

**GUROBI OPTIMIZATION, INC.
END-USER LICENSE AGREEMENT
("Agreement")**

Please read the terms and conditions of this license agreement carefully. By installing and enabling the Gurobi Product(s) you are accepting the terms of this agreement. (The Product(s) will be enabled when you have installed the License Key(s) that is supplied to you by Gurobi.) The Effective Date of this Agreement is the date on which the Gurobi Product(s) is installed and enabled. The Gurobi Product(s) is copyrighted and licensed (not sold) to you by Gurobi Optimization, Inc., a corporation with its principal place of business in Houston, Texas. This Agreement shall apply to all Gurobi Products, unless replaced by Gurobi. It consists of 1) the accompanying Terms and Conditions; 2) the Licensed Products addendum ("**Exhibit A**"); and 3) the Maintenance and Support addendum ("**Exhibit B**").

TERMS AND CONDITIONS

1. DEFINITIONS

1.1. "Error" means any reported and reproducible failure of the Product(s) to perform substantially in accordance with its published documentation. "**Error Correction**" means either a modification or addition that, when made or added to the Product(s), brings the Product(s) into material conformity with its published documentation, or a procedure or routine that, when observed in the regular operation of the Product(s), avoids the practical adverse effect of such nonconformity. "**Material Error**" means any reported and verifiable failure of the Product(s) to perform substantially in accordance with its published documentation where this Error prevents use of the Product(s), or which seriously impacts use of the Product(s). "**Product(s)**" is the Gurobi Optimizer Version 5.6.0 or higher in the form of object code libraries, including all Upgrades and published documentation as further described in Exhibit A. "**Upgrades**" shall mean any Error Corrections, new Releases (as defined in the Exhibit B), and software modifications or additions, which are provided at Gurobi's sole discretion pursuant to Exhibit B. "**You**" or "**your**" means the single end-user customer organization accepting this Agreement.

2. SCOPE OF RIGHTS

2.1. Grant of License. Gurobi grants you a non-exclusive right to use the Product(s) (including any Error Corrections, standard enhancements or Upgrades provided under Exhibit B) for use only as specified in Exhibit A, in machine-readable form ("**Product License**"). This Product License specifically prohibits redistribution, transfer or resale of the Product(s). You may make a reasonable number of copies of the Program in machine-readable, object code form, for nonproductive backup purposes only.

2.2. Limitations on Use. You may not use, copy, modify, or distribute the Product(s), or make any copy, adaptation, transcription, or merge any portion thereof, except as expressly authorized by Gurobi in a separate written agreement signed by Gurobi. You may not reverse assemble, reverse compile, or otherwise translate the Product(s). Your license may not be transferred, leased, assigned, or sub-licensed without Gurobi's prior written consent, which will not be unreasonably withheld. If you copy or modify the Product(s) in any way not expressly authorized by Gurobi, your license is automatically terminated.

3. MAINTENANCE AND SUPPORT

3.1. Maintenance and Support. Gurobi offers a Maintenance and Support program as set forth in Exhibit B. Maintenance and support is not available for academic licenses.

4. LICENSE FEES

4.1. Payment Terms. Unless otherwise indicated on the invoice, all invoices from Gurobi shall be due and payable within thirty (30) days of the date of each invoice. Except as provided in Paragraph 8.2 (Right to Cure), the fees are not refundable. If any fees are not paid when due, Gurobi may, at its option, charge interest at a rate of one and one-half percent (1½%) per month or, if less, the highest rate allowed by applicable law from the date such fee or charge first became due.

4.2. Taxes. You are responsible for sales or use taxes, and state or local property or excise taxes associated with your licensing, possession, or use of the Product(s), modifications, or any associated services.

5. WARRANTIES

5.1. Warranty. Gurobi warrants for a period of sixty (60) days after the Effective Date of this Agreement, for your benefit alone, that the Product(s) will perform substantially in accordance with the documentation. Gurobi does not warrant that the Product(s) will be Error-free in all circumstances. As your exclusive remedy for any defect or Material Error in the Product(s), and as Gurobi's entire liability in contract, tort, or otherwise, Gurobi agrees to correct such Material Error or defect at Gurobi's facility by issuing corrected instructions, a restriction, or a work around. If

Gurobi is unable to correct such defect or Material Error after a reasonable opportunity, Gurobi shall refund the License Fees paid for such Product(s). This warranty does not apply to the free Trial Version, the free Academic Version or otherwise to time limited Evaluation Versions of the Product(s), which are provided to you at no charge "as is".

5.2. Limitation on Warranty. EXCEPT AS EXPRESSLY SET FORTH IN THIS SECTION 5, GUROBI SHALL HAVE NO LIABILITY FOR THE PRODUCT(S), FOR NEGLIGENCE; GUROBI MAKES AND YOU RECEIVE NO WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, OR IN ANY OTHER PROVISION OF THIS AGREEMENT OR ANY OTHER COMMUNICATION; AND GUROBI SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

5.3. Limitation of Liability; Exclusion of Consequential Damages. The cumulative liability of Gurobi to you for any and all claims relating to the Product(s) and any services rendered under this Agreement shall not exceed the total amount of all License Fees paid to Gurobi for the Product(s) within the prior year. This limitation shall not apply to the indemnification provided in Section 8 ("Indemnification"). In no event shall Gurobi be liable to you for any consequential, indirect, special, or incidental damages, even if Gurobi has been advised of the possibility of such potential loss or damage. The foregoing limitation of liability and exclusion of certain damages shall apply regardless of the success or effectiveness of other remedies.

6. OWNERSHIP

6.1. Ownership. Gurobi shall have sole right, title, and interest in and to the Product(s) and all documentation relating to the Product(s) (including its development or its operation, testing or use, and all reports and copies created), and all intellectual property rights associated with the Product(s) (including, without limitation, rights to copyrights, patents, trade secrets, and know-how). This Agreement does not provide you with title or ownership of the Product(s), but only a right of limited use under this license.

7. CONFIDENTIAL INFORMATION

7.1. Confidential Information. "Confidential Information" means any data or information, oral or written, treated as confidential that relates to either party's past, present, or future research, development or business activities, including any unannounced products and service(s), and including any information relating to services, developments, inventions, processes, plans, financial information, customer lists, forecasts, and projections. Notwithstanding the foregoing, Confidential Information shall not be deemed to include information that: 1) is publicly available or in the public domain at the time disclosed; 2) is or becomes publicly available or enters the public domain through no fault of the party receiving such information; 3) is rightfully communicated to the recipient by persons not bound by confidentiality obligations with respect thereto; 4) is already in the recipient's possession free of any confidentiality obligations with respect thereto at the time of disclosure; 5) is independently developed by the recipient; or 6) is approved for release or disclosure by the disclosing party without restriction.

8. INDEMNIFICATION

8.1. Indemnification. If a third party claims that the Product(s) infringes any U.S. patent, copyright, or trade secret, Gurobi will (as long as you are not in default under this Agreement or any other agreement with Gurobi) defend you against such claim at Gurobi's expense and pay all damages that a court finally awards, including reasonable attorneys' fees, provided that you promptly notify Gurobi in writing of the claim, allow Gurobi to control the defense of such claim, and cooperate with Gurobi in the defense or any related settlement negotiations.

8.2. Right to Cure. If such a claim is made or appears possible, Gurobi may, at its option, secure for you the right to continue to use the Product(s), or modify or replace the Product(s) so it is non-infringing, or, if neither of the foregoing options is available in Gurobi's judgment, require you to return the Product(s) for a credit equal to the portion of previously paid License Fees allocable to the remaining term of your license.

8.3. No Obligation. Gurobi has no obligation for any claim based on a modified version of the Product(s), or its combination, operation, or use with any product, data, or apparatus not provided by Gurobi, or for the data provided by you. **THIS PARAGRAPH STATES GUROBI'S ENTIRE OBLIGATION TO YOU WITH RESPECT TO ANY CLAIM OF INFRINGEMENT.**

9. TERM AND TERMINATION

9.1. Term. The term of your license is from the Effective Date above and shall continue thereafter, unless terminated sooner according to the terms of this Agreement.

9.2. Material Breach. This Agreement may be terminated: 1) by either party upon a material breach by the other party of the terms of this Agreement, which breach has not been cured within thirty (30) days after the breaching party has received written notice thereof; 2) by Gurobi, upon fifteen (15) days written notice, in the event of any delinquency of your payment of amounts due hereunder; or 3) by the non-breaching party upon three (3) days written notice in the event of breach of Section 7 (Confidential Information).

9.3. Survival. Notwithstanding the termination of this Agreement for any reason, the rights and duties of the parties under Sections 4 (License Fees), 6 (Ownership), 7 (Confidential Information), and 8 (Indemnification) shall survive such termination and remain in full force and effect.

10. EXPORT CONTROLS

10.1. Export Controls. Neither the Product(s), Documentation, nor any other information, process, product, or service obtained directly or indirectly from Gurobi, may be shipped, exported, or re-exported to any country or entity that is the subject of any prohibition imposed by the U.S. Export Administration Act of 1979, U.S. Executive Orders, the U.S. Department of Commerce, or the North Atlantic Treaty Organization (NATO), or any other applicable export control laws and regulations of the U.S. or any other country.

11. GENERAL

11.1. Assignment. This Agreement shall not be assignable by you without the prior written consent of Gurobi.

11.2. Waiver of Construction against the Drafter. This Agreement shall be interpreted in accordance with the plain meaning of its terms and not strictly for or against either of the parties to this Agreement.

11.3. Severability. In the event that any provision of this Agreement is found invalid or unenforceable pursuant to judicial decree or decision, the remainder of this Agreement shall remain valid and enforceable according to its terms. WITHOUT LIMITING THE FOREGOING, IT IS EXPRESSLY UNDERSTOOD AND AGREED THAT, IN THE EVENT ANY REMEDY HEREUNDER IS DETERMINED TO HAVE FAILED OF ITS ESSENTIAL PURPOSE, ALL OTHER LIMITATIONS OF LIABILITY AND EXCLUSION OF DAMAGES SET FORTH HEREIN SHALL REMAIN IN FULL FORCE AND EFFECT.

11.4. Notices. All notices or other communications required to be given under this Agreement shall be in writing and delivered either personally or by U.S. mail, certified, return receipt requested, postage prepaid, and addressed as provided in this Agreement or as otherwise requested by the receiving party. Notices delivered personally shall be effective upon delivery and notices delivered by mail shall be effective upon their receipt by the party to whom they are addressed.

11.5. Governing Law. This Agreement shall be governed by, and construed and enforced in accordance with the laws of the State of Texas as they apply to a contract made and performed in such state. Venue for any dispute under this Agreement shall be San Francisco, California.

11.6. Modifications and Waivers. This Agreement may not be modified except by a writing signed by authorized representatives of both parties. A waiver by either party of its rights hereunder shall not be binding unless contained in a writing signed by an authorized representative of the party waiving its rights. The non-enforcement or waiver of any provision on one (1) occasion shall not constitute a waiver of such provision on any other occasions unless expressly so agreed in writing. It is agreed that no use of trade or other regular practice or method of dealing between the parties hereto shall be used to modify, interpret, supplement, or alter in any manner the terms of this Agreement.

11.7. Force Majeure. Neither party shall be responsible for any failure to perform due to unforeseen circumstances or to causes beyond the parties' reasonable control, including but not limited to acts of God, war, riot, embargoes, acts of civil or military authorities, fire, floods, accidents, strikes, or shortages of transportation, facilities, fuel, energy, labor, or materials. In the event of any such delay, either party may defer any delivery dates for a period equal to the time of such delay. Notwithstanding the foregoing, if either party is in default under this Section for more than forty five (45) days, the non-defaulting party may terminate this Agreement.

11.8. No Set Off. Notwithstanding anything to the contrary in this Agreement, you waive your right to suspend or set off any payment obligation to Gurobi on any basis whatsoever.

11.9. Arbitration. Any controversy or claim arising out of or relating to this Agreement, or the breach thereof that fails to settle by mediation, shall be settled by binding arbitration in the County of Santa Clara, California, administered by JAMS in accordance with its then current Commercial Arbitration Rules, and judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. The arbitrator may award monetary damages, punitive damages, injunctive relief, rescission, restitution, costs and attorneys' fees. The arbitration award shall be final and binding regardless of whether one of the parties fails or refuses to participate in the arbitration. The arbitrator shall not have the power to amend this Agreement in any respect. Notwithstanding the foregoing, the parties agree that this Section does not apply to the breach of provisions pertaining to confidentiality and proprietary rights, and that either party may petition a court of law for injunctive relief and such other rights and remedies as it may have at law or equity against such breaches.

11.10. Attorneys' Fees. In the event of any dispute with respect to this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees and other costs and expenses incurred in resolving such dispute.

EXHIBIT A LICENSED PRODUCTS

The Product(s) is offered in the following categories of licenses:

Note: Gurobi commercial licenses can be used for development or deployment (sometimes called "run-time"), or both. In particular, it is possible to use a Gurobi commercial license for the development of an application and then use that same license to deploy the application, subject only to the specific machine and usage-level limitations of that particular license. There is also no limit on the number of specific applications you may use with a given Gurobi license.

1. **Size-Limited (free) Trial License:** Six-month time-limited, free license for problems with at most 2000 variables and 2000 constraints. The use of this license is restricted to a single person identified during the installation process. This license is for research, development, and evaluation purposes only. It may not be used in commercial applications.
2. **General License Restrictions:** In all cases below, license Users and Uses are restricted to you and your employees. In particular, making the Product(s) available over the Internet or similar networking technology to others who are not your employees (“**Hosting**”) is forbidden, with one exception, as follows. Hosting, that otherwise respects the limitations of the license, is permitted if the Product(s) is embedded in and only accessible through a user-developed application that adds significant additional functionality.
3. **Commercial Licenses**
 - a. **Perpetual Single-Use – Single-Machine License:** This license is locked to a particular physical machine and its use is restricted to a single simultaneous use.
 - b. **Perpetual Named-User – Unlimited-Use, Single-Machine License:** This license is locked to a particular physical machine and its use is restricted to a single identified person. That person is allowed an unlimited number of simultaneous uses.
 - c. **Perpetual Unlimited-User – Unlimited-Use, Single-Machine License:** This license is locked to a particular physical machine. The number of simultaneous users and uses is unlimited. The license depends on the number of CPU sockets in the physical machine.
 - d. **Perpetual Floating-Use License:** This license runs on a single, specified local-area network of machines. One particular physical machine in this collection acts as the license server. The Gurobi Product(s) can be installed and run on any machine on the network with an operating environment that is among the supported platforms. This license has a specified limit on the number of simultaneous Gurobi processes that can be run on the machines of this network.
 - e. **Perpetual Compute Server – Unlimited-User, Unlimited-Use, Unlimited-Client, Single-Machine License:** This license is locked to a particular physical machine, which acts as a server for an unlimited number of client machines. The number of instances and uses on the clients is also unlimited. The license depends on the number of CPU sockets in the physical machine.
 - f. **Virtual-Machine Licensing:** Any of the above licenses may be used on a virtual machine. We also offer a **Perpetual Virtual Host Machine License.** This license allows an unlimited number of virtual machines to share a single physical host machine, with each virtual machine having its own Unlimited-User, Unlimited-Use, Single-Machine License (3c).
 - g. **Time-limited Evaluation License.** These licenses can be of any of the above types 3a-3f, but will have a specified time limit determined at the time the License Key is issued (typically two (2) weeks from the date of issue).
4. **Academic Licenses:** These licenses are restricted to academic use. Access for commercial purposes is forbidden. You and any users of the code must be faculty, staff, or students at a degree-granting academic institution.
 - a. **Free Time-limited Named-User – Unlimited-Use, Single-Machine License:** Same conditions as 3b, with the following additional restrictions. The license will have a one-year time limit from the date of installation and must be “validated” while connected to the Internet from a recognized academic domain (e.g., “.edu”).
 - b. **Perpetual Unlimited-Simultaneous-Use Floating-Use License:** This license has the same conditions as 3d. It has a limit (the physical limit of the licensor) of 1024 simultaneous Gurobi processes that can be run on the machines of this network.
 - c. **Note:** Maintenance and support contracts (Exhibit B) are not offered with academic licenses.

GUROBI OPTIMIZER FUNCTIONALITY AND PLATFORMS

Functionality:

The Gurobi Optimizer includes state-of-the-art linear programming (LP), quadratic programming (QP), quadratically constrained programming (QCP), and second order cone programming (SOCP) solvers, including mixed-integer programming (MIP) extensions of each. The MIP solvers include shared memory parallelism, capable of simultaneously exploiting any number of processors and cores per processor. The Gurobi Optimizer is written in C and is accessible from several languages. We provide an interactive Python interface, matrix-oriented interfaces for C, MATLAB, and R, and object-oriented interfaces for C++, Java, .NET, and Python.

Platforms:

The Platforms supported are 32-bit and 64-bit Windows (including but not limited to Windows Vista, Windows 7, Windows 8, and Windows Server), 64-bit Linux (including but not limited to RedHat, SUSE, and Ubuntu distributions), 64-bit MAC OS (10.7, and 10.8), and 64-bit AIX (6.1 and 7.1).

Documentation:

The Gurobi Documentation includes the Release Notes, the Quick Start Guide, the Gurobi Reference Manual, and the Gurobi Example Tour, all of which are delivered in HTML format.

EXHIBIT B MAINTENANCE AND SUPPORT

Maintenance Term. The Maintenance Term for the Product(s) shall commence on The Effective Date of the Agreement ("**Maintenance Term**"). Annual Maintenance and Support contracts cover one year of Maintenance and Support. The fees for a Maintenance and Support contract are 20% of the then current standard list price for the Product(s) covered by the contract. First year Maintenance and Support is not included in the list price of the license. Maintenance and Support is not available with academic licenses.

Reactivating Maintenance. In the event you do not purchase Maintenance and Support services for some period and choose to enter into a new Maintenance and Support contract at a later date, you will be charged the then prevailing annual Maintenance and Support fees for the periods that were not covered.

Gurobi Product Releases are numbered 'a.b.c', where 'a' is a positive integer, and 'b', and 'c' are non-negative integers. 'a' is the number of the Major Release, 'b' the number of the Minor Release, and 'c' the number of the Technical Release.

A Gurobi Maintenance and Support Contract includes the following benefits:

- (1) During the Maintenance Term Gurobi warrants that the Product(s) will perform substantially in accordance with the documentation published by Gurobi as updated from time to time. Gurobi does not warrant that the Product(s) will be Error-free in all circumstances.
- (2) During the Maintenance Term, Gurobi shall make reasonable commercial efforts to correct, or devise workarounds for any Errors in the Product(s) reported by you, and to provide such corrections or workarounds to you in a timely manner in accordance with the list of Service Levels given below. Some Errors will be corrected in the next release of the Product(s) only. Further, upon discovery of an Error, you agree, if requested by Gurobi, to submit to Gurobi a listing of output and any other data that Gurobi may require in order to reproduce the Error and the operating conditions under which the Error occurred or was discovered.
- (3) Support will be provided remotely by electronic communication during normal business hours.
- (4) During the Maintenance Term, you are entitled to all Upgrades to any new release of the licensed Product(s) where that release occurs during this period. Except in the case of purchased Academic licenses, if you have not paid for maintenance and support, you are entitled only to your currently licensed release. Academic licenses are entitled to receive Minor and Technical releases corresponding to their currently licensed Major release.
- (5) During each one-year Maintenance Term your license may be transferred to a new machine or operating system up to three times free of charge. Additional transfers will be accompanied by a nominal charge of \$250. Licenses not covered by Maintenance and Support will incur a charge of \$1000 for a transfer or change in environment that requires the issuance of a new license.

Maintenance Exceptions. Maintenance and Support does not cover the following:

- (1) Any problem caused by modifications to any version of the Product(s) not made or authorized by Gurobi;
- (2) Errors in any versions of the Product(s) other than the most recent two major releases (see Use and Restrictions)
- (3) Use with a compiler not listed in the Platform Table, as indicated in the Release Notes.

- (4) Use with an operating system not listed in the Platform Table, including alternate Linux distributions
 - (5) Use of undocumented private APIs
 - (6) Custom code beyond calls to the Gurobi APIs
 - (7) Hardware modifications such as overclocking
 - (8) General system administration tasks, such as managing file permissions and environment variables
 - (9) Use of 3rd party tools such as databases, application servers, integrated development environments, etc.
- In these situations, Gurobi will try to help when possible, but assistance cannot be guaranteed.

Gurobi will not be responsible for delays caused by events or circumstances beyond its reasonable control.

Use and Restrictions. Your rights and obligations concerning the use of any Error Corrections or new Releases (or any other programming provided by Gurobi, regardless of its form or purpose) shall be governed by the License Agreement. Gurobi shall have sole and exclusive ownership of all right, title, and interest in and to such works (including ownership of all copyrights, patent rights, trade secret rights and other intellectual property rights pertaining thereto), subject only to the License Agreement. Unless otherwise agreed, you are entitled to use the Product(s) only as authorized under the License Agreement. Gurobi releases will no longer be supported after the release of the second subsequent Major release. For example, releases 3.b.c will no longer be supported subsequent to release 5.0.0 and higher.

Service Levels. For each support request, a Gurobi representative will assign a service priority, according to the following table of "Service Levels".

Priority	Description	Examples	Initial response target
1 - Urgent	Production system completely blocked with no apparent workaround: one or more models cannot be solved in a production system.	License key failure for production system Segmentation fault for production system	Within 2 business hours
2 - High	Non-blocking issue for a production system: a malfunction of one or more Gurobi features on a production system, though a workaround is available.	Unexpected slow performance for a production system Failure with specific parameter values for production system	Within 8 business hours
3 - Important	Any issue with a non-production system: any malfunction of Gurobi features for a non-production system, or any requests for performance evaluation and tuning.	Any failure in a non-production environment Benchmark requests	By the end of the next business day
4 - Normal	All other questions.	"How-to" questions Product suggestions Questions involving topics in <i>Exceptions to the Service Levels</i>	Within 3 business days

Exceptions to the Service Levels. Due to their complexity, questions on the following topics are considered Normal priority, regardless of whether they are blocking or whether they involve a production system:

- (1) Use of undocumented Gurobi parameters
- (2) Use of callback functions that modify the behavior of Gurobi algorithms.
- (3) Models with severe numerical issues such as poor scaling or single-precision fractional coefficients.

Response Times. As soon as Gurobi staff receives sufficient detail to isolate or reproduce the situation, Gurobi will assign it a case number and a priority level, and Gurobi staff will start an initial assessment. A response for the initial assessment will be given according to the Initial Response Target for that priority level. When the initial estimate is complete, Gurobi will give an estimated timeframe for resolution.