



What's New

10.0.0.0

Copyright © 2024 PTC Inc. and/or Its Subsidiary Companies. All Rights Reserved.

Copyright for PTC software products is with PTC Inc. and its subsidiary companies (collectively “PTC”), and their respective licensors. This software is provided under written license or other agreement, contains valuable trade secrets and proprietary information, and is protected by the copyright laws of the United States and other countries. It may not be copied or distributed in any form or medium, disclosed to third parties, or used in any manner not provided for in the applicable agreement except with written prior approval from PTC. More information regarding third party copyrights and trademarks and a list of PTC’s registered copyrights, trademarks, and patents can be viewed here: <https://www.ptc.com/support/go/copyright-and-trademarks>

User and training guides and related documentation from PTC are also subject to the copyright laws of the United States and other countries and are provided under a license agreement that restricts copying, disclosure, and use of such documentation. PTC hereby grants to the licensed software user the right to make copies of product documentation and guides in printed form, but only for internal/personal use and in accordance with the license agreement under which the applicable software is licensed. Any copy made shall include the PTC copyright notice and any other proprietary notice provided by PTC. Note that training materials may not be copied without the express written consent of PTC. This documentation may not be disclosed, transferred, modified, or reduced to any form, including electronic media, or transmitted or made publicly available by any means without the prior written consent of PTC and no authorization is granted to make copies for such purposes.

UNITED STATES GOVERNMENT RIGHTS

PTC software products and software documentation are “commercial items” as that term is defined at 48 C.F.R. 2.101. Pursuant to Federal Acquisition Regulation (FAR) 12.212 (a)-(b) (Computer Software) (MAY 2014) for civilian agencies or the Defense Federal Acquisition Regulation Supplement (DFARS) at 227.7202-1(a) (Policy) and 227.7202-3 (a) (Rights in commercial computer software or commercial computer software documentation) (FEB 2014) for the Department of Defense, PTC software products and software documentation are provided to the U.S. Government under the PTC commercial license agreement. Use, duplication or disclosure by the U.S. Government is subject solely to the terms and conditions set forth in the applicable PTC software license agreement.

PTC Inc., 121 Seaport Blvd, Boston, MA 02210 USA

Contents

What's New in PTC Mathcad Prime 10.0.0.0	4
Application Enhancements.....	6
Advanced Controls	7
Choice of Solving Algorithms	7
Subscript and Superscript in Text	8
Symbolic Engine Enhancements	9
Numeric Engine Enhancements	11
Usability Enhancements	12
Open a File from an Include Region	13
Open a File from the Converter	13
World Date and System Date in Headers and Footers	13
Open Linked Worksheet to an Internal Link Region	14
Hide Area Border	14

1

What's New in PTC Mathcad Prime 10.0.0.0

In this document, find topics introducing the enhancements in this release.
Enhancements are categorized by the functional area:

- Application Enhancements
 - Advanced controls
 - Choice of solving algorithms
 - Subscript and superscript in text
- Symbolic Engine Enhancements
 - Expanded use of the keyword *fully*
 - New *standard* keyword
 - Improved support for *undefined*
 - General keyword improvements
 - Improved calculus operators
- Numeric Engine Enhancements
 - Improvements in **PDESolve**
 - Multithreading improvements
 - General engine improvements
- Usability Enhancements
 - Ability to open a file from an include region
 - Ability to open a file from the converter
 - World date and system date format in headers and footers

-
- Ability to link a PTC Mathcad Prime 10.0.0.0 worksheet to an internal link region in another worksheet.
 - Ability to hide area border.

2

Application Enhancements

Advanced Controls	7
Choice of Solving Algorithms.....	7
Subscript and Superscript in Text.....	8

Advanced Controls

PTC Mathcad Prime 10.0.0.0

User Interface Location: **Input/Output** ▶ **Controls** ▶ **Advanced**.

Videos

Watch this video to learn more about advanced controls in PTC Mathcad Prime 10.0.0.0:

[Advanced Controls](#)

Description

Insert control structures in your worksheet that can be scripted to create powerful interactions with your worksheet content or the file system.

Benefits

PTC Mathcad Prime 10.0.0.0 brings advanced scripted controls functionality to the application. Controls provide an easy way to set up and use drop-down selection boxes for users to choose different variable values in their worksheets. PTC Mathcad Prime 10.0.0.0 provides a full suite of advanced controls, so users can define in detail exactly how each control will operate within the worksheet.

Advanced controls include several different control types: list box, radio button, checkbox, button, slider, and text box. All advanced controls are managed through a user-defined script. Each control is driven by a script, accessible through an associated scripting environment. You can edit the script to define what variable and values the control will use, along with how it will interact with the worksheet and other external resources.

Additionally, the following capabilities are supported:

- One or more inputs for each control
- Hide or collapse the left hand side of a control
- Deactivate scripts in a worksheet, for security purposes

Choice of Solving Algorithms

PTC Mathcad Prime 10.0.0.0

User Interface Location: Right-click the function or the integral.

Videos

Watch this video to learn more about choice of solving algorithms in PTC Mathcad Prime 10.0.0.0:

[Choice of Solving Algorithms](#)

Description

For functions with multiple solving algorithms, choose the algorithm that the function will use to solve your calculation.

Benefits

PTC Mathcad Prime 10.0.0.0 includes the ability to choose specific solving algorithms for all functions where different algorithms can be used. This will include the functions **Pdesolve**, **Odesolve**, **numol**, **genfit**, **polyroots**, **Find**, **Minimize**, **Maximize**, **Minerr**, and definite integrals. Each instance of these functions in the worksheet includes a right mouse button menu of algorithm options, so you can keep the default algorithm or choose a different option from the list.

Subscript and Superscript in Text

PTC Mathcad Prime 10.0.0.0

User Interface Location: **Text Formatting** ► **Text Font**

Videos

Watch this video to learn more about using subscript and superscript in PTC Mathcad Prime 10.0.0.0:

[Subscript and Superscript in Text](#)

Description

You can now apply subscript or superscript formatting to any text within a text box or a text block.

Benefits

PTC Mathcad Prime 10.0.0.0 provides controls to format text content that requires subscripts, such as variable identifiers, or superscripts, such as variable exponents. You can select subscript or superscript while in a text region and type. Alternatively, apply subscript or superscript to the selected portions of the text.

3

Symbolic Engine Enhancements

PTC Mathcad Prime 10.0.0.0

User Interface Location: **Math ▶ Operators and Symbols**

Videos

Watch this video to learn more about PTC Mathcad Prime 10.0.0.0 symbolic engine enhancements:

[Symbolic Engine Enhancements](#)

Description

PTC Mathcad Prime 10.0.0.0 continues to enhance the functionality of the symbolic engine, implementing a complete control over the symbolic engine in PTC Mathcad Prime. This will enable updates and enhancements to symbolic calculations with each new release.

Benefits

In PTC Mathcad Prime 10.0.0.0, the following symbolic engine updates and enhancements have been made:

- Expand use of the keyword *fully*
 - Support for additional general use cases
 - Support of *fully* with the keyword *rewrite* and calculations with infinity
 - Use of *fully* with the new modifier *max*
- New *standard* keyword
 - Integral constant in indefinite integrals
 - Big-O notation with series expansions

-
- Improved *undefined* support
 - Improved general support for *undefined* in symbolic calculations
 - Improved the compatibility between *undefined* (symbolic) and **NaN** (numeric)
 - Support for **NaN** functions with symbolic calculation
 - Improvement of calculus operators.
 - Improved performance and added supported use cases for calculus operators, including integrals.
 - General keyword improvements.
 - Improved functionality and added supported use cases for keywords, including:
 - ◆ *rewrite* (use with new the modifiers: *atan2*, *arg*, *fact*, *sign*, and Φ)
 - ◆ *solve*
 - ◆ *simplify*

4

Numeric Engine Enhancements

PTC Mathcad Prime 10.0.0.0

User Interface Location: N/A

Videos

Watch this video to learn more about PTC Mathcad Prime 10.0.0.0 numeric engine enhancements:

[Numeric Engine Enhancements](#)

Description

In PTC Mathcad Prime 10.0.0.0, the following numeric engine updates and enhancements have been made:

- Improvements in **PDESolve**
 - Implicit and explicit boundary conditions.
 - Mixed boundary conditions.
 - Units support.
- Multithreading improvements
 - General improved performance for worksheets that contain many independent calculable regions.
- General engine improvements
 - Improved behavior of unitless zero in a matrix.
 - Improved performance of inline assignment evaluation in a matrix.

5

Usability Enhancements

Open a File from an Include Region	13
Open a File from the Converter.....	13
World Date and System Date in Headers and Footers	13
Open Linked Worksheet to an Internal Link Region	14
Hide Area Border	14

Open a File from an Include Region

PTC Mathcad Prime 10.0.0.0

User Interface Location: In a PTC Mathcad Prime 10.0.0.0 worksheet, hover over the file path, hold down CTRL and click.

Videos

Watch this video to learn more about opening a file from an include region in PTC Mathcad Prime 10.0.0.0:

[Open a File from an Include Region](#)

Description

You can now open a worksheet directly from an include region.

Open a File from the Converter

PTC Mathcad Prime 10.0.0.0

User Interface Location: In the **PTC Mathcad Prime 10.0.0.0 XMCD, MCD Converter**, right click a line with a converted file and select an option.

Videos

Watch this video to learn more about opening a file from the converter in PTC Mathcad Prime 10.0.0.0:

[Open a File from the Converter](#)

Description

You now have an easier access to the converted worksheets using the legacy worksheet converter. In PTC Mathcad Prime 10.0.0.0 converted worksheets and their HTML representations, can be opened directly from the **PTC Mathcad Prime 10.0.0.0 XMCD, MCD Converter** user interface.

World Date and System Date in Headers and Footers

PTC Mathcad Prime 10.0.0.0

User Interface Location: **Document** ► **Headers and Footers** ► **Saved Date**

Videos

Watch this video to learn more about world date and system date in headers and footers in PTC Mathcad Prime 10.0.0.0:

World Date and System Date in Headers and Footers

Description

To better align across geographies, the world date format and system date format are added as options to insert in both the header and footer of a PTC Mathcad Prime 10.0.0.0 worksheet.

Open Linked Worksheet to an Internal Link Region

PTC Mathcad Prime 10.0.0.0

User Interface Location: **Text Formatting** ► **Links** ► **Link**

Videos

Watch this video to learn more about opening a linked worksheet to an internal link region in PTC Mathcad Prime 10.0.0.0:



[Open Linked Worksheet to an Internal Link Region](#)

Description

The internal link functionality that was added in PTC Mathcad Prime 9.0.0.0 has been enhanced in PTC Mathcad Prime 10.0.0.0 to enable users to add the internal link identifier to the end of a hyperlink to an external PTC Mathcad Prime worksheet. The internal link is added in a #tag form. When you click the link and the external worksheet opens, it instantly scrolls the worksheet to display the target region.

Hide Area Border

PTC Mathcad Prime 10.0.0.0

User Interface Location: Right-click the area region and select **Hide Area Border**. Alternatively, right click the  or  icons and select **Hide Area Border**.

Videos

Watch this video to learn more about hiding and showing an area border in PTC Mathcad Prime 10.0.0.0:

[Hide Area Border](#)

Description

In PTC Mathcad Prime 10.0.0.0 you can now hide the area border if you do not want to see the collapsed area when printing a document.