

Intel[®] Performance Maximizer Version 1.0.3

Production Release for Intel® Core[™] X-series Processors (Cascade Lake) and 9th Generation Intel® Core[™] i9/i7/i5 Processors (Coffee Lake) Update

User Guide

December 2019



INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

A "Mission Critical Application" is any application in which failure of the Intel Product could result, directly or indirectly, in personal injury or death. SHOULD YOU PURCHASE OR USE INTEL'S PRODUCTS FOR ANY SUCH MISSION CRITICAL APPLICATION, YOU SHALL INDEMNIFY AND HOLD INTEL AND ITS SUBSIDIARIES, SUBCONTRACTORS AND AFFILIATES, AND THE DIRECTORS, OFFICERS, AND EMPLOYEES OF EACH, HARMLESS AGAINST ALL CLAIMS COSTS, DAMAGES, AND EXPENSES AND REASONABLE ATTORNEYS' FEES ARISING OUT OF, DIRECTLY OR INDIRECTLY, ANY CLAIM OF PRODUCT LIABILITY, PERSONAL INJURY, OR DEATH ARISING IN ANY WAY OUT OF SUCH MISSION CRITICAL APPLICATION, WHETHER OR NOT INTEL OR ITS SUBCONTRACTOR WAS NEGLIGENT IN THE DESIGN, MANUFACTURE, OR WARNING OF THE INTEL PRODUCT OR ANY OF ITS PARTS.

Intel may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The information here is subject to change without notice. Do not finalize a design with this information.

The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Intel, Intel® Performance Maximizer, and the Intel logo are trademarks of Intel Corporation or its subsidiaries in the U.S. and other countries.

*Other names and brands may be claimed as the property of others.

Microsoft, Windows, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

Copyright © 2019 Intel Corporation. All rights reserved.



Contents

1	evision History
2	erminology
3	ntroduction 6 .1 Overview 6 .2 Minimum Requirements 6 3.2.1 Supported Hardware 6 3.2.2 Supported Operating Systems 6 3.2.3 Memory and Storage Requirements 6 3.2.4 BIOS Setup Requirements 6
4	Installation
5	utomated Testing and Configuration
6	ninstallation2
7	roubleshooting

Tables

Table 1: Revision History	4
Table 2: Client CPU Brand Strings	6
Table 3: HEDT CPU Brand Strings	7
Table 4: Intel® Performance Maximizer GUI Error Messages	22



Table 1: Revision History

Package Definition	Intel [®] Performance Maximizer Software Package Revision	Release Date
Production Release for Intel® Core [™] X-series Processors (Cascade Lake) and 9 th Generation Intel® Core [™] i9/i7/i5 Processors (Coffee Lake) Update	1.0.3.1217	December 2019
Production Release for 9 th Generation Intel® Core™ i9/i7/i5 Processors (Coffee Lake)	1.0.1.602	May 2019



2 Terminology

Term	Description
UEFI	Unified Extensible Firmware Interface
GUI	Graphical User Interface. In this document, this refers to the Intel® Performance Maximizer user interface Windows application

§



3 Introduction

3.1 Overview

Intel® Performance Maximizer is a Microsoft Windows based processor-core overclocking tool that automatically tests and configures the maximum overclocking performance capability of the processor. As appropriate, the Intel® Performance Maximizer Windows software configures the system to reboot and load the Intel® Performance Maximizer UEFI application. This application executes a series of tests in a Pre-OS UEFI environment to determine the maximum stable processor-core overclocking performance. During this testing phase, which may last several hours, the system may hang and automatically reboot several times. When the tests complete, the Intel® Performance Maximizer software automatically reboots the system back to Windows, the stable overclocking settings are applied, and the results are displayed to the end-user.

The Intel® Performance Maximizer software package is comprised of the following software components:

- Intel® Performance Maximizer Windows driver and INFs
- Intel® Performance Maximizer Windows installer
- Intel® Performance Maximizer Windows GUI application and services
- Intel® Performance Maximizer UEFI application
- Intel® Performance Maximizer Processor-specific tests

3.2 Minimum Requirements

This section captures the minimum requirements for an end-user system necessary for proper Intel® Performance Maximizer installation and operation.

3.2.1 Supported Hardware

This Intel® Performance Maximizer package supports the following Intel Processors and Chipsets:

CPU Brand Strings	Chipset
Intel(R) Core(TM) i5-9600K CPU @ 3.70GHz	Intel Z390
Intel(R) Core(TM) i5-9600KF CPU @ 3.70GHz	Intel Z390
Intel(R) Core(TM) i7-9700K CPU @ 3.60GHz	Intel Z390

Table 2: Client CPU Brand Strings



Intel(R) Core(TM) i7-9700KF CPU @ 3.60GHz	Intel Z390
Intel(R) Core(TM) i9-9900K CPU @ 3.60GHz	Intel Z390
Intel(R) Core(TM) i9-9900KF CPU @ 3.60GHz	Intel Z390
Intel(R) Core(TM) i9-9900KS CPU @ 4.00GHz	Intel Z390

Table 3: HEDT CPU Brand Strings

CPU Brand Strings	Chipset
Intel(R) Core(TM) i9-10980XE CPU @ 3.00GHz	Intel X299
Intel(R) Core(TM) i9-10940X CPU @ 3.30GHz	Intel X299
Intel(R) Core(TM) i9-10920X CPU @ 3.50GHz	Intel X299
Intel(R) Core(TM) i9-10900X CPU @ 3.70GHz	Intel X299

3.2.2 Supported Operating Systems

This package supports the following Operating System (OS):

- Microsoft Windows 10 x64 Edition Version 1909 (November 2019 Update)
- Microsoft Windows 10 x64 Edition Version 1809 (October 2018 Update)

3.2.3 Memory and Storage Requirements

- >= 8GB of Installed System Memory
 A minimum of 8 Gigabytes (GB) of Installed System Memory is required for
 Intel® Performance Maximizer installation and operation
- 16GB of Unallocated Hard-drive Storage Space

16 GB of free or unallocated space is required on a non-removable GPT formatted drive to create a partition for exclusive use by Intel® Performance Maximizer software.

- Note: Intel® Performance Maximizer supports the ability to shrink a partition on an existing eligible GPT hard-drive to free up 16GB space. Please see Intel® Performance Maximizer installation steps for further details.
- Note: Intel® Performance Maximizer partition on the hard-drive is intended for exclusive use by the Intel® Performance Maximizer software. It is highly recommended that the user does not use this partition to store other information. The integrity of any user-created files in this partition is not guaranteed, such files may be deleted by Intel® Performance Maximizer software, and this partition itself will be



deleted at the time of uninstallation of the Intel® Performance Maximizer software.

3.2.4 BIOS Setup Requirements

This Intel® Performance Maximizer package requires the following minimum BIOS setup options to be set properly for Intel® Performance Maximizer installation and operation.

Note: The names of actual BIOS setup options may be different from those listed below or such options may not exist in BIOS setup menu. Please contact the appropriate Motherboard manufacturer / BIOS vendor for questions regarding BIOS setup menu.

- Processor Core Overclocking must be enabled
- All Processor cores must be enabled
- Intel® Hyper-Threading Technology (Intel® HT Technology), if supported on the processor, must be enabled
- Intel® Turbo Boost Technology 2.0 mode must be enabled
- Boot mode must be UEFI
- Enhanced Intel SpeedStep® Technology must be enabled
- Intel® Watchdog Timer Driver (Intel® WDT) must be enabled

Refer to the Intel® Performance Maximizer Release Notes for any additional recommendations/limitations and known issues for a specific released version of the Intel® Performance Maximizer software.

This Intel® Performance Maximizer package requires the following minimum BIOS setup options to be set properly for Intel® Performance Maximizer installation and operation.



4 Installation

Note: A wired LAN internet connection is recommended for the overall installation process.

4.1 Summary of Installation Steps

There are Installation steps:

- 1) Download the Intel® Performance Maximizer software package(s)
 - a. If you are downloading a version of Intel® Performance Maximizer that has multiple download files, you will need to download all files into the same directory before installing
- 2) Install the Intel® Performance Maximizer Software
- 3) Complete Setup and Installation of the Intel® Performance Maximizer Software

🗄 Device Manager _ \times File Action View Help 🗢 🏟 🗖 🗖 💆 📰 💭 V 🛃 DESKTOP-H9078GQ Audio inputs and outputs
 Computer 🕳 Disk drives 🌄 Display adapters > > 🎽 Firmware > 🐺 Human Interface Devices IDE ATA/ATAPI controllers
 IEEE 1394 host controllers Keyboards > I Mice and other pointing devices Monitors Other devices > Ports (COM & LPT) 📄 Print queues 📇 Printers Processors Software components Intel(R) Graphics Control Panel Intel(R) Grfx VK binaries Intel(R) Media SDK binaries Intel(R) Performance Maximizer Driver Software devices Sound, video and game controllers Storage controllers > to System devices > Üniversal Serial Bus controllers 📇 WSD Print Provider

Sample image below shows Intel® Performance Maximizer driver installed successfully.



4.2 Details

4.2.1 Download

Intel® Performance Maximizer Software Package can be downloaded from https://downloadcenter.intel.com/.

4.2.2 Install

Note: The Installation process requires **Administrator** level privileges.

- Following download, unzip the package to a local folder and double-click the "Intel®_Performance_Maximizer" executable
 - a. If you are downloading a version of Intel® Performance Maximizer that has multiple download files, you will need to download all files into the same directory before unzipping and double clicking the parent executable
- 2) If the following prompt appears, give application permission to run as administrator.



3) Accept the Accept terms and conditions and Click Install

🕼 Intel® Performance Maxim	zer 1.0.1.459 Setup	-		×
	Please read the Intel® Perfe 1.0.1.459 License Agreemer	ormance M nt	laximizer	
	INTEL SOFTWARE LICEN (OEM / IHV / ISV Distributi	SE AGREE on & Singl	MENT e User)	^
	IMPORTANT - READ BEF INSTALLING OR	ORE COPY USING.	YING,	
	Do not use or load software (in this site or any associated mate the "Software") until you have following terms and conditions the Software, you agree to the t Agreement, which Intel may not time following reasonable notic	cluding driv rials (collec carefully re . By loading terms of this odify from ti e to You. If	vers) from trively, ad the g or using me to you do	~
	I accept the terms in the License	Agreement	-	
Print	Back 📢 Ins	tall	Cance	4

4) Click Finish

intel



🖟 Intel® Performance Ma	formance Maximizer 1.0.1.459 Setup – × Completed the Intel® Performance Maximizer 1.0.1.459 Setup Wizard Click the Finish button to exit the Setup Wizard. A restart is needed to complete the installation. A restart is needed to complete the installation.			
	Completed the Intel® Maximizer 1.0.1.459 S	Performa etup Wiza	nce ard	
	Click the Finish button to exit the	Setup Wizard		
	A restart is needed to complete t	he installation		
	Back	Finish	Cano	tel

5) Click Yes to restart the system





4.2.3 Setup

Note: The Setup and the rest of the Installation process requires **Administrator** level privileges.

1) Following reboot, Double click on the "Intel® Performance Maximizer" desktop icon and Click "Continue"



2) Accept the disclaimer regarding the effects of overclocking



- 3) Select a non-removable hard-drive on the system where the Intel® Performance Maximizer partition will be created and the Intel® Performance Maximizer software will be installed. If there is insufficient unallocated space on the selected hard-disk, there are 2 choices:
 - a. Use Intel® Performance Maximizer GUI to select and shrink any non-greyed out partition to free up the necessary space for Intel® Performance Maximizer partition.

Note: It is highly recommended that the user backs up any data before shrinking an existing partition

- b. Select another hard-drive with the necessary unallocated space.
- 4) Click "Continue" when ready with the drive/partition selection.



5) Intel® Performance Maximizer GUI will create a partition titled "IPM" and will format the partition. This process may take a few minutes.

REFRESH

CONTINUE



🧟 Intel® Performance Maximizer	- 🗆	×
		About
INTEL [®]		
Intel® Performance Maximizer INTEL® PERFORMANCE PERFORMANCE MANNEE MARXIMIZE Completed 28847 C68 Completed 28847 C68 Completed		
	Intel® Performance Maximizer requires 16 GB of reserved removable disk for automated processor overclocking. Plea create the reserved space.	space on a non- ase select where to
Disk 0 TOSHIBA-RD 238.47 GB GPT	5.00 GB	
		About
REFRESH	CONTINU	E

 6) The system is now ready to begin running the overclocking tests and automatically configure the processor core for the maximum performance. Select "Continue" and "Yes" to reboot the system and start the tests.
 Note: The testing process may take several hours to complete.





Automated Testing and Configuration

On end-user selection to run the overclocking tests, the system automatically reboots into Pre-OS UEFI environment and loads the Intel® Performance Maximizer UEFI Application. The application executes processor-core specific tests to determine the maximum stable overclocking processor-core frequency. On test completion, the system reboots back to Windows and the maximum stable overclocking processor-core frequency limit is programmed.

5.1 Testing phase

5

It is strongly recommended that the Intel® Performance Maximizer tests in UEFI environment are not interrupted.

Note: If testing is interrupted abnormally (e.g., by pressing CTRL-ALT-DEL or power button push while tests are executing), the system will reboot and continue the tests and the maximum performance results may be incorrect. If the user wants to abort the Intel® Performance Maximizer tests and reboot to Windows immediately, the user can press any key within a specified time interval when the message "Press any key within 10 seconds to abort testing..." appears on the screen and confirm the abort.

A sample image while the tests are ongoing is provided below.





During testing, the system may hang and reboot several times, and this is expected behavior. The reboots occur automatically, and this overall process may take several hours.

5.2 Configuration phase

After the tests have completed successfully, the system will be automatically rebooted back to Windows, the new overclocking settings will be programmed by the Intel® Performance Maximizer Windows driver, and the results displayed in the Intel® Performance Maximizer Windows GUI Application.

Note: Unless otherwise stated, the Intel® Performance Maximizer application displays the all-core active processor core turbo frequency.

A sample image of a successful test run in Windows is shown below.

		(intel)
🙋 Intel® Performance Ma	ximizer	– 🗆 X
	INTEL® PERFORMANC MAXIMIZE	About
	Test Complete	
Congratula	tions! Intel® Performance Maximizer has finishe system.	ed testing your
Frequency Before Testing:	4.60 GHz	
Frequency After Testing:	taimize INTEL® PERFORMANCE MAXIMIZER Actions! Intel® Performance Maximizer has finished testing your system. 4.60 GHz 4.80 GHz ase in Processor Clock Frequency: 200 MHz	
Increa	se in Processor Clock Frequency:	200 MHz
KERON TES		FINISH



6 Uninstallation

Intel® Performance Maximizer software can be uninstalled from Windows Control Panel, Programs by clicking on "Intel® Performance Maximizer N.N.N.NNNN" icon. Uninstallation will remove the Intel® Performance Maximizer software and the Intel® Performance Maximizer partition.

0	Programs and Features					- 🗆	×	
\leftarrow	→ 、 个 図 → Control P	anel > Programs > Programs and Features		~ Ō	Search Program	ms and Features	o,	
	Control Panel Home	Uninstall or change a program						
	View installed updates	To uninstall a program, select it from the list an	d then click l	Uninstall Cha	nge or Renair			
	Turn Windows features on or	to annistan a program, serect it norm the instan		orninscan, erna	ige, et nepetit			
•	off	Organize 🔻 Uninstall Repair					?)
		Name	Pub	lisher		Installed On	Size	^
		RW-Everything v1.7				9/29/2018		
		Wicrosoft Visual C++ 2015 Redistributable (x64) -	- 14.0 Mici	rosoft Corpora	ation	8/23/2018		
		Wicrosoft Visual C++ 2013 Redistributable (x64)	- 12.0 Mici	rosoft Corpora	ation	8/23/2018		
		Wicrosoft Visual C++ 2012 Redistributable (x86) -	- 11.0 Mici	rosoft Corpora	ation	9/7/2018		
		G Microsoft OneDrive	Mici	rosoft Corpora	ation	4/17/2019		
		Intel® Performance Maximizer 1.0.1.459	Intel	Corporation		4/17/2019		
		😬 Intel® Graphics Driver	Intel	I Corporation		8/15/2018		J
		<					>	
		Intel Corporation Product version:	101459					
		Ç o ğ Size:	1.81 GB					
		Intel® Performance Maximizer 1.0.1.459						
		Please wait while Windows configures Intel® Perfor	mance Maximi	izer				
		Gathering required information						
			Cancel					
		Intel® Performance Maximizer		\times				
		As part of uninstallation, Intel® Performance Maximize removing the reserved disk space it created for automa overclocking. Any user data on that partition will be lo	er will be ated processo ost.	or				
			1					



7 Troubleshooting

7.1 Error Messages

Intel® Performance Maximizer GUI application will display errors that are detected by Intel® Performance Maximizer software during the tests in UEFI environment and during Installation and Configuration in the Windows environment. This section describes the error messages displayed by the Intel® Performance Maximizer GUI and possible fixes.

Please contact Intel Customer Support for assistance in resolving Intel $\ensuremath{\mathbb{R}}$ Performance Maximizer issues.

"This version of the application is not compatible with the driver. Please reinstall Intel® Performance Maximizer."	
Possible Cause(s):	Recommended Action(s):
<i>Generic driver issue</i>	<i>Check for yellow bang in Windows Device Manager, and/or try reinstalling Intel</i> ® <i>Performance Maximizer software</i>
"Unable to shrink partition. Please check your disk and try again."	
Possible Cause(s):	Recommended Action(s):
<i>Shrinking may fail if 16GB of contiguous space is not present for the selected partition</i>	<i>Clean up space on the hard disk(s) or Select another partition to shrink</i>
"Error communicating with Intel® Performance Maximizer driver. Please reboot your system. If you continue to see this message, please reinstall Intel® Performance Maximizer. "	
Possible Cause(s):	Recommended Action(s):
Driver communication issue.	<i>Reboot, check for driver yellow bang in Windows Device Manager, try again and/or reinstall.</i>
"Not all processor cores are enabled. Please ensure that all processor cores are enabled in your system's BIOS."	
Possible Cause(s):	Recommended Action(s):
Some processor core(s) are disabled.	Enable all processor cores in BIOS setup and rerun tests.

Table 4: Intel® Performance Maximizer GUI Error Messages



"Intel® Hyper-Threading Technology is not enabled. Please ensure that Intel® Hyper-Threading Technology is enabled in your system's BIOS."		
Possible Cause(s):	Recommended Action(s):	
<i>This processor supports Intel</i> ® <i>Hyper-</i> <i>Threading Technology but is disabled in</i> <i>BIOS.</i>	Enable Intel® Hyper-Threading Technology in BIOS setup.	
"Intel® Turbo Boost Technology 2.0 and/or Intel® Enhanced Speedstep Technology are not enabled. Please ensure that Intel® Turbo Boost Technology 2.0 and Intel® Enhanced Speedstep Technology are both enabled in your system's BIOS before rerunning tests."		
Possible Cause(s):	Recommended Action(s):	
<i>This processor supports Intel</i> ® <i>Turbo</i> <i>Boost Technology 2.0 but it is disabled</i> <i>in BIOS.</i>	<i>Enable Intel</i> ® <i>Turbo Boost Technology</i> <i>2.0 in BIOS setup.</i> <i>Enable Intel</i> ® <i>Enhanced Speedstep</i> <i>Technology in BIOS setup.</i>	
"Intel® Performance Maximizer is not supported on your system. Please ensure that your current system meets the minimum requirements listed in the User Guide."		
Possible Cause(s):	Recommended Action(s):	
<i>Intel® Performance Maximizer does not support this processor / chipset / platform / BIOS version.</i>	<i>Please check to see if Intel® Performance</i> <i>Maximizer supports this processor /</i> <i>chipset / platform / BIOS version and try</i> <i>again.</i>	
"This installation package is not compatible with your system."		
Possible Cause(s):	Recommended Action(s):	
The Intel® Performance Maximizer package that was downloaded / installed does not match the processor or the package is corrupt.	<i>Download the correct package, reinstall the product and try again.</i>	
"This system's BIOS is not compatible with Intel® Performance Maximizer."		
Possible Cause(s):	Recommended Action(s):	
Necessary overclocking hardware resources are not accessible by Intel® Performance Maximizer	<i>Contact your Motherboard / BIOS vendor for an updated BIOS.</i>	
A hardware resource conflict is	<i>Ensure that UEFI Mode is enabled in BIOS.</i>	
preventing test execution. Necessary UEFI services in BIOS failed.	<i>If the issue persists, Contact Intel for assistance.</i>	



Necessary Overclocking services are not supported in BIOS.

Legacy BIOS mode is enabled instead of UEFI BIOS mode.

System unable to enter pre-OS UEFI environment and execute tests.

"Intel® Performance Maximizer is not supported on your system. Please ensure that your current system meets the minimum requirements listed in the User Guide."

Possible Cause(s):	Recommended Action(s):
<i>Necessary files in Intel</i> ® <i>Performance</i> <i>Maximizer partition are not R/W</i> <i>accessible.</i>	<i>Check for and fix any disk / partition errors, ensure partition is not full and try again. If error persists, please ensure your current system hardware settings</i>
<i>Missing/Corrupted test files in Intel</i> ® <i>Performance Maximizer partition.</i>	support overclocking, reinstall Intel® Performance Maximizer, and try again.
Insufficient space in Intel® Performance Maximizer partition.	
<i>Intel</i> ® <i>Performance Maximizer partition / volume is corrupted.</i>	

"Instability was detected and your system has been reverted back to the default settings."

Possible Cause(s):	Recommended Action(s):
<i>This may occur if the tests have not been run for a long time invalidating the previous overclocking settings.</i>	A rerun of the tests is recommended. Also, check for other drivers/software on the system that may have contributed to the instability.

"Intel® Performance Maximizer encountered an error while running tests. Testing was interrupted"

Possible Cause(s):	Recommended Action(s):
<i>This may occur when characterization did not finish, or if Intel® Performance Maximizer's data file is corrupted/not valid.</i>	A rerun of the tests is recommended. If that fails with the same error again, uninstall, reinstall and try again.

"Intel® Performance Maximizer was unable to overclock this system. This could be due to inadequate cooling"

Possible Cause(s):	Recommended Action(s):
Software was unsuccessful in overclocking the system, which could be	<i>Check if BIOS settings are at their default values and if not, restore default BIOS</i>



<i>due to invalid BIOS configuration settings or insufficient cooling capability for the processor resulting in thermal throttling.</i>	<i>values and test again. If that results in the same error, ensure your cooling solution is appropriate / optimal for overclocking and test again.</i>	
"Intel® Performance Maximizer is not supported on this processor."		
Possible Cause(s):	Recommended Action(s):	
<i>Intel</i> ® <i>Performance Maximizer does not support this processor.</i>	<i>Please check to see if Intel</i> ® <i>Performance</i> <i>Maximizer supports this processor.</i>	
"There was not enough system memory (RAM) detected during test run. A minimum of 8 GB is required."		
Possible Cause(s):	Recommended Action(s):	
<i>This system does not have enough memory installed to support Intel</i> ® <i>Performance Maximizer.</i>	Please check to see if there is enough memory to support Intel® Performance Maximizer.	
"Intel® Performance Maximizer cannot test this system because the current BIOS does not support Intel® Watchdog Timer Driver (Intel® WDT)"		
Possible Cause(s):	Recommended Action(s):	
<i>Necessary overclocking hardware resources are not accessible by Intel® Performance Maximizer e.g., Overclocking Watchdog Timer is locked by BIOS.</i>	<i>Contact your Motherboard / BIOS vendor for an updated BIOS.</i>	
"A GPT formatted bootable disk is required."		
Possible Cause(s):	Recommended Action(s):	
	Please check to see if your boot partition	
Intel® Performance Maximizer could not find a GPT formatted partition on your system.	is formatted as GPT.	
Intel® Performance Maximizer could not find a GPT formatted partition on your system. "This could be due to a recent upgra the result of incomplet You will need to rerun tests to	de of Intel® Performance Maximizer or te/corrupted test results.	
Intel® Performance Maximizer could not find a GPT formatted partition on your system. "This could be due to a recent upgra the result of incomplet You will need to rerun tests to Possible Cause(s):	de of Intel® Performance Maximizer or te/corrupted test results. o obtain valid overclock results." Recommended Action(s):	



A recent upgrade of Intel® Performance Maximizer that is no longer compatible with your current overclock settings.		
"Could not read/write to Intel® Performance Maximizer partition."		
Possible Cause(s) : Data/Log files on the Intel® Performance Maximizer partition are not R/W accessible.	Recommended Action(s): <i>Reboot your system and if the issue persists, reinstall Intel</i> ® <i>Performance Maximizer.</i>	
"Intel® Speed Shift Technology is enabled and needs to be disabled. Please ensure that Intel® Speed Shift Technology is disabled in your system's BIOS."		
Possible Cause(s):	Recommended Action(s):	
BIOS has Intel® Speed Shift Technology enabled in a way that interferes with Intel® Performance Maximizer.	<i>Please check to see if Intel® Speed Shift Technology is enabled in BIOS and if so, disable it.</i>	

7.2 Interoperability Issues with other Overclocking Tuning Utilities

Interoperability issues may arise when other processor overclocking tuning utilities are used to modify processor overclocking and performance related settings on the system in the presence of Intel® Performance Maximizer. To avoid such issues, it is recommended that the BIOS settings are set to default and other processor overclocking tuning utilities are not used.