

# ***GerbTool***<sup>TM</sup>

**VERSION 16.0**

**GETTING STARTED**

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## About GerbTool

GerbTool provides CAD/CAM professionals with the tools they need for complete control over their PCB data. It includes a feature-rich data editor for ensuring a seamless link between PCB design and manufacturing. From visual verification to high-level data analysis, GerbTool simplifies and automates your PCB post-processing tasks.

- GerbTool's intuitive graphical user interface, Navigator, toolbars, and hotkeys allow you to focus on accomplishing tasks quickly and efficiently, rather than on the technical details of operating the software.
- The Import Wizard takes the guesswork out of importing your databases.
- Automated tools, such as the Solder and Paste Mask Generators/Optimizers, Advanced Panelization, and Graphical Netlist Comparison, reduce your time-to-market and costs.
- A full suite of Analysis tools are combined into a single, checklist-style flow for increased throughput and data quality.

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## System Requirements

The following minimum system configuration is required for running and installing GerbTool.

- IBM PC compatible with at least a 1GHz Pentium CPU.
- Windows XP, Vista or Windows 7 or later.
- For best graphics display, a 17" or larger monitor with at least 1280 x 1024 resolution is recommended.
- At least 512 megabytes (MB) of RAM and 30 MB of hard disk space.

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## Technical Support

If you purchased GerbTool from an authorized reseller, you should contact them directly for technical support as they will have a better understanding of your needs and intended uses of the software.

If you are unable to get satisfactory assistance in solving your problems, you may contact WISE Software Solutions using the following methods:

- Check our web site at <http://www.gerbtool.com> for up-to-date FAQ's with video demos, as well as access to the GerbTool User Forum.
- Send technical questions by e-mail to [tech@wssi.com](mailto:tech@wssi.com). Send license requests to [licenses@wssi.com](mailto:licenses@wssi.com).
- Call (503) 554-8855 between the hours of 8:00 A.M. and 4:00 P.M., Pacific Time.

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## Software Installation

The installation of GerbTool software requires administrative privileges. The installation software will check your user account during the setup process to determine if you have sufficient privileges.

1. Insert the GerbTool CD into your CD ROM drive. The CD Browser starts automatically. Depending on your specific needs, choose one or all of the following options:
  - If installing on a PC where GerbTool will be used, choose "Install GerbTool".
  - If installing on a PC which will act as a License Server, choose "Install Wise License Server".
  - If you chose to lock your license to a USB dongle, choose "Install USB dongle drivers".

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## Activate a Nodelocked License

A nodelocked license is a single software license that is enabled by an activation code. In order to afford some protection from potential improper use, only one-year licenses are issued and the license is tied to a single computer. The license is not linked to maintenance and will be renewed perpetually. If you find your license has expired, please click on the License Activation Wizard button to request a new activation code.

If you wish to obtain a license that does not expire and allows you to move the license from one machine to another, a USB hardkey license offers this flexibility.

1. After the installation is complete, start GerbTool. The application will display a message box "No valid license found".
2. Click the License Activation Wizard button.
3. Select Request License Activation, and click the Next button.
4. Your name, e-mail address, serial number and phone are required to receive an Activation Code. Complete the Registration Information, and click the Next button.
5. If you have any additional information that you would like to add to the license request, type it in the Notes field, and click the Next button.
6. Indicate whether you want your license request sent directly to WISE Software by e-mail (preferred), printed on your default printer, or saved to a Text file.

If you cannot send your request or receive the Activation Code by e-mail, please contact WISE Software technical support at 1-503-554-8855 for instructions.


7. Click the Next button. Depending upon the method you chose, our request is either sent by e-mail, printed, or you are prompted to select a file name for your text file. A confirmation message appears.  
  
If you sent the request by e-mail, you are finished. If you experience any problems sending your request using this method, we recommend starting the wizard again, saving the request to a text file, and sending it as an e-mail attachment.  
  
If you saved the request to a .txt file, you can attach the file to an e-mail message addressed to licenses@wssi.com.
8. WISE will send an e-mail reply with the Activation Code as a .wlac file attachment. Double-click on the .wlac file in the e-mail. If your e-mail program asks you what you wish to do with the file, tell it to open the file.
9. You may now open the GerbTool application (Start>Programs>WISE Software>GerbTool 16.0>GerbTool) or by clicking on the GerbTool icon on your desktop.

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## Activate a Hardkey License

A hardkey license is a single software license, which is tied to a piece of hardware (commonly called a "key" or "dongle"). You attach the hardkey to the USB port of your computer, and an activation code enables the license.

You can use the software on any computer that the hardkey is attached to. However, the first time you install the software on any computer, you must perform the following procedure in order to enable the license.

1. Setting up a license that uses a hardkey requires an installation of GerbTool. In addition, you will need to install the appropriate FLEXid Hardkey Drivers. The hardkey driver installation files are available on your product installation CD or from the Download page at [www.wssi.com](http://www.wssi.com).
2. When the WISE Software application and hardkey driver installations are complete, attach your hardware key to your USB port.  
  
 *The Activation Code for hardkey devices is normally e-mailed to you automatically after a license is shipped. If you have already received the .wlac file by e-mail, skip steps 3 through 9.*
3. Start GerbTool. The application will display a message box "No valid license found".
4. Click the License Activation Wizard button.
5. Select Request License Activation, and click the Next button.
6. Your name, e-mail address, serial number and phone are required to receive an Activation Code. Complete the Registration Information, and click the Next button.
7. If you have any additional information that you would like to add to the license request, type it in the Notes field, and click the Next button.

8. Indicate whether you want your license request sent directly to WISE Software by e-mail (preferred), printed on your default printer, or saved to a Text file.  
If you cannot send your request or receive the Activation Code by e-mail, please contact WISE Software technical support at 1-503-554-8855 for instructions.
9. Click the Next button. Depending upon the method you chose, your request is either sent by e-mail, printed, or you are prompted to select a file name for your text file. A confirmation message appears.  
If you sent the request by e-mail, you are finished. If you experience any problems sending your request using this method, we recommend starting the wizard again, saving the request to a text file, and sending it as an e-mail attachment.  
If you saved the request to a .txt file, you can attach the file to an e-mail message addressed to [licenses@wssi.com](mailto:licenses@wssi.com).
10. WISE will send an e-mail reply with the Activation Code as a .wlac file attachment. Double-click on the .wlac file in the e-mail. If your e-mail program asks you what you wish to do with the file, tell it to open the file.
11. You should see a message License successfully activated. Click the OK button.
12. You may now open the GerbTool application (Start>Programs>WISE Software>GerbTool 16.0>GerbTool) or by clicking on the GerbTool icon on your desktop.

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## Activate a Network License

### 1. Install from CD or downloaded file "WISE-License-Server-Setup.exe"

*Note: If your network license utilizes a hardkey device for the server, be sure to install the drivers and attach the hardkey prior to the following steps. Please contact support [support@wssi.com](mailto:support@wssi.com) if you have questions.*

### 2. In your Windows Start menu, select:

- All Programs>WISE Software>WISE License Server> Launch LMTTOOLS.

### 3. Select "System Settings" tab and do the following:

- Click the "Save HOSTID info into a file" button.
- Attach the file to an email and send it to [licenses@wssi.com](mailto:licenses@wssi.com). Please reference your product Serial Number in the subject line.

### 4. WISE will send an e-mail reply with the wise03.lic license file attached.

- Save the wise03.lic file to one of the following locations, overwriting the existing file:

For Windows 2000 or Windows XP

C:\Documents and Settings\All Users\Application Data\WISE Software Solutions\License\

For Vista or Windows 7

C:\ProgramData\WISE Software Solutions\License\

*Note: If you already have other services that are using the default port number 8855, you may open the wise03.lic file with a text editor and change the port number (4th argument on the 1st line). To determine port availability run "netstat -a" from a command prompt. You may need to change the port to 7788 if your previous Wise03.lic license file used port 7788.*

**5. In the LMTOOLS dialog box, click the "Config Services" tab.**

- Select "WISE Software" in the Service Name box.
- Select the "Use Services" and "Start Server At Power Up" options.
- Click the "Save Service" button.

**6. Select the "Start/Stop/Reread" tab.**

- Click the Start Server button.

*Note: At this point you may be asked to allow the communication from this service through your firewall software. If not, you may need to manually configure exceptions through your firewall as detailed here in the troubleshooting section.*

**7. Select the "Server Status" tab.**

- Click "Perform Status Enquiry" button to see the status of your license service.
- ❖ You now should see a line in the text box "xxxPC: license server UP" along with the number of licenses. You are now ready to install on the individual workstations or "clients."
- ❖ If the server setup has failed please refer to the [Troubleshooting section](#).

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## Client Setup

In order to set up a client computer to access a WISE Software floating license, perform the following steps.

1. After the installation is complete, start GerbTool. The application will display a message box "No valid license found".
2. Click the License Activation Wizard button.
3. Select the Setup User Node, and Click the Next button.
4. Fill in your Server Name and Port Number, and Click on the Next button.  
*Note: The Server Name and Port number must match the server's settings exactly.*
5. You should see a message License successfully updated, click the Finish button. GerbTool is now ready to use.

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## Updating your Network License File

To request a license file update, please send your current “wise03.lic” license file to [licenses@wssi.com](mailto:licenses@wssi.com) and be sure to reference your product Serial Number in the email.

- wise03.lic will be found in one of the following locations.

For Windows 2000 or Windows XP

C:\Documents and Settings\All Users\Application Data\WISE Software Solutions\License\

For Vista or Windows 7

C:\ProgramData\WISE Software Solutions\License\

**WISE will send an e-mail reply with the updated wise03.lic license file attached.**

- Save the wise03.lic file overwriting the existing file. Stop and start the service using LMTOOLS.

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# Troubleshooting your Network License

Possible causes of license service failure:

1. License service not set up at all, or set up incorrectly, verify against the License Server Setup instructions.
2. Lmgrd.exe conflict. For maximum compatibility, it is recommended to use the latest version of Lmgrd.exe for all FLEX services. Find the newest Lmgrd.exe and make copies of the file and overwrite the older ones being used by other services. The license services should be stopped during the process of Lmgrd.exe replacement and backups should be made of the original files.
3. Lmgrd.exe cannot find wise03.exe. You must have the Lmgrd.exe we ship or any version newer than 9.5 and the wise03.exe should be in the same folder as the Lmgrd.exe.
4. Port conflict. Sometimes our former default port (7788) can be used by others. No conflicts with our current recommendation (8855) have ever been reported. As long as there is no conflict, the user can specify any port #. To determine port availability run "netstat -a" from a command prompt.
5. Firewall blockage. Please configure exceptions for the Lmgrd.exe and wise03.exe files in your firewall software. You may also need to create an exception for the port #.
  - a. Go to Control Panel.
  - b. Select Security Center.
  - c. Select Windows Firewall.
  - d. Select the Exceptions tab.
  - e. Click the "Add Program" button and browse to the Lmgrd.exe file (C:\Program Files\WISE Software Solutions\License)
  - f. Click OK.
  - g. Click the "Add Program" button and browse to the wise03.exe file (C:\Program Files\WISE Software Solutions\License)
6. License file corruption. The license file should look like this:

```
SERVER SERVERNAME HOSTID 8855 DAEMON wise03 wise03.EXE
FEATURE gt-dsn wise03 16.0 9-dec-2011 1 START=9-dec-2010
SIGN2="05DD \ C5E8 8C41 45EE BFBE 9B18 01A6 54BD E7F7 5075 4EBA
80A2 9799 \ 9709 DE9B 1883 9911 45DF 762B D7B0 920F 32C2 F37E 49B6
02A3 \ D35C 96C0 F20F ED27 90DB"
```

Any strange characters found in the license file could indicate corruption, please send the file back to [licenses@wssi.com](mailto:licenses@wssi.com).

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## Upgrading from a previous version FAQ

### Q: I am running a wise03 license service successfully (GerbTool 15.0 and up) and need to update to the latest version:

A: Your current license service does not need to be changed; you only need a new "wise03.lic" license file.

### Q: I am running an older license service (GerbTool versions 8-14):

A: Please uninstall the old version of the software. When configuring the new license service using the methods in this guide, make sure that the old service is stopped and removed from LMTOOLS prior to setting up the new service.

### Q: I need to run an older version license service as well as a new version of the license service to maintain different versions of the software application:

A: Please contact support at [support@wssi.com](mailto:support@wssi.com) or 503-554-8855 option 3

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## License Allocation Options

It is possible to limit the product level that a client can access on your server or reserve a copy for a client, or create other options for license allocation. For example, you have a 2-user GT-Viewer license and a 3-user GT-Designer license. John Doe needs to always have a copy of GT-Designer available. You can reserve one for him. The following procedure shows what you need to do to accomplish this.

1. On the license server, use a text editor to create an Options file with the following text:

```
RESERVE 1 gt-dsn USER JDoe
```

2. Save the file as **Wise03.opt**, in the same folder as your Wise03.lic file. By default, it is located in **C:\ProgramData\WISE Software Solutions\License** on the Windows Vista operating system, or **C:\Documents and Settings\All Users\Application Data\WISE Software Solutions\License** on all other versions of Windows.

Note that the name of the options file must match the vendor daemon name, with the extension .opt. The daemon will automatically read the options file at startup, if it is configured correctly.

In the following example, a company has a network license for GT-Viewer and GT-Designer. The Options file excludes 3 individuals from using the GT-Designer product, and the information regarding that transaction is not logged. All users can access the GT-Viewer licenses, but they do not need to be listed.

```
EXCLUDE gt-dsn USER RSmith  
EXCLUDE gt-dsn USER AJones  
EXCLUDE gt-dsn USER DMiller  
NOLOG QUEUED
```

## WISE Software Feature Names

- vcam = VisualCAM product.
- gt-dsn = GT-Designer product.
- gt-ins = GT-Inspector product.
- gt-com = GT-Communicator product.
- gt-vwr = GT-Viewer product.

### Optional Modules:

- gt-pad = PADS Ascii
- gt-dcm = DirectCAM
- gt-dff = DFF
- gt-anc = Advanced NC
- gt-nlc = Netlist Comparison
- gt-pnl = Advanced Panel

## Options File Syntax

The following is a list of the OPTIONS available to use in your Options file. A brief description is included, as well as the syntax. Everything in the options file is case sensitive. Be sure user names and feature names are entered correctly. You can also include comments in your Options file by starting each comment line with "#".

`EXCLUDE featurename type name`

Excludes a user, host, display or group from the list of who is allowed to use the feature. Excluded users will not be allowed to use the feature.

**featurename** - name of the feature being affected

**type** - one of USER, HOST, DISPLAY, GROUP or HOST\_GROUP.

**name** - name of the user or group to exclude

To exclude the user AChan from the list of those able to use the feature gt-com:

```
EXCLUDE gt-com USER AChan
```

`EXCLUDEALL type name`

Excludes a user, host, display or group from the list of who is allowed to use all features served by this vendor daemon (Wise03.exe).

**type** - one of USER, HOST, DISPLAY, GROUP or HOST\_GROUP.

**name** - name of the user or group to exclude

To exclude any user on the server "chaos" from using all features served by Wise03.exe:

```
EXCLUDEALL HOST chaos
```

`GROUP groupname usernamelist`

`HOST_GROUP groupname hostnamelist`

Defines a group of users/hosts for use in INCLUDE, INCLUDEALL, EXCLUDE, EXCLUDEALL, AND RESERVE options lines.

**groupname** - name of the group being defined

**usernamelist** - list of user names in that group

To define the user group Engineers consisting of MBurns, JHowe, and AJames:

```
GROUP Engineers MBurns JHowe AJames
```

To define the host group engineers consisting of node\_a, node\_b, and node\_c:

```
HOST_GROUP engineers node_a node_b node_c
```

INCLUDE featurename type name

Includes a user, host, display, or group in the list of who is allowed to use the feature. Anyone *not* in an INCLUDE statement will not be allowed to use that feature.

**featurename** - name of the feature being affected

**type** - one of USER, HOST, DISPLAY, GROUP or HOST\_GROUP.

**name** - name of the user or group to include

To include user "MRoberts" in the list of users able to use gt-vwr:

```
INCLUDE gt-vwr USER MRoberts
```

INCLUDEALL type name

Includes a user, host, display, or group in the list of who is allowed to use all features served by Wise03.exe. Anyone not in an INCLUDEALL statement will not be allowed to use these features.

**type** - one of USER, HOST, DISPLAY, GROUP or HOST\_GROUP.

**name** - name of the user or group to include

To allow the user "KDean" to use all features served by Wise03.exe:

```
INCLUDEALL USER KDean
```

NOLOG what

Turns off logging of specific events by the FLEXIm daemons. Administrators might use this option to reduce the size of the Imgrd or debug.log file.

**what** - what to turn off: one of IN, OUT, DENIED, OR QUEUED

To turn off logging of check-ins:

```
NOLOG IN
```

To turn off logging of check-outs and queued requests two separate NOLOG lines are required:

```
NOLOG DENIED
```

```
NOLOG QUEUED
```

REPORTLOG

Specifies that a log file be written suitable for use by the FLEXadmin End-User Administration Tool. You set up a log in **C:\ProgramData\WISE Software Solutions\License\debug.log** (on Windows Vista) or **C:\Documents and Settings\All Users\Application Data\WISE Software Solutions\License\debug.log** (on all other versions of Windows) when you setup your license server. It is a great diagnostic help when determining who is using the tool or what is happening when you attempt to access the Wise03.lic file.

```
RESERVE numlic featurename type name
```

Reserves licenses for a specific user. Any licenses reserved for a user are dedicated to that user. Even when the user is not actively using the license it will be unavailable to other users.

**numlic** - number of licenses to reserve

**featurename** - name of feature to reserve

**type** - one of USER, HOST, DISPLAY, GROUP or HOST\_GROUP.

**name** -name of the user or group to reserve licenses for.

To reserve one license of Designer (gt-dsn) for user "JDoe"

```
RESERVE 1 gt-dsn USER JDoe
```

## Rules of Precedence in Option.dat Files

INCLUDE and EXCLUDE statements can be combined in the same options file and control access to the same features. When doing so, you will need to refer to the following rules of precedence:

- If there is only an EXCLUDE list, everyone who is not on the list will be allowed to use the feature.
- If there is only an INCLUDE list, only those users on the list will be allowed to use the feature.
- If neither list exists, then everyone is allowed to use the feature.
- The EXCLUDE list is checked before the INCLUDE list; so someone who is on both lists will not be allowed to use the feature.

Once you create an INCLUDE or EXCLUDE list everyone else is implicitly "outside" the group. This feature allows you, as an administrator, the ability to control licenses without having to explicitly list each user that you wish to allow or deny access to.

For example:

```
RESERVE 1 gt-ins USER JDoe
RESERVE 2 gt-dsn HOST ntpc
EXCLUDE gt-dsn USER RWilliams
NOLOG QUEUED
```

This Options file would:

- Reserve one license of the gt-ins feature for JDoe.
- Reserve 2 licenses of the gt-dsn feature for anyone on a computer with the hostname "ntpc".
- Prevent RWilliams from using the gt-dsn feature on any node on the network.
- Cause QUEUED messages to be omitted from the debug log file.