

# **GAUSS™ 5.0**

## ***Quick-Start Guide***



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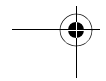
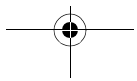
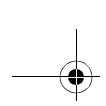
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# Introduction **1**

## Product Overview

GAUSS is a complete analysis environment suitable for performing quick calculations, complex analysis of millions of data points, or anything in between. Whether you are new to computerized analysis or a seasoned programmer, the GAUSS family of products combine to offer you an easy to learn environment that is powerful and versatile enough for virtually any numerical task.

Since its introduction in 1984, GAUSS has been a standard for serious number crunching and complex modeling of large-scale data. Worldwide acceptance and use in government, industry, and the academic community is a firm testament to its power and versatility.

The GAUSS System can be described several ways: it is an exceptionally efficient number cruncher, a comprehensive programming language, and an interactive analysis environment. GAUSS may be the only numerical tool you will ever need.

# Getting Started **2**

## Installation Under UNIX/Linux

1. Make a directory to install GAUSS in.
2. `cd` to that directory.
3. Unzip the `.gz` file if there is one.
4. Untar the `.tar` file.
5. Put the installation directory in the executable path.
6. Put the installation directory in the shared library search path.
7. Install the license, please refer to Chapter 5: Licensing for instructions.

For last minute information, see README.term.

## Installation Under Windows

### Machine Requirements

- A 486 computer or higher.

- Operating System and Memory (RAM) requirements
  - Windows NT4.0, SP6 IE4.0, 32 MB minimum 256 MB recommended.
  - Windows 2000, 64 MB minimum, 256 MB recommended.
  - Windows XP, 128 MB minimum, 256 MB recommended.
- Free hard disk space requirements:
  - Minimum of 100 MB free hard disk space, more may be needed depending on the size of matrices and the complexity of the program.
- Monthly defragmenting is recommended.

## Installation from Download

### Downloading

The production release is in `GAUSS_5.0_Win_heavy.zip`.

The GUI has online documentation in HTML format. There are also PDF versions of the Quick Start Guide and GAUSS manuals in this directory that you can download separately if you want them.

`GAUSS_5.0_Manual.zip`

### Installation

Download `GAUSS_5.0_Win_heavy.zip`, unzip it in a temp directory, and run `setup.exe`.

If you are doing a command line ftp, once logged on you will be placed in the `GAUSS50` directory and will have access to all files contained in that directory and no others. Remember to set the transfer protocol to "bin" before downloading binary files. Use the "get" command to get the files you want off the ftp site.

To install the license, please refer to Chapter 5: Licensing for instructions.

## Installation from CD

Insert the GAUSS 5.0 compact disc into the CD-ROM drive, and setup should start automatically. If setup does not start automatically, click Start, then click Run. Type `D:\setup.exe` in the dialog box (where D is the drive letter of the CD-ROM drive).

You can use this procedure for the initial installation of GAUSS, and for additions or modifications to GAUSS components.

To install the license, please refer to Chapter 5: Licensing for instructions.

# Documentation **3**

## **GAUSS Quick-Start Guide**

- Introduction
- Getting Started
- Documentation
- Support Services
- Licensing

## **GAUSS User Guide**

- Introduction
- Getting Started
- Using the Command Line Interface
- Using the Windows Interface
- GAUSS Source Browser
- Language Fundamentals
- Operators



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Procedures and Keywords  
Libraries  
Compiler  
File I/O  
Foreign Language Interface  
Data Exchange  
Data Transformations  
Publication Quality Graphics  
Utilities  
Error Messages  
Maximizing Performance  
Fonts Appendix  
Reserved Words Appendix  
Singularity Tolerance Appendix

## **GAUSS Language Reference**

Introduction  
Commands by Category  
Command Reference  
Obsolete Commands  
Colors Appendix

## **Ordering Documentation**

- GAUSS User Guide and Language Reference set (Part No. 003101)
- GAUSS 5.0 Supplement (Part No. 003079)

*GAUSS Quick-Start Guide*

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For pricing information, please visit our Web site at: [www.Aptech.com](http://www.Aptech.com), or contact us at:

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# Support Services **4**

## Contacting Our Support Services

- To contact our support technicians, please e-mail us at: [support@Aptech.com](mailto:support@Aptech.com).
- Our contact information:  
Aptech Systems, Inc.  
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Phone: (425) 432-7855  
FAX: (425) 432-7832  
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E-mail for Academic Sales: [acsw@Aptech.com](mailto:acsw@Aptech.com)  
[Info@Aptech.com](mailto:Info@Aptech.com)
- Our Web address is: [www.Aptech.com](http://www.Aptech.com).

# Licensing 5

## Licensing Under UNIX/Linux

After you install GAUSS or the GAUSS Engine, go to the FLEXlm subdirectory and run the following command:

```
% ./lmutil lmhostid
```

Send the output to [license@aptech.com](mailto:license@aptech.com), and you will be sent a license code. Create a file called `gauss.lic` in the FLEXlm subdirectory, and copy the license code into it.

If you have purchased a Single User or Server Locked license, the program is now ready for use. If you have purchased a floating network license, you have to start the `lmgrd` license server daemon first. Go to the FLEXlm subdirectory and run the following command:

```
% ./lmgrd -c gauss.lic -l lmgrd.dl
```

For Network licensing see your system administrator to have the license daemon started automatically in the operating system start-up scripts.

For last minute information, see `README.term`.

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# Licensing Under Windows

## Single User License

1. E-mail or FAX your completed registration form containing your contact information, serial number and the hostid that was displayed during installation to Aptech Systems. NOTE: The information displayed, is stored in the `hostid.txt` file in your `GAUSSHOME50\flexlm` directory as well. Be sure to include your phone number, e-mail address and/or FAX number. E-mail is the preferred method for returning licenses.

If you need to obtain the hostid after installation:

- a. Open DOS prompt window
- b. `CD GAUSSHOME50\flexlm`
- c. type the command `notepad hostid.txt`
- d. send the contents of this `hostid.txt` file to Aptech.

If your machine is a laptop or your only connection is via modem you will need to verify your hostid after installation is complete by:

- a. Reboot machine
- b. Open DOS prompt window
- c. `CD GAUSSHOME50\flexlm`
- d. type the command `lmhost >> hostid.txt`
- e. type the command `notepad hostid.txt`

If the hostids are the same, please send us the results.

If they are not, please:

- a. Open DOS prompt window
- b. `CD GAUSSHOME50\flexlm`
- c. type the command `lmhost -pin > hostid.txt`
- d. send the contents of the `hostid.txt` file to Aptech.

E-mail to [license@Aptech.com](mailto:license@Aptech.com)

or

FAX to (425) 432-7832

**Caution:** Some text editors automatically add a `.txt` extension to files when you save them. Check to be sure that you have actually created a file named `gauss.lic`. Also, be aware that it is Windows default to hide file extensions.

2. Aptech will send you a license. Save it in a file called `gauss.lic` in the `GAUSSHOME50\flexlm` directory. NotePad is the recommended editor.

## Floating Network License

Every Installation of GAUSS 5.0 can act as a Floating Network License server. You can have a single license server or 3 redundant servers.

### Install License Server(s)

Install GAUSS 5.0. For initial testing and trouble shooting you will need `GAUSS.exe` file installed. However if you are short on hard drive space, after you have confirmed that the FLEXlm License Manager is running correctly, you can delete the shortcuts off the desktop and remove all files in the `GAUSS50` directory except for the `flexlm` directory.

### Obtain and Install License

To get the `hostid` of each license server, which is displayed during the GAUSS 5.0 install, it is also stored in the `GAUSSHOME50\flexlm\hostid.txt` file.

1. E-mail or FAX your completed registration form containing your contact information, serial number and the `hostid` that was displayed during installation to Aptech Systems. NOTE: The information displayed, is stored in the `hostid.txt` file in your `GAUSSHOME50\flexlm` directory as well. Be sure to include your phone number, e-mail address and/or FAX number. E-mail is the preferred method for returning licenses.

E-mail to [license@Aptech.com](mailto:license@Aptech.com)

or

FAX to (425) 432-7832

**Caution:** Some text editors automatically add a `.txt` extension to files when you save them. Check to be sure that you have actually created a file named `gauss.lic`. Also, be aware that it is Windows default to hide file extensions.

2. Aptech will send you a license. Save it in a file called `gauss.lic` in the `GAUSSHOME50\flexlm` directory. NotePad is the recommended editor.
3. Aptech will send you one or more licenses, depending on the number of increments you purchased. Save all of them in a file called '`gauss.lic`'. Copy `gauss.lic` to the license server installation directory on each server.

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### Configure License Server(s)

1. Launch LMTOOLS from the GAUSS50 program group
2. Select the "Configuration using Services" radio button
3. Select "Configure Services" tab
  - a. Specify Service Name, we suggest "GAUSS License Server"
  - b. Complete the next 3 fields
  - c. "Path to the lmgrd.exe file"
  - d. "Path to the license file"
  - e. "Path to the debug log file" (specify a filename of your choice)
  - f. On NT, select "Use Services"
  - g. Select "Start Server at Power Up" box
  - h. Click "Save Service" button
4. Select "Start/Stop/Reread" tab
  - a. From the "Flexlm license Services installed on the computer" field, choose the name of the server to start.
  - b. Click on the "Start Server" button
5. Close LMTOOLS
6. Test by starting GAUSS on Server.

### Configure Clients

Copy the `gauss.lic` license file to the `GAUSSHOME50/flexlm` directory on each client workstation where GAUSS is installed.

GAUSS is now ready to run.

### Server Locked License

1. Email or FAX your completed registration form containing your contact information, serial number and the hostid that was displayed during installation to Aptech Systems. Be sure to include your e-mail address and/or FAX number. E-mail is the preferred method for returning licenses.

E-mail to [license@Aptech.com](mailto:license@Aptech.com)

or

FAX to (425) 432-7832

If you need to obtain the hostid after the installation:

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- a. Open DOS prompt window
- b. CD GAUSSHOME50\flexlm
- c. Run lmhost.exe

**Caution:** *Some text editors automatically add a .txt extension to files when you save them. Check to be sure that you have actually created a file named gauss.lic. Also, be aware that it is Windows default to hide file extensions.*

2. Aptech will send you a license. Save it in a file called 'gauss.lic' in the GAUSSHOME50\flexlm directory.

GAUSS is now ready to run.