system directory
<b>Driver File:</b>	HASPUT16.DLL (Universal Thunk DLL)
<b>Location after installation:</b>	Windows system directory

## To Install the HASP Device Driver

Run HINSTALL.EXE.

**See Also:** [The HASP Device Driver Installation Utility -- HINSTALL](#)

# HASP Device Driver for Windows

To: [Contents](#)

The HASP Device Driver for Windows is composed of one driver file.

<b>Driver File:</b>	HASP.386 (Windows Virtual Device Driver)
<b>Location after installation:</b>	Windows system directory

## To Install the HASP Device Driver

- (1) Run setup.exe in the Drivers\install\Win16 directory, or

Copy HASP.386 to the Windows system directory, and add the following line to the [386Enh] section in the SYSTEM.INI file:

**device=<path>\hasp.386**

- (2) Restart Windows.

# HASP Device Driver for Windows 95

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The HASP Device Driver for Windows 95 is composed of one driver file.

<b>Driver File:</b>	HASP95.VXD (Static Virtual Device Driver)
<b>Location after installation:</b>	Windows 95 system directory
<b>Driver File:</b>	HASP95DLL.VXD (Dynamic Virtual Device Driver)
<b>Location after installation:</b>	Windows 95 system directory

## To Install the HASP Device Driver

Run HINSTALL.EXE

**See Also:** [The HASP Device Driver Installation Utility -- HINSTALL](#)

# HASP Device Driver for Windows NT

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The HASP Device Driver for Windows NT is composed of three driver files.

<b>Driver File:</b>	HASPNT.SYS ( <a href="#">Kernel Device Driver</a> )
<b>Location after installation:</b>	Windows NT SYSTEM32\DRIVERS directory
<b>Driver File:</b>	HASPVDD.DLL ( <a href="#">Virtual Device Driver</a> )
<b>Location after installation:</b>	Windows NT SYSTEM32 directory
<b>Driver File:</b>	HASPDOS.SYS ( <a href="#">DOS Device Driver</a> )
<b>Location after installation:</b>	Windows NT SYSTEM32 directory

Note: The HASP Device Driver fully supports Windows NT systems that run on multi-processor computers.

## To Install the HASP Device Driver

Run HINSTALL.EXE

**See Also:** [The HASP Device Driver Installation Utility -- HINSTALL](#)

# HASP Installation Help Conventions

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We have included several cues to assist you in using the HASP Installation Help screens.

<b>This cue</b>	<b>Indicates</b>
<u>Topic</u>	Jump to another Help topic. Click the text to read the Help topic indicated. Click the Back button (below the menu bar) to return to the previous help topic.
<b>Bold Text</b>	API functions, feature names or options in the HASP Installation.
<b>Bold Dark Blue Text</b>	A macro definition name.
<b>Dark Red Text</b>	A HASP Custom API parameter.
(Default)	The default for any particular feature, function or option. This is the value that the program will use if no other alternative is taken. Color is for emphasis only.
Notes	Additional information about a feature, option or parameter.

## Trademarks

HASP is a registered trademark and NetHASP is a trademark of Aladdin Knowledge Systems Ltd.

Windows is a trademark of Microsoft Corporation. Windows NT, Windows 95 and Win32s are registered trademarks of Microsoft Corporation.

# Viewing the HASP NT Loader Parameters in the Windows NT Registry Editor

To: [Utilizing Installation Parameters](#)

Changes in the HASP NT Loader parameters can be made using hinstall. If the procedure fails, you can use the Registry Editor to view and edit the HASP NT Loader parameters.

## To View and/or Edit the HASP NT Loader Parameters

### For Windows NT 3.5x

- (1) From the Program Manager click on File.
- (2) In the drop-down menu click on Run.
- (3) In the Command Line enter: REGEDT32  
Four frames open up.
- (4) Follow steps (3) through (8) as for Windows NT 4.0, listed below.

### For Windows NT 4.0

- (1) Choose Run from the Start menu.
- (2) Enter REGEDT32.  
Four frames open up.
- (3) Switch to the frame labeled **HKEY\_LOCAL\_MACHINE**
- (4) Click on the **System** directory
- (5) Click on the **CurrentControlSet** directory
- (6) Click on the **Services** directory  
A list containing all of the installed device drivers is displayed. The list is alphabetical in ascending order.
- (7) Search for the item **Hasp Loader**
- (8) When found click **Hasp Loader**  
On the right side of the frame information is displayed about the HASP NT Loader for Windows NT.

Note: You can edit each parameter by either: double-clicking the parameter or first selecting the parameter and then pressing <Enter>.

## See Also

[Registry Settings for the HASP Loader under Windows NT](#)



# HDDINFO structure

To: [HiGetInfo\(\)](#)

The **HDDINFO** structure contains information relating to the currently installed HASP Device Driver.

```
typedef struct _HDDINFO{
    CHAR        HIVersion[ HI_ITEM_LEN ];
    CHAR        HIInstallDate[ HI_DATE_STR_LEN ];
    DWORD       HIComputerType;
    CHAR        HIProcessorType[ HI_ITEM_LEN ];
    DWORD       DriverStatus;
    DWORD       LoaderStatus;
    CHAR        HIImagePath[ HI_ITEM_LEN ];
    DWORD       HIPortMode;
    DWORD       HILPT1;
    DWORD       HILPT2;
    DWORD       HILPT3;
    CHAR        HIServerPath[ HI_ITEM_LEN ];
    CHAR        HIServerSwitches[ HI_ITEM_LEN ];
} HDDINFO;
```

## Members

### **HIVersion**

Current version of the HASP Device Driver.

### **HIInstallDate**

Date of installation.

### **HIComputerType**

Current h/w platform. Currently available platforms are listed in the following table:

Value	Meaning
<a href="#"><b>HI_IBM_TYPE</b></a>	Platform is IBM PC and compatibles
<a href="#"><b>HI_NEC_TYPE</b></a>	Platform is NEC PC
<a href="#"><b>HI_UNKNOWN_TYPE</b></a>	Type is unknown

### **HIProcessorType**

The processor type on which Windows NT and Windows 95 are running.

Value	Meaning
-------	---------

<b>“X86”</b>	Intel x86 series
<b>“PPC”</b>	Power PC
<b>“MIPS”</b>	MIPS by Silicon Graphics
<b><u>“ALPHA”</u></b>	<u>Alpha by Digital Corporation</u>

### DriverStatus

Indicates whether or not the HASP Device Driver is installed.

<b>Value</b>	<b>Meaning</b>
<b>HI_DRIVER_INSTALLED</b>	Driver is installed
<b><u>HI_DRIVER_NOT_INSTALLED</u></b>	<u>Driver is not installed</u>

### LoaderStatus

Indicates whether or not the HASP NT Loader service is installed or supported.

<b>Value</b>	<b>Meaning</b>
<b>HI_LOADER_INSTALLED</b>	Loader services installed
<b>HI_LOADER_NOT_INSTALLED</b>	Loader services not installed
<b><u>HI_LOADER_NOT_SUPPORTED</u></b>	<u>Loader services not supported</u>

### HIImagePath

Path of the HASP Device Driver.

### HIPortMode

The parallel port mode.

<b>Value</b>	<b>Meaning</b>
<b>HI_NORMAL_PORT_MODE</b>	Normal port mode
<b>HI_BIDI_PORT_MODE</b>	BiDi port mode
<b>HI_ECP_PORT_MODE</b>	ECP port mode
<b><u>HI-AUTO_PORT_MODE</u></b>	<u>Automatically detected port mode</u>

### HILPT1

The physical address of LPT1.

### HILPT2

The physical address of LPT2.

**HILPT3**

The physical address of LPT3.

**HIServerPath**

The path of the NetHASP server.

**HIServerSwitches**

Switches of the NetHASP server.

# HDDInstall()

To: Custom API - Function List

## Purpose

Installs the HASP Device Driver.

```
DWORD PASCAL HDDInstall(  
    DWORD          InstallMode          //Installation mode  
);
```

## Parameters

### InstallMode

Sets the characteristics of the installation process.

The full installation process (default) includes the following steps:

- (1) Removes the "Haspnt" entry in the Windows NT system registry  
Removes the "HASP95" entry in the Windows 95 system registry
- (2) Creates a new "Haspnt" entry in the Windows NT system registry.  
Creates a new "HASP95" entry in the Windows 95 system registry.  
Under Win32s add the line device=\\...\\hasp.386 in the [386Enh] section
- (3) Copies the HASP Device Driver's files to the proper place on the disk.
- (4) Reloads HASP Device Driver

## InstallMode Options

The following options are available:

Value	Meaning
<b>HI_INSTALL_FULL</b>	Performs steps 1 - 4. (Default)
<b>HI_INSTALL_UPDATE</b>	Add new parameters to the system registry if they do not already exist (existing parameters are not modified).  Then performs step 4.
<b>HI_INSTALL_RELOAD</b>	Performs only step 4.  Not supported in Win32s
<b>HI_INSTALL_WRITE_NEW</b>	Performs only step 3.

Note: Unless you are writing a comprehensive installation procedure, use the default installation option.

## Return Values

If successful the function returns the value: **HI\_SUCCESS**.

If failed the function returns the value: **HI\_FAIL**.

You can retrieve the error details by calling **HILastError**.

## Special Considerations

- When loaded the HASP Device Driver performs the following tasks:
  - (1) Automatically detects the computer parallel ports.  
(Available only for Windows NT.)
  - (2) If the AutoDetect parameter in the system registry is set to Yes, then the driver updates the LPTx parameters according to the results of step 1, above.  
(Available only for Windows NT.)
  - (3) Reads all of the information from the system registry.  
This information is utilized when the device driver is accessed.
- After installation you must restart the system. Applicable to Win95 and Win32s systems.
- Under Windows NT the **HDDInstall** function is called only with administrator privileges.

### See Also:

[HDDRemove\(\)](#)

[Utilizing Installation Parameters](#)

# HDDInstall() - API Error Messages

To: [API Functions - Error Messages](#)

Error Code	Macro	Description
0x02002002	CANNOT_WRITE_DD_VMM_TO_DBR	Failed to write the hasp95.vxd value in the VMM32Files key in the system registry.
0x02002003	CANNOT_WRITE_DD_VXD_TO_DBR	Failed to write the HASP95 key in the system registry.
0x02002004	CANNOT_WRITE_PARAMETERS_PARAM_IN_DBR	Failed to write the Parameters key in the system registry.
0x02002005	CANNOT_DELETE_VMM_KEY	Failed to delete the hasp95.vxd value from the VMM32Files key in the system registry.
0x02002006	CANNOT_DELETE_VXD_KEY	Failed to delete the HASP95 key from the system registry.
0x02002008	CANNOT_WRITE_PARAM_TO_EVENTLOG	Failed to write to the Event Log in the system registry.
0x02002009	CANNOT_WRITE_HASPNT_PARAM_IN_DBR	Failed to write the HASPNT key in the system registry.
0x0200200a	CANNOT_WRITE_HASP_PARAM_IN_DBR	Failed to write the HASP value in the DOS Devices key in the system registry.
0x0200200c	CANNOT_DELETE_HASPNT_KEY	Failed to delete the HASPNT key from system registry.
0x0200200e	CANNOT_INSTALL_HASP386_IN_INI	Failed to write the hasp.386 device in system.ini.
0x02002010	ERROR_SET_IN_WIN_DD	Cannot update the ComputerType in hasp.386.
0x02002011	CANNOT_INSTALL_VDD	Failed to install the HASP vdd.dll.
0x02002013	CANNOT_WRITE_PCMCIA_PARAM_IN_DBR	Failed to write the HASP PCMCIA key in the system registry.
0x02004001	CANNOT_WRITE_VXD_TO_DISK	Failed to write the hasp95.vxd to the disk.

<b>0x0200400</b> <b>2</b>	<b>CANNOT_WRITE_HASPNT_TO_DISK</b>	Failed to write haspnt.sys to the disk.
<b>0x0200400</b> <b>3</b>	<b>CANNOT_WRITE_VDD_TO_DISK</b>	Failed to write haspvdd.dll to the disk.
<b>0x0200400</b> <b>4</b>	<b>CANNOT_WRITE_HASPUT_TO_DISK</b>	Failed to write the HASPUT16.DLL to the disk.
<b>0x0200400</b> <b>5</b>	<b>CANNOT_WRITE_HASP386_TO_DISK</b>	Failed to write the HASP.386 to the disk.
<b>0x0200800</b> <b>1</b>	<b>CANNOT_HANDLE_SC_MANAGER</b>	Failed to handle the Services Manager.
<b>0x0200800</b> <b>4</b>	<b>CANNOT_STOP_DRIVER</b>	Failed to stop the HASP Device Driver.
<b>0x0200800</b> <b>6</b>	<b>CANNOT_INSTALL_DRIVER_IN_SERVICES</b>	Failed to install the HASP Device Driver in the services.
<b>0x0200800</b> <b>7</b>	<b>CANNOT_START_DRIVER</b>	Failed to start the HASP Device Driver.
<b>0x0200800</b> <b>8</b>	<b>CANNOT_LOAD_DRIVER_DYNAMICALLY</b>	The HASP Device Driver cannot be loaded dynamically.
<b>0x0201000</b> <b>0</b>	<b>USER_HAVE_NO_ACCESS</b>	You need administrator privileges to install the HASP Device Driver.
<b>0x0210010</b> <b>4</b>	<b>INSTALL_CANCELLED</b>	The HASP Device Driver installation procedure was canceled.

# HDDInstallEx()

To: Custom API - Function List

## Purpose

Installs the HASP Device Driver.

## DWORD PASCAL HDDInstallEx(

DWORD	<b>InstallMode</b>	//Installation mode
DWORD	<b>DriverPath</b>	//HASP DeviceDriver path
DWORD	<b>Reserved</b>	//Reserved for future use
DWORD	<b>Reserved</b>	//Reserved for future use;

);

## Parameters

### InstallMode

Sets the characteristics of the installation process.

### DriverPath

Specifies the HASP Device Driver path. Applicable for Windows NT only.

### Reserved

Reserved for future use. Must be zero.

## InstallMode Options

The following options are available:

Value	Meaning
<b>HI_INSTALL_FULL</b>	Performs steps 1 - 4. (Default)
<b>HI_INSTALL_UPDATE</b>	Adds new parameters to the system registry if they do not already exist (existing parameters are not modified).  Then performs step 4.
<b>HI_INSTALL_RELOAD</b>	Performs only step 4.  Not supported in Win32s.
<b>HI_INSTALL_WRITE_NEW</b>	Performs only step 3.

Note: Unless you are writing a comprehensive installation procedure, use the default installation option.



## Return Values

If successful the function returns the value: **HI\_SUCCESS**.

If failed the function returns the value: **HI\_FAIL**.

You can retrieve the error details by calling **HILastError**.

## Special Considerations

- When loaded the HASP Device Driver performs the following tasks:
  - (1) Automatically detects the computer parallel ports.  
(Available only for Windows NT.)
  - (2) If the AutoDetect parameter in the system registry is set to Yes, then the driver updates the LPTx parameters according to the results of step 1, above.  
(Available only for Windows NT.)
  - (3) Reads all of the information from the system registry.  
This information is utilized when the device driver is accessed.
- After installation you must restart the system.
- Under Windows NT the **HDDInstall** function is called only with administrator privileges.

### See Also:

[HDDRemove\(\)](#)

[Utilizing Installation Parameters](#)

# HDDInstallEx() - API Error Messages

To: [API Functions - Error Messages](#)

Error Code	Macro	Description
<b>0x02002002</b>	CANNOT_WRITE_DD_VMM_TO_DBR	Failed to write the hasp95.vxd value in the VMM32Files key in the system registry.
<b>0x02002003</b>	CANNOT_WRITE_DD_VXD_TO_DBR	Failed to write the HASP95 key in the system registry.
<b>0x02002004</b>	CANNOT_WRITE_PARAMETERS_PARAM_IN_DBR	Failed to write the Parameters key in the system registry.
<b>0x02002005</b>	CANNOT_DELETE_VMM_KEY	Failed to delete the hasp95.vxd value from the VMM32Files key in the system registry.
<b>0x02002006</b>	CANNOT_DELETE_VXD_KEY	Failed to delete the HASP95 key from the system registry.
<b>0x02002008</b>	CANNOT_WRITE_PARAM_TO_EVENTLOG	Failed to write to the Event Log in the system registry.
<b>0x02002009</b>	CANNOT_WRITE_HASPNT_PARAM_IN_DBR	Failed to write the HASPNT key in the system registry.
<b>0x0200200a</b>	CANNOT_WRITE_HASP_PARAM_IN_DBR	Failed to write the HASP value in the DOS Devices key in the system registry.
<b>0x0200200c</b>	CANNOT_DELETE_HASPNT_KEY	Failed to delete the HASPNT key from system registry.
<b>0x0200200e</b>	CANNOT_INSTALL_HASP386_IN_INI	Failed to write the hasp.386 device in system.ini.
<b>0x02002010</b>	ERROR_SET_IN_WIN_DD	Cannot update the ComputerType in hasp.386.
<b>0x02002011</b>	CANNOT_INSTALL_VDD	Failed to install the HASP vdd.dll.
<b>0x02002013</b>	CANNOT_WRITE_PCMCIA_PARAM_IN_DBR	Failed to write the HASP PCMCIA key in the system registry.
<b>0x02004001</b>	CANNOT_WRITE_VXD_TO_DISK	Failed to write the hasp95.vxd to the disk.

<b>0x0200400</b> <b>2</b>	<b>CANNOT_WRITE_HASPNT_TO_DISK</b>	Failed to write haspnt.sys to the disk.
<b>0x0200400</b> <b>3</b>	<b>CANNOT_WRITE_VDD_TO_DISK</b>	Failed to write haspvdd.dll to the disk.
<b>0x0200400</b> <b>4</b>	<b>CANNOT_WRITE_HASPUT_TO_DISK</b>	Failed to write the HASPUT16.DLL to the disk.
<b>0x0200400</b> <b>5</b>	<b>CANNOT_WRITE_HASP386_TO_DISK</b>	Failed to write the HASP.386 to the disk.
<b>0x0200800</b> <b>1</b>	<b>CANNOT_HANDLE_SC_MANAGER</b>	Failed to handle the Services Manager.
<b>0x0200800</b> <b>4</b>	<b>CANNOT_STOP_DRIVER</b>	Failed to stop the HASP device driver.
<b>0x0200800</b> <b>6</b>	<b>CANNOT_INSTALL_DRIVER_IN_SERVICES</b>	Failed to install the HASP Device Driver in the services.
<b>0x0200800</b> <b>7</b>	<b>CANNOT_START_DRIVER</b>	Failed to start the HASP Device Driver.
<b>0x0200800</b> <b>8</b>	<b>CANNOT_LOAD_DRIVER_DYNAMICALY</b>	The HASP Device Driver cannot be loaded dynamically.
<b>0x0201000</b> <b>0</b>	<b>USER_HAVE_NO_ACCESS</b>	You need administrator privileges to install the HASP Device Driver.
<b>0x0210010</b> <b>4</b>	<b>INSTALL_CANCELLED</b>	The HASP Device Driver installation procedure was canceled.

# HDDRemove()

To: [Custom API - Function List](#)

## Purpose

Removes the HASP Device Driver

```
DWORD PASCAL HDDRemove(  
    DWORD          HIReserved          //Reserved for future use  
);
```

## Parameters

**HIReserved** Reserved for future use. Must be 0 (zero).

## Return Values

If successful the function returns the value: **HI\_SUCCESS**.

If failed the function returns the value: **HI\_FAIL**.

You can retrieve the error details by calling **HILastError**.

## Special Considerations

- When the HASP NT Loader service is installed, an appropriate warning is given if you try to remove the Hasp Device Driver. Without the driver, the NetHASP License Manager cannot access the NetHASP key.
- The **HDDRemove** function performs the following tasks:
  - (1) Under Windows NT:  
Removes the "Haspnt" entry in the system registry.
  - (2) Under Windows 95:  
Removes the "HASP95" entry in the system registry.
  - (3) Under Win32s  
Removes the line device=\\...\\hasp.386 in the [386Enh] section.
- Under Windows NT the **HDDRemove** function is called only with administrator privileges.
- To make these changes take effect, you must restart the system. Applicable to Win95 and Win32s systems.

**See Also:**

[HDDInstall\(\)](#)

[Utilizing Installation Parameters](#)



# HDDRemove() - API Error Messages

To: [API Functions - Error Messages](#)

Error Code	Macro	Description
<b>0x02002005</b>	CANNOT_DELETE_VMM_KEY	Failed to delete the hasp95.vxd value from the VMM32Files key in the system registry.
<b>0x02002006</b>	CANNOT_DELETE_VXD_KEY	Failed to delete the HASP95 key from the system registry.
<b>0x0200200b</b>	CANNOT_DELETE_HASP_PARAM_FROM_DBR	Failed to delete the HASP value from the DOS Devices key in the system registry.
<b>0x0200200d</b>	CANNOT_DELETE_EVENTLOG_KEY	Failed to delete the HASPNT from the EventLog key in the system registry.
<b>0x0200200f</b>	CANNOT_REMOVE_HASP386_FROM_INI	Failed to remove hasp.386 device from the system.ini.
<b>0x02002012</b>	CANNOT_REMOVE_VDD	Failed to remove the HASP Virtual Device Driver.
<b>0x02002014</b>	CANNOT_DELETE_PCMCIA_KEY	Failed to delete the HASP PCMCIA key from the system registry.
<b>0x02004007</b>	CANNOT_REMOVE_VXD_FROM_DISK	Failed to delete the hasp95.vxd file from the disk.
<b>0x02004008</b>	CANNOT_REMOVE_HASPNT_FROM_DISK	Failed to delete the haspnt.sys file from the disk.
<b>0x02004009</b>	CANNOT_REMOVE_VDD_FROM_DISK	Failed to delete the haspvdd.dll file from the disk.
<b>0x0200400a</b>	CANNOT_REMOVE_HASPUT_FROM_DISK	Failed to delete the hasput16.dll file from the disk.
<b>0x0200400b</b>	CANNOT_REMOVE_HASP386_FROM_DISK	Failed to delete the haspnt.386 file from the disk.
<b>0x0200400c</b>	CANNOT_REMOVE_LOADER_FROM_DISK	Failed to delete the hsrv.ldr file from the disk.
<b>0x0200400d</b>	DRIVER_NOT_INSTALLED	The HASP Device Driver is not installed.

0x02008001	CANNOT_HANDLE_SC_MANAGER	Failed to handle the Services Manager.
0x02008004	CANNOT_STOP_DRIVER	Failed to stop the HASP Device Driver.
0x02008005	CANNOT_REMOVE_DRIVER_FROM_SERVICES	Failed to remove the HASP Device Driver from the services.
0x02008009	CANNOT_UNLOAD_DRIVER_DYNAMICALLY	The HASP Device Driver cannot be dynamically unloaded.
0x02100102	WRN_LOADER_STILL_INSTALLED	Warning: You removed the HASP Device Driver while the NetHASP LM loader is still installed.
0x02010000	USER_HAVE_NO_ACCESS	You need administrator privileges to install the HASP Device Driver.

# HDDSYSINFO structure

To: [HiGetInfo\(\)](#)

The **HDDSYSINFO** structure contains general information relating to the operating system on which the HASP Device Driver is installed.

```
typedef struct _HDDSYSINFO{  
    DWORD      HiSystemType;  
} HDDSYSINFO;
```

## Members

**HiSystemType**

Current system type.

Value	Meaning
<b>VER_PLATFORM-WIN32s</b>	Windows 32s system
<b>VER_PLATFORM-WIN32_WINDOWS</b>	Windows 95 system
<b>VER_PLATFORM-WIN32_NT</b>	Windows NT system



# HIGetInfo()

To: [Custom API - Function List](#)

## Purpose

Receives information relating to the installed HASP Device Driver and other general information.

```
DWORD PASCAL HIGetInfo(  
    LPHDDINFO      IpHDDInfo,           //Address of structure for device  
information  
    LPHDDSYSINFO IpHDDSysInfo        //Address of structure for operating  
system information  
);
```

## Parameters

### **IpHDDInfo**

Points to a [HDDINFO structure](#) that receives the relevant information relating to the installed HASP Device Driver.

No initialization is needed prior to the function call.

### **IpHDDSysInfo**

Points to a [HDDSYSINFO structure](#) that receives the relevant information relating to the operating system.

No initialization is needed prior to the function call.

## Return Values

If successful the function returns the value: **HI\_SUCCESS**.

If failed the function returns the value: **HI\_FAIL**.

You can retrieve the error details by calling **HILastError**.

## Special Considerations

- Currently this function is implemented for Windows NT and Windows 95.

# HIGetInfo() - API Error Messages

To: [API Functions - Error Messages](#)

Error Code	Macro	Description
<b>0x0200200</b> <b>0</b>	CANNOT_READ_PARAM_FROM_DBR	Failed to read from the system registry.
<b>0x0200800</b> <b>1</b>	CANNOT_HANDLE_SC_MANAGER	Failed to establish a connection with the Service Control Manager.
<b>0x0200800</b> <b>4</b>	CANNOT_STOP_DRIVER	Failed to stop the HASP Device Driver.
<b>0x0200800</b> <b>7</b>	CANNOT_START_DRIVER	Failed to start the HASP Device Driver.
<b>0x0201000</b> <b>0</b>	USER_HAVE_NO_ACCESS	You need administrator privileges to install the HASP Device Driver.

# HIGetOSType()

To: [Custom API - Function List](#)

## Purpose

Retrieves the current operating system type.

**DWORD PASCAL     HIGetOSType( void )**

## Parameters

None

## Return Values

If successful the function returns one of the following values:

<u>Value</u>	<u>Meaning</u>
<b>VER_PLATFORM_WIN32s</b>	Windows 32s system
<b>VER_PLATFORM_WIN32_WINDOWS</b>	Windows 95 system
<b>VER_PLATFORM_WIN32_NT</b>	Windows NT system

If failed the function returns the value: **HI\_FAIL**.

You can retrieve the error details by calling **HILastError**.

# HIGetOSType() - API Error Messages

To: [API Functions - Error Messages](#)

Error Code	Macro	Description
<b>0x02001000</b> <b>0</b>	CANNOT_GET_OS_TYPE	Failed to verify the OS type.
<b>0x02001000</b> <b>1</b>	PLATFORM_DETECTION_FAIL	Calling to GetVersionEx failed.
<b>0x02001000</b> <b>2</b>	PLATFORM_UNKNOWN	Unknown platform detected.
<b>0x02010000</b> <b>0</b>	USER_HAVE_NO_ACCESS	You need administrator privileges to install the HASP Device Driver.

# HIInstallLoader()

To: Custom API - Function List

## Purpose

Installs the HASP NT Loader service.

```
DWORD PASCAL HIInstallLoader(  
    LPSTR           HIReserved1,           //Reserved for future use  
    DWORD           HIReserved2           //Reserved for future use  
);
```

## Parameters

<b>HIReserved1</b>	Reserved for future use. Must be Null.
<b>HIReserved2</b>	Reserved for future use. Must be Zero (0).

## Return Values

If successful the function returns the value: **HI\_SUCCESS**.

If failed the function returns the value: **HI\_FAIL**.

You can retrieve the error details by calling **HILastError**.

## Special Considerations

- Under Windows NT, you can load the NetHASP License Manager automatically before the user logs on. This is done by first installing the HASP NT Loader which is implemented as a Windows NT service. The HASP NT Loader automatically loads the NetHASP License Manager. With the HASP NT Loader it is not necessary to log on nor interact with the Windows NT system.
- The **HIInstallLoader** function performs the following steps:
  - (1) Creates the "HASP Loader" entry in the system registry.
  - (2) Copies the **HSRVLDR.EXE** file into the SYSTEM32 directory located under the Windows NT directory.

Note: The HASP NT Loader expects the NetHasp License Manager to reside in the SYSTEM32 directory, located under the Windows NT directory. You must copy the file to this location.

- Before calling this API function make sure that the HASP Device Driver is installed. If the HASP Device Driver is not installed a warning error code will be returned when calling **HILastError**.

- Under Windows NT the **HIInstallLoader** function is called only with administrator privileges.

**See Also:**

[HIRemoveLoader\(\)](#)

[HDDInstall\(\)](#)

[Utilizing Installation Parameters](#)

[HISetLicenseManagerParameters\(\)](#)

# HllInstallLoader() - API Error Messages

To: [API Functions - Error Messages](#)

Error Code	Macro	Description
<b>0x02008002</b>	CANNOT_ADD_LM_LOADER_IN_SERVICES	Failed to add the NetHASP LM loader object into the Service Control Manager Database.
<b>0x02100101</b>	WRN_HDD_NOT_INSTALLED	Warning: You installed the NetHASP LM loader object without the HASP Device Driver being installed.
<b>0x02002007</b>	CANNOT_WRITE_PARAM_TO_DBR	Failed to write keys or values to the system registry.
<b>0x02004006</b>	CANNOT_WRITE_LOADER_TO_DISK	Cannot write the hsrldr.exe to the disk.
<b>0x0200400c</b>	CANNOT_REMOVE_LOADER_FROM_DISK	Failed to delete the hsrvldr file from the disk.
<b>0x02010000</b>	USER_HAVE_NO_ACCESS	You need administrator privileges to install the HASP Device Driver.

# HILastError()

To: Custom API - Function List

## Purpose

Retrieves information about the last error that occurred after calling one of the Device Driver API functions.

```
DWORD PASCAL HILastError(  
    LPSTR          *lpHIErrorStr,          //Address of address of error  
description buffer  
    LPDWORD       lpSystemError          //Address of location for system  
error  
    LPDWORD       lpSubError             //Address of location for internal  
suberror  
);
```

## Parameters

<b>lpHIErrorStr</b>	Points to a buffer to receive the full last error description of the HASP Device Driver.
<b>lpSystemError</b>	Points to a variable containing the system error number.
<b>lpSubError</b>	Points to a variable containing an internal suberror.

## Return Values

If successful the function returns the last requested error number.

The **lpHIErrorStr** parameter contains the full descriptive string.

If failed the function returns the value: **HI\_FAIL**.



# HINSTALL Command Line Switches

To: [Contents](#)

To run the HASP Device Driver installation utility from the command line, enter:

**hinstall <switch>**

You can use any of the following switches:

[-?](#)

[-autodetect](#)

[-computertype](#)

[-driverpath](#)

[-help](#)

[-i](#)

[-info](#)

[-is](#)

[-iu](#)

[-lpt](#)

[-nomsg](#)

[-portmode](#)

[-r](#)

[-rs](#)

[-serverpath](#)

[-serverswitches](#)

Note: You can replace the prefix "-" with "/" in any switch.

# HIRemoveLoader()

To: [Custom API - Function List](#)

## Purpose

Removes the HASP NT loader service.

```
DWORD PASCAL HIRemoveLoader(  
    DWORD          HIReserved          //Reserved for future use  
);
```

## Parameters

**HIReserved**      Reserved for future use. Must be Zero (0).

## Return Values

If successful the function returns the value: **HI\_SUCCESS**.

If failed the function returns the value: **HI\_FAIL**.

You can retrieve the error details by calling **HILastError**.

## Special Considerations

- The **HIRemoveLoader** function removes the “HASP Loader” entry from the system registry.
- The **HIRemoveLoader** function is called only with administrator privileges.

**See Also:**      [HIInstallLoader\(\)](#)  
                  [Utilizing Installation Parameters](#)

# HIRemoveLoader() - API Error Messages

To: [API Functions - Error Messages](#)

Error Code	Macro	Description
<b>0x02008003</b>	CANNOT_REMOVE_LM_LOADER_FROM_SERVICES	Failed to remove the NetHASP LM loader object from the Service Control Manager Database.
<b>0x02010000</b>	USER_HAVE_NO_ACCESS	You need administrator privileges to install the HASP Device Driver.

# HISetAutoDetect()

To: [Custom API - Function List](#)

## Purpose

Assigns a **Yes/No** value to the **AutoDetect** parameter in the system registry.

```
DWORD PASCAL HISetAutoDetect(  
    BOOL                AutoDetect           //Automatic detect flag  
);
```

## Parameters

**AutoDetect**      Use **Yes** to enable automatic detection of parallel ports.  
                    Use **No** to disable automatic detection of parallel ports.

## Return Values

If successful the function returns the value: **HI\_SUCCESS**.

If failed the function returns the value: **HI\_FAIL**.

You can retrieve the error details by calling **HILastError**.

## Special Considerations

- This function is supported only under Windows NT
- When loaded the HASP Device Driver performs the following tasks:
  - (1) Automatically detects the parallel ports
  - (2) If the AutoDetect parameter in the system registry is set to Yes, then the driver updates the LPTx parameters according to the results of step 1, above.  
Previous settings are overwritten.

If the **AutoDetect** parameter is set to **No** the system registry is not updated.

In this condition you can manually change the value of the LPTx parameter.

If you set a value that conflicts with the automatic detection results, an error message is displayed. You can view the conflict description in the Event Viewer (located in the Administrative Tools).

- The **HISetAutoDetect** function is called only with administrator privileges.

**See Also:**      [HISetPortAddress\(\)](#)

[HISetComputerType\(\)](#)

## Utilizing Installation Parameters

# HISetAutoDetect() - API Error Messages

To: [API Functions - Error Messages](#)

Error Code	Macro	Description
<b>0x0200200</b> <b>1</b>	ERROR_UPDATE_PARAM_IN_DBR	Failed to update a value in the system registry.
<b>0x0201000</b> <b>0</b>	USER_HAVE_NO_ACCESS	You need administrator privileges to install the HASP Device Driver.

# HISetComputerType()

To: [Custom API - Function List](#)

## Purpose

Assigns a value to the **ComputerType** parameter in the system registry.

```
DWORD PASCAL HISetComputerType(  
    DWORD          ComputerType    //Computer type indicator  
);
```

## Parameters

**ComputerType**    The x86 platform indicator.

The following values are allowed:

<u>Value</u>	<u>Meaning</u>
<b>HI_IBM_TYPE</b>	Platform is IBM PC and compatibles.
<b>HI_NEC_TYPE</b>	Platform is NEC PC which uses standard parallel mode (STP - IBM compatible mode)
<b>HI_UNKNOWN_TYPE</b>	Type is unknown.

## Return Values

If successful the function returns the value: **HI\_SUCCESS**.

If failed the function returns the value: **HI\_FAIL**.

You can retrieve the error details by calling **HILastError**.

## Special Considerations

- This function should only be used on x86 systems.
- To make the changes take effect you must restart the system.    Applicable to Win95 and Win32s systems.

# HISetComputerType() - API Error Messages

To: [API Functions - Error Messages](#)

Error Code	Macro	Description
<b>0x02002007</b>	CANNOT_WRITE_PARAM_TO_DBR	Failed to write keys or values to the system registry.
<b>0x02002010</b>	ERROR_SET_IN_WIN_DD	Cannot update the ComputerType in hasp.386.
<b>0x02008001</b>	CANNOT_HANDLE_SC_MANAGER	Failed to establish a connection with the Service Control Manager.
<b>0x02008004</b>	CANNOT_START_DRIVER	Failed to start the HASP Device Driver.
<b>0x02008007</b>	CANNOT_STOP_DRIVER	Failed to stop the HASP Device Driver.
<b>0x02010000</b>	USER_HAVE_NO_ACCESS	You need administrator privileges to install the HASP Device Driver.



## HISetLicenseManagerParameters()

To: [Custom API - Function List](#)

### Purpose

Sets the NetHASP License Manager parameters. These parameters are used when the License Manager is automatically loaded, before the user logs on.

### DWORD PASCAL HISetLicenseManagerParameters(

LPSTR	<b>ServerPath,</b>	//Full pathname of the NetHASP License Manager
LPSTR	<b>ServerSwitch,</b>	//Command-Line switches
DWORD	<b>HIReserved</b>	//Reserved for future use

);

### Parameters

<b>ServerPath</b>	Points to the full path name string for the location of the NetHASP License Manager.
<b>ServerSwitch</b>	Points to a command line switches string used by the NetHASP License Manager.
<b>HIReserved</b>	Reserved for future use. Must be Zero (0).

### Return Values

If successful the function returns the value: **HI\_SUCCESS**.

If failed the function returns the value: **HI\_FAIL**.

You can retrieve the error details by calling **HILastError**.

### Special Considerations

- When the Windows NT system starts it loads the NetHASP License Manager. The default location of the NetHASP License Manager program is *SYSTEM32* directory located under the Windows NT root directory. The **ServerPath** parameters lets you change the default location.
- When the NetHASP License Manager is loaded by default it does not use any command line switches. The **ServerSwitch** parameter lets you add as many parameters as required.
- The **HISetLicenseManager** function is called only with administrator privileges.

### See Also:

[HIInstallLoader\(\)](#)

[Utilizing Installation Parameters](#)



# HISetLicenseManagerParameters() - API Error Messages

To: [API Functions - Error Messages](#)

Error Code	Macro	Description
<b>0x02002007</b>	CANNOT_WRITE_PARAM_TO_DBR	Failed to write keys or values to the system registry.
<b>0x02010000</b>	USER_HAVE_NO_ACCESS	You need administrator privileges to install the HASP Device Driver.

# HISetPortAddress()

To: Custom API - Function List

## Purpose

Assigns a value to the **LPTx** parameters in the system registry.

## DWORD PASCAL HISetPortAddress(

```
    DWORD    PortType,    //Parallel port selector
    DWORD    PortNumber,  //Port number selector
    DWORD    PortAddress, //Parallel port selector
);
```

## Parameters

<b>PortType</b>	Set the port type: 1 for parallel
<b>PortNumber</b>	Sets the port number: 1 for LPT1 2 for LPT2 3 for LPT3
<b>PortAddress</b>	Sets the actual port address. The address is a heximal number, for example: 3BC, 378

## Return Values

If successful the function returns the value: **HI\_SUCCESS**.

If failed the function returns the value: **HI\_FAIL**.

You can retrieve the error details by calling **HILastError**.

## Special Considerations

- This function is supported only under Windows NT
- When loaded the HASP Device Driver performs the following tasks:
  - (1) Automatically detects the parallel ports
  - (2) If the **AutoDetect** parameter in the system registry is set to Yes, then the driver updates the LPTx parameters according to the results of step 1, above.  
Previous settings are overwritten.
  - (3) Reads and stores all of the information from the system registry.  
This information is utilized when the device driver is accessed.

If the **AutoDetect** parameter is set to **NO** the system registry is not updated.

In this condition you can call **HISetPortAddress** and change the value of the LPTx parameter.

If you set a value that conflicts with the automatic detection results, an error message is displayed. You can view the conflict description in the Event Viewer (located in the Administrative Tools).

#### **Warning**

**An invalid port address could adversely affect the entire Windows NT system.**

---

- The **HISetPortAddress** function is called only with administrator privileges.

#### **See Also:**

[HISetAutoDetect\(\)](#)

[Utilizing Installation Parameters](#)

# HISetPortAddress() - API Error Messages

To: [API Functions - Error Messages](#)

Error Code	Macro	Description
<b>0x02002007</b>	CANNOT_WRITE_PARAM_TO_DBR	Failed to write keys or values to the system registry.
<b>0x02000002</b>	INVALID_PORT_NUM_SPECIFIED	Invalid port number was specified.
<b>0x02000003</b>	INVALID_PORT_TYPE_SPECIFIED	Invalid port type was specified.
<b>0x02008001</b>	CANNOT_HANDLE_SC_MANAGER	Failed to establish a connection with the Service Control Manager.
<b>0x02008004</b>	CANNOT_STOP_DRIVER	Failed to stop the HASP Device Driver.
<b>0x02008007</b>	CANNOT_START_DRIVER	Failed to start the HASP Device Driver.
<b>0x02010000</b>	USER_HAVE_NO_ACCESS	You need administrator privileges to install the HASP Device Driver.

# HISetPortMode()

To: Custom API - Function List

## Purpose

Assigns a value to the **PortMode** parameter in the system registry.

```
DWORD PASCAL HISetPortMode(  
    DWORD          PortMode          //Parallel mode indicator  
);
```

## Parameters

### **PortMode**

The following values are allowed:

Value	Meaning
<b>Normal</b>	Normal mode
<b>BiDi</b>	Bi-Directional mode
<b>ECP</b>	ECP mode
<b>Auto</b>	Auto mode

## Return Values

If successful the function returns the value: **HI\_SUCCESS**.

If failed the function returns the value: **HI\_FAIL**.

You can retrieve the error details by calling **HILastError**.

## Special Considerations

- To make these changes take effect, you must restart the system. Applicable to Win95 and Win32s systems.
- In Windows NT the **HISetPortMode** function is called only with administrator privileges.

# HISetPortMode() - API Error Messages

To: [API Functions - Error Messages](#)

Error Code	Macro	Description
<b>0x0200200</b> <b>7</b>	CANNOT_WRITE_PARAM_TO_DBR	Failed to write keys or values to the system registry.
<b>0x0200800</b> <b>1</b>	CANNOT_HANDLE_SC_MANAGER	Failed to handle the Services Manager.
<b>0x0200800</b> <b>4</b>	CANNOT_STOP_DRIVER	Failed to stop the HASP Device Driver.
<b>0x0200800</b> <b>7</b>	CANNOT_START_DRIVER	Failed to start the HASP Device Driver.



# INSTALL Directory

To: [List of Files](#)

The Install directory contains the HASP Device Drivers software for Windows NT, Windows 95, Win32s, and Windows 3.x operating systems. The Install directory contains two subdirectories, for Win16 and Win32 operating systems.

## Win16

The root directory contains a setup utility to install the HASP Device Driver on Windows 3.x and Win32 systems. The directory also includes subdirectories which contain sample installations of the HASP Device Driver using various environments.

The Win16 directory contains the following files:

<b>setup.exe</b>	HASP Device Driver Installation Wizard.
<b>hasp.ibm</b>	HASP Device Driver for Windows 3.x and Win32s with IBM defaults.
<b>hasp.nec</b>	HASP Device Driver for Windows 3.x and Win32s with NEC defaults.
<b>hddwin.dll</b>	Files used by the <i>setup.exe</i> program.
<b>in16.bmp</b>	
<b>in256.bmp</b>	
<b>setup.ins</b>	
<b>uninst16.exe</b>	
<b>_inst16.ex_</b>	
<b>_setup.lib</b>	
<b>_setup.dll</b>	
<b>license.txt</b>	Aladdin Knowledge Systems license agreement.

The Win16 directory also contains the following subdirectories:

<b>IS</b>	<u>HASP Device Driver dynamic installation sample for InstallShield</u>
<b>MSC</b>	<u>HASP Device Driver dynamic installation</u>

## sample for Microsoft C

### Win32

The root directory contains a utility to install the HASP Device Driver on Win32 systems. The directory also includes subdirectories which contain sample installations of the HASP Device Driver using various environments.

The Win32 directory contains the following file:

**HINSTALL.EXE**      The HASP Device Driver installation utility for Windows 95, and Windows NT (GUI).

The Win32 directory also contains the following subdirectories:

**CMDLINE**      Contains **HINSTALL.EXE**, a command line utility that supports Windows NT, Windows 95, and Win32s.

**BORLANDC**      HASP Device Driver dynamic installation sample for Borland C

**DELPHI**      HASP Device Driver dynamic installation sample for Borland Delphi

**DLL**      HASP Device Driver pre-compiled static and dynamic libraries

**IS**      HASP Device Driver dynamic installation sample for InstallShield

**MSC**      HASP Device Driver dynamic installation sample for Microsoft C

**VB**      HASP Device Driver dynamic installation sample for Visual Basic

**WATCOMC**      HASP Device Driver dynamic installation sample for Watcom C

**See Also:**      Drivers Directory

# If the HASP Device Driver Crashes While Loading

To: [Troubleshooting](#)

[Recovering From HASP Device Driver Crashes in Windows NT](#)

[Recovering From HASP Device Driver Crashes in Windows 95](#)

[Recovering From HASP Device Driver Crashes in Win32s](#)

# Installing the HASP Device Driver

To: [Contents](#)

[The HASP Device Driver Installation Utility – HINSTALL](#)

## To install the HASP Device Driver

- (1) Run hinstall.exe, or enter **hinstall -i** from the command line.
- (2) Click Install (GUI only).
- (3) To make these changes take effect, you must restart the system. Applicable only for Win95 and Win32s systems.

## Installing at the Customer Site

You can install the HASP Device Driver for Win32 on the system of your customer in one of two ways:

- Run **hinstall**. You can write a command (batch) file to perform the installation and then distribute this file with your application.
- Install the HASP Device Driver from within your application by creating your own installation procedure (for details see [Custom API - Function List](#) ).

**See Also:**     [The Hinstall Utility Tabs](#)

[Removing the HASP Device Driver](#)

[Upgrading the HASP Device Driver](#)

[HINSTALL Command Line Switches](#)

Native Windows 32-bit applications access the Kernel Device Driver.

# LastStatus Error 1 under Win32s

To: [Troubleshooting](#)

## Problem

A NetHASP-protected Win32 application runs smoothly on Windows for Workgroups stations, but produces LastStatus error 1 when running under Win32s.

## Solution

To avoid this situation, copy **hasput16.dll** to the application directory. You can find *hasput16.dll* in the HASP software *drivers* directory.

# List of Files

To: [Contents](#)

The HASP Device Drivers software includes drivers for Windows NT, Windows 95, Win32s, and Windows 3.x. You can find the HASP Device Driver software in the DRIVERS directory on the HASP CD-ROM or on the HASP Device Drivers diskette.

The DRIVERS directory contains the following files:

<b>HINSTALL.HLP</b>	This help file.
<b>README.1ST</b>	Latest updates.
<b>VERSION.DRV</b>	The HASP Device Driver software version number.

The DRIVERS directory contains the following subdirectories:

<b>DRIVERS</b>	<a href="#">DRIVERS Directory</a>
<b>INSTALL</b>	<a href="#">INSTALL Directory</a>

# Loading the NetHASP License Manager Automatically

To: [Contents](#)

With Windows NT, it is possible to load the NetHASP License Manager automatically before the user logs on. You do this with HINSTALL.

HINSTALL installs a HASP NT Loader implemented as a Windows NT service. This loader automatically loads the NetHASP License Manager. With the HASP NT Loader, you don't have to log on or interact with the NT system.

## To install the HASP NT Loader

- (1) Log on as a user with administrator privileges.
- (2) Run **hinstall -is**.
- (3) Copy the NetHASP License Manager for Win32 to the SYSTEM32 directory in the Windows NT root directory.
- (4) Restart the system; the HASP NT Loader automatically loads the License Manager.

If the HASP NT Loader has been installed properly, you can see its entry in the Windows NT SCManager (Service Control Manager).

Note: Since the NetHASP License Manager loads automatically before the user logs on, the HASP NT Loader and the NetHASP License Manager messages do not appear on the screen. To see any related messages, you have to log on. For example, if you try to load the NetHASP License Manager without a HASP key connected, you do not see the "HASP not found" error message until you log on.

## To remove the HASP NT Loader

- (1) Log on as a user with administrator privileges.
- (2) Run **hinstall -rs**.
- (3) Restart the system.

**See Also:** [Viewing the Entry in the SCManager](#)

[HINSTALL Command Line Switches](#)



# Manually Removing the HASP Device Driver in Win32s

To: [Troubleshooting](#)

You can manually remove the HASP Device Driver in Win32s by editing the SYSTEM.INI file.

- (1) Open the SYSTEM.INI file.
- (2) Locate the [386Enh] section.
- (3) Remove the line: device=\...\hasp.386.

# Manually Removing the HASP Device Driver in Windows 95

To: [Troubleshooting](#)

- (1) Run REGEDIT - the registry editor program.
- (2) Click on the **HKEY\_LOCAL\_MACHINE** directory.
- (3) Click on the **System** directory.
- (4) Click on the **CurrentControlSet** directory.
- (5) Click on the **Services** directory.
- (6) Click on the **VxD** directory.
- (7) Search for the item "**HASP95**" and click on it.
- (8) Press Del to delete the item.
- (9) Repeat steps 1 to 4.
- (10) Click on the **Control** directory.
- (11) Click on the **VMM32Files** directory.
- (12) Search for the item "**hasp95.vxd**" and click on it.
- (13) Press Del to delete the item.

# Manually Removing the HASP Device Driver in Windows NT

To: [Troubleshooting](#)

The HASP Device Driver can be removed using hinstall/r. If this procedure fails, you can remove the HASP Device Driver manually.

## To Remove the HASP Device Driver Manually

### For Windows NT 3.5x

- (1) From the Program Manager click on File.
- (2) In the drop-down menu click on Run.
- (3) In the Command Line enter: REGEDT32  
Four frames open up.
- (4) Follow steps (3) through (14) as for Windows NT 4.0, listed below.

### For Windows NT 4.0

- (1) Choose Run from the Start menu.
- (2) Enter REGEDT32.  
Four frames open up.
- (3) Switch to the frame labeled **HKEY\_LOCAL\_MACHINE**
- (4) Click on the **System** directory.
- (5) Click on the **CurrentControlSet** directory.
- (6) Click on the **Services** directory. A list appears containing all of the installed device drivers (alphabetically).
- (7) Search for the item "**Haspnt**" and click on it.
- (8) Press Del to delete the item.
- (9) Repeat steps 1 to 6.
- (10) Click on the **Control** directory.
- (11) Click on the **Session Manager** directory.
- (12) Click on the **DOS Devices** directory. A list appears containing all of the installed device drivers (alphabetically).
- (13) Click on the "**HASP**" item and press Del to delete.
- (14) Edit the file CONFIG.NT in %system%\system32 directory and remove the line device=\...  
\haspdos.sys.



# Manually Removing the HASP NT Loader

To: [Troubleshooting](#)

The HASP NT Loader can be removed using hinstall/rs. If this procedure fails, you can remove the HASP NT Loader manually.

## To Remove the HASP NT Loader Manually

### For Windows NT 3.5x

- (1) From the Program Manager click on File.
- (2) In the drop-down menu click on Run.
- (3) In the Command Line enter: REGEDT32  
Four frames open up.
- (4) Follow steps (3) through (8) as for Windows NT 4.0, listed below.

### For Windows NT 4.0

- (1) Choose Run from the Start menu.
- (2) Enter REGEDT32.  
Four frames open up.
- (3) Switch to the frame labeled **HKEY\_LOCAL\_MACHINE**
- (4) Click on the **System** directory.
- (5) Click on the **CurrentControlSet** directory.
- (6) Click on the **Services** directory.  
A list appears containing all of the installed device drivers (alphabetically).
- (7) Search for the item "**HASP Loader**" and click on it.
- (8) Press Del to delete the item.

# Printer Errors under Windows

To: [Troubleshooting](#)

## **Problem**

You get printer errors when trying to print from a protected Windows application.  
This is due to a conflict between printer access and HASP access.

## **Solution**

To avoid conflicts between HASP and other parallel devices (such as printers), install the HASP Device Driver.

# Recovering From HASP Device Driver Crashes in Win32s

To: [If the HASP Device Driver Crashes While Loading](#)

You can manually remove the HASP Device Driver in Win32s by editing the SYSTEM.INI file.

- (1) Open a DOS Box.
- (2) Open the SYSTEM.INI file.
- (3) Locate the [386Enh] section.
- (4) Remove the line: device=\...\hasp.386.

# Recovering From HASP Device Driver Crashes in Windows 95

To: [If the HASP Device Driver Crashes While Loading](#)

- (1) Boot the computer to DOS.
- (2) Manually delete the driver \%system%\system\hasp95.sys from the disk.
- (3) Restart the system.
- (4) Follow the steps [Manually Removing the HASP Device Driver in Windows 95](#) .



# Recovering From HASP Device Driver Crashes in Windows NT

To: [If the HASP Device Driver Crashes While Loading](#)

- (1) Boot the computer to DOS.
- (2) Manually delete the driver `\\%system%\\system32\\drivers\\haspnt.sys` from the disk.
- (3) Boot to Windows NT system.
- (4) Follow the steps for [Manually Removing the HASP Device Driver in Windows NT](#) .

**If it is not possible to boot to DOS do the following**

- (1) Boot to NT.
- (2) Press the spacebar while booting the NT system.  
A menu appears.
- (3) Select Use Last Known Good Configuration, or press L and then enter to continue restart.
- (4) Follow the steps in the section [Manually Removing the HASP Device Driver in Windows NT](#) .

# Registry Settings for the HASP Device Driver under Windows NT

When you install the HASP Device Driver under Windows NT, you add the **Haspnt** key to your registry under the path HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services.

The **Haspnt** key has the following keys and values:

Key	Sample Value	Description
<b>Date</b>	November 5, 1997	The date the HASP Device Driver was installed.
<b>DisplayName</b>	Haspnt	File name of the HASP Device Driver.
<b>ErrorControl</b>	0x1	System-defined parameter.
<b>Group</b>		System-defined parameter.
<b>ImagePath</b>	<Path>\haspnt.sys	Location of the kernel driver file.
<b>Start</b>	0x2	Loading stage during system startup.
<b>Tag</b>		System-defined parameter.
<b>Type</b>		System-defined parameter.
<b>Version</b>	3.05	The version of the HASP Device Driver

An **Enum** key is also added to your registry under the path HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\Haspnt. The **Enum** key contains three system defined parameters, **0**, **Count**, and **NextInstance**.

A **Parameters** key is also added to your registry under the path HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\Haspnt. The following values are assigned to the **Parameters** key:

Key	Sample Value	Description
<b>AutoDetect</b>	Yes	Automatic detection of LPT ports. For additional information, see <a href="#">-autodetect</a> .
<b>COM1</b>	0x3F8	The I/O address of the COM1 serial port.
<b>COM2</b>	0	The I/O address of the COM2 serial port.
<b>COM3</b>	0	The I/O address of the COM3 serial port.
<b>COM4</b>	0	The I/O address of the COM4 serial port.
<b>ComputerType</b>	IBM	The type of computer. For additional information, see <a href="#">-computertype</a>

<b>LPT1</b>	0x378	The LPT1 address.
<b>LPT2</b>	0	The LPT2 address.
<b>LPT3</b>	0	The LPT3 address.
<b>PortmodeType</b>	AUTO	The parallel port mode. For additional information, see <u>-portmode</u> .
<u><b>ProcessorType</b></u>	<u>X86</u>	<u>The type of processor used by your computer.</u>

A **Security** key is also added to your registry under the path  
HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\Hspnt. The **Security** key is a system  
defined parameter.

# Registry Settings for the HASP Device Driver under Windows 95

When you install the HASP Device Driver under Windows 95, a **HASP95** key is added to your registry under the path HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\VxD.

The **HASP95** key has the following keys and values:

Key	Sample Value	Description
<b>Date</b>	November 5, 1997	The date the HASP Device Driver was installed.
<b>Start</b>	00	Loading stage during system startup.
<b>Static VxD</b>	hasp95.vxd	System-defined parameter.
<b>Version</b>	3.05	The version of the HASP Device Driver.

A **Parameters** key is also added to your registry under the path HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\VxD\Hasp95.

The following values are assigned to the **Parameters** key:

Key	Sample Value	Description
<b>AutoDetect</b>	Yes	Automatic detection of LPT ports. For additional information, see <a href="#">-autodetect</a> .
<b>COM1</b>	0x3F8	The I/O address of the COM1 serial port.
<b>COM2</b>	0	The I/O address of the COM2 serial port.
<b>COM3</b>	0	The I/O address of the COM3 serial port.
<b>COM4</b>	0	The I/O address of the COM4 serial port.
<b>ComputerType</b>	IBM	The type of computer. For additional information, see <a href="#">-computertype</a> .
<b>LPT1</b>	0	The LPT1 address.
<b>LPT2</b>	0	The LPT2 address.
<b>LPT3</b>	0	The LPT3 address.
<b>PortMode</b>	AUTO	The parallel port mode. For additional information, see <a href="#">-portmode</a> .
<b>ProcessorType</b>	X86	The type of processor used by your computer.



# Registry Settings for the HASP Loader under Windows NT

When you install the HASP Loader under Windows NT, a **HASP Loader** key is added to your registry under the path HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services.

The **HASP Loader** key has the following keys and values:

Key	Default Value	Description
<b>DisplayName</b>	HASP Loader	File name of the HASP Loader.
<b>ErrorControl</b>	0x1	System-defined parameter.
<b>ImagePath</b>	<Path>\hsrvldr.exe	Loader file path.
<b>ObjectName</b>	LocalSystem	System-defined parameter.
<b>ServerPath</b>	<Path>\nhsvw32.exe	NetHASP License Manager path.
<b>ServerSwitch</b>		NetHASP License Manager command line switches.
<b>Start</b>	0x2	Loading stage during system startup.
<b>Type</b>	0x110	System-defined parameter.

An **Enum** and a **Security** key are also added to your registry under the path HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\HASP Loader. They contain system defined parameters.

# Removing the HASP Device Driver

To: [Contents](#)

[The HASP Device Driver Installation Utility – HINSTALL](#)

## To remove the HASP Device Driver

- (1) Run hinstall.exe, or enter **hinstall -r** from the command line.
- (2) Click Remove (GUI only).
- (3) To make these changes take effect you must restart the system. Applicable to Win95 and Win32s systems.

### See Also:

[The Hinstall Utility Tabs](#)

[Installing the HASP Device Driver](#)

[Upgrading the HASP Device Driver](#)

[HINSTALL Command Line Switches](#)

# The HASP Device Driver Installation Utility - HINSTALL

To: [Contents](#)

HINSTALL.EXE is a Win32 application that installs the HASP Device Driver.

There are two versions of hinstall.exe: one GUI and command line based that supports Windows 95 and Windows NT, and the other command line based that supports Windows 95, Windows NT, and Win32s. For the location of the hinstall.exe, please see refer to [Install Directory](#).

HINSTALL automatically recognizes the type of operating system and installs the correct driver files at the required location.

HINSTALL also automatically recognizes the computer type - IBM or NEC. This allows a protected application to migrate between IBM and NEC platforms without any platform adaptation.

Note: To use HINSTALL.EXE With Windows NT, you need administrator privileges.

**See Also:**    [Installing the HASP Device Driver](#)

[Removing the HASP Device Driver](#)

[Upgrading the HASP Device Driver](#)

[Loading the NetHASP License Manager Automatically](#)

[HINSTALL Command Line Switches](#)



# The Hinstall Utility Tabs

## Windows NT

The following information appears on the HASP Device Driver tab:

<b>Version</b>	The version of the installed HASP Device Driver.
<b>Driver Path</b>	The path of the HASP Kernal Device Driver.
<b>Installation Date</b>	The date of installation.
<b>Computer Name</b>	The processor type of your computer.
<b>Computer Type</b>	The type of computer (IBM compatible or NEC).
<b>Port Mode</b>	The method of detecting the parallel port mode.
<b>LPT1</b>	The parallel port address.
<b>LPT2</b>	The parallel port address.
<b>LPT3</b>	The parallel port address.
<b>Installation Status</b>	Installation status of the NetHASP License Manager Loader.

The following information appears on the License Manager Loader tab:

<b>Server Path</b>	The path of the NetHASP License Manager.
<b>Server Switches</b>	The switches used with the NetHASP License Manager.

## Windows 95

The following information appears on the HASP Device Driver tab:

<b>Version</b>	The version of the installed HASP Device Driver.
<b>Driver Path</b>	The path of the HASP Device Driver.
<b>Installation Date</b>	The date of installation.
<b>Computer Name</b>	The processor type of your computer.
<b>Computer Type</b>	The type of computer (IBM compatible or

NEC).

**Port Mode**

The method of detecting the parallel port mode.

# Topic

Good, now you can return to the [HASP Installation Help Conventions](#) or jump to the [Contents](#).

# Troubleshooting

To: [Contents](#)

[Error 9121 under Windows NT](#)

[LastStatus Error 1 under Win32s](#)

[Printer Errors under Windows](#)

[Manually Removing the HASP Device Driver in Windows NT](#)

[Manually Removing the HASP Device Driver in Windows 95](#)

[Manually Removing the HASP Device Driver in Win32s](#)

[Manually Removing the HASP NT Loader](#)

[If the HASP Device Driver Crashes While Loading](#)

[Utilizing Installation Parameters](#)

# Upgrading the HASP Device Driver

To: [Contents](#)

[The HASP Device Driver Installation Utility – HINSTALL](#)

**To upgrade your existing HASP Device Driver to a newer version:**

**If you have the HASP Device Driver V2.0 and up**

- (1) Install the new HASP Device Driver.
- (2) To make these changes take effect, you must restart the system. Applicable to Win95 and Win32s systems.

**If you have the HASP Device Driver version prior to V2.0**

- (1) Use your current version of HINSTALL to remove the HASP Device Driver.
- (2) Restart your system.
- (3) Install the new HASP Device Driver using the new version of HINSTALL.
- (4) To make these changes take effect, you must restart the system. Applicable to Win95 and Win32s systems.

**See Also:**     [Installing the HASP Device Driver](#)  
[Removing the HASP Device Driver](#)  
[HINSTALL Command Line Switches](#)

# Utilizing Installation Parameters

To: [Troubleshooting](#)

You can view and/or edit the HASP Device Driver and the HASP NT Loader in several different ways.

## **Win32s**

[Configuration File Settings for Win32s](#)

## **Windows 95**

[Viewing the HASP Device Driver Parameters in the Windows 95 Registry Editor](#)

## **Windows NT**

[Viewing the HASP Device Driver Parameters in the Windows NT Registry Editor](#)

[Viewing the HASP NT Loader Parameters in the Registry Editor](#)

[Disabling the HASP NT Loader](#)

# Viewing the Entry in the SCManager

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If the HASP NT Loader has been installed properly, you can see its entry in the Windows NT SCManager (Service Control Manager).

## **To see the entry in the SCManager**

- (1) Choose Main from the Program Manager.
- (2) Choose Control Panel, then Services; the HASP NT Loader entry appears in the Services list.
- (3) Check that the Status field is empty, and that the Startup field has the value Automatic.

**See Also:**     [Loading the NetHASP License Manager Automatically](#)

Native Windows 16-bit applications access the Virtual Device Driver which accesses the Kernel Device Driver.



# What is a HASP Device Driver?

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The HASP Device Driver interfaces between HASP-protected applications and the HASP. In other words, protected applications communicate with the HASP through the HASP Device Driver.

**See Also:**      [When Do I Need a HASP Device Driver?](#)

# When Do I Need a HASP Device Driver?

To: [Contents](#)

The following table shows the applications that use the HASP Device Driver under various operating systems.

Application Type	Operating System			
	Windows (16-Bit)	Win32s	Windows 95	Windows NT
DOS	Optional	Optional	Required	Required
Windows (16-bit)	Optional	Optional	Required	Required
Win32	Not Applicable	Required	Required	Required

If the HASP Device Driver is required and it is not installed, the protected application will not find the HASP.

If the HASP Device Driver is optional and it is not installed, the protected application communicates directly with the HASP. To enhance performance and to avoid conflict between other parallel devices (such as printers) and HASP access, we recommend installing the HASP Device Driver.

Note: Install the HASP Device Driver only on computers where a HASP is connected to the local parallel port.

**See Also:**

[HASP Device Driver for Windows](#)  
[HASP Device Driver for Win32s](#)  
[HASP Device Driver for Windows 95](#)  
[HASP Device Driver for Windows NT](#)

# Viewing the HASP Device Driver Parameters in the Windows 95 Registry Editor

To: [Utilizing Installation Parameters](#)

You can use the Registry Editor under Windows 95 to view and edit the HASP Device Driver parameters.

- (1) Run **REGEDIT** (The Registry Editor program)
- (2) Click on **HKEY\_LOCAL\_MACHINE** directory
- (3) Click on the **System** directory
- (4) Click on the **CurrentControlSet** directory
- (5) Click on the **Services** directory
- (6) Click on the **VxD** directory
- (7) Search for the item **HASP95**, when found click on HASP95  
On the right side of the frame, information is displayed about the HASP Device Driver for Windows 95.
- (8) You can see additional information under the **Parameters** key.

Note: You can edit each parameter by either double-clicking the parameter or first selecting the parameter and then pressing <Enter>.

## See Also:

[Registry Settings for the HASP Device Driver under Windows 95](#)

# Windows NT Device Drivers and Loader Parameters

To: [Utilizing Installation Parameters](#)

You can view and/or edit the HASP Device Driver and the HASP NT Loader parameters in several different ways.

[Viewing the HASP Device Driver Parameters in the Windows NT Registry Editor](#)

[Viewing the HASP Loader Parameters in the Windows NT Registry Editor](#)

[Disabling the HASP NT Loader](#)

