

ModelDesk

Platform Management

For ModelDesk 5.5

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- For countries not listed, contact dSPACE GmbH in Paderborn, Germany.
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You can also use the support request form: <http://www.dspace.com/go/supportrequest>. If you are logged on to mydSPACE, you are automatically identified and do not need to add your contact details manually.

If possible, always provide the relevant dSPACE License ID or the serial number of the CmContainer in your support request.

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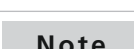



About This Document

Contents

This document introduces you to the platform management using ModelDesk.

Symbols

dSPACE user documentation uses the following symbols:

Symbol	Description
	Indicates a hazardous situation that, if not avoided, will result in death or serious injury.
	Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
	Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.
	Indicates a hazard that, if not avoided, could result in property damage.
	Indicates important information that you should take into account to avoid malfunctions.
	Indicates tips that can make your work easier.
	Indicates a link that refers to a definition in the glossary, which you can find at the end of the document unless stated otherwise.
	Precedes the document title in a link that refers to another document.

Naming conventions

dSPACE user documentation uses the following naming conventions:

%name% Names enclosed in percent signs refer to environment variables for file and path names.

< > Angle brackets contain wildcard characters or placeholders for variable file and path names, etc.

Special folders

Common Program Data folder A standard folder for application-specific configuration data that is used by all users.

%PROGRAMDATA%\dSPACE\<InstallationGUID>\<ProductName>

or

%PROGRAMDATA%\dSPACE\<ProductName>\<VersionNumber>

Documents folder A standard folder for user-specific documents.

%USERPROFILE%\Documents\dSPACE\<ProductName>\<VersionNumber>

Local Program Data folder A standard folder for application-specific configuration data that is used by the current, non-roaming user.

%USERPROFILE%\AppData\Local\dSPACE\<InstallationGUID>\<ProductName>

Accessing dSPACE Help and PDF Files


After you install and decrypt dSPACE software, the documentation for the installed products is available in dSPACE Help and as PDF files.

dSPACE Help (local) You can open your local installation of dSPACE Help:

- On its home page via Windows Start Menu
- On specific content using context-sensitive help via **F1**

dSPACE Help (Web) You can access the Web version of dSPACE Help at www.dspace.com/go/help.

To access the Web version, you must have a *mydSPACE* account.

PDF files You can access PDF files via the  icon in dSPACE Help. The PDF opens on the first page.

Basics and Instructions

Where to go from here

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Basics of Platform Manager

Introduction

The Platform Manager displays all the registered platforms that can be accessed via the products, including their components and running applications.

Synchronized Platform Management with Several dSPACE Products

Introduction

Several dSPACE products support synchronized platform management. The platform management instances in these products are synchronized.

Synchronization of platform management instances

Several dSPACE products have a **Platform Manager** that displays all the registered platforms with their components and running applications that can be accessed via the products. There are functions to register platforms, to manage the platform configuration, and to handle the real-time applications loaded to the platforms.

If you work simultaneously with several of these dSPACE products, each of them has its own platform management instance running. The instances contain consistent information about the connected platforms. This means that when you perform a platform management activity in one instance, the contents of all the other currently running platform management instances are synchronized accordingly.

Tip

A platform management instance provides information on platforms and the applications loaded to them only for those platforms that are supported by the respective dSPACE product.

Performing platform management activities

The following table shows the platform management activities that are synchronized between the platform management instances. You can see which platform management activities are possible even if another platform management activity in another dSPACE product is currently running. Depending on the activity you perform, simultaneous access to the hardware and real-time applications from several dSPACE products can be restricted, because exclusive access to a single platform or to all registered platforms might be necessary.

Note

Not every platform management activity is available in every dSPACE product.

Activity You Want to Perform in Platform Management Instance A	Activity That is Currently Running in Platform Management Instance B											
	Register Platforms	Refresh Interface Connections	Refresh Platform Configuration	Clear System	Manage Recent Platform Configuration	Load/Reload Real-Time Application	Stop RTP(s)	Unload Real-Time Application	Update Firmware	Clear Flash	Explore Logged Data	Online Calibration is Started
Register Platforms	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓
Refresh Interface Connections	–	–	–	–	–	–	–	–	–	–	–	–
Refresh Platform Configuration	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓
Clear System	–	–	–	–	–	–	–	–	–	–	–	–
Manage Recent Platform Configuration	–	–	–	–	–	–	–	–	–	–	–	–
Load Real-Time Application	✓	–	✓	–	–	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾
Stop RTP(s)	✓	–	✓	–	–	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾
Unload Real-Time Application	✓	–	✓	–	–	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾
Update Firmware	✓	–	✓	–	–	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾
Clear Flash	✓	–	✓	–	–	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾
Explore Logged Data	✓	–	✓	–	–	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾
Go Online / Start Online Calibration	✓	–	✓	–	–	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾

¹⁾ Only possible for different platforms since the activity you want to perform requires exclusive platform access.

dSPACE products supporting platform management synchronization

Platform management synchronization is performed when you access dSPACE platforms *simultaneously* using any combination of the following software products:

- AutomationDesk as of Version 3.6p2
Note that automated access via Platform Management library and XIL API library might also require exclusive access to a platform.
- ConfigurationDesk as of Version 4.4
- ControlDesk as of Version 5.0
- Firmware Manager as of Version 1.0
- ModelDesk as of Version 3.1
- RTT Manager as of Version 2.1

Firewall settings

To enable platform management synchronization, the firewalls of the PCs must be configured to allow communication for simultaneous platform access.

Windows firewalls During the installation of dSPACE software, Windows firewalls are automatically configured to allow communication between the platform management instances for synchronization. You do not have to configure Windows firewalls manually. The first time you start a product involved in platform management synchronization, the firewall asks you to allow access. Confirm the product as trusted software.

Other firewalls If the host PC has a firewall different from the Windows firewall, configure that firewall manually to allow communication between the platform management instances of the products.

Related topics

Basics

[Accessing the SCALEXIO or MicroAutoBox III System with Multiple dSPACE Products Simultaneously..... 21](#)

Registering Platforms

Introduction

The dSPACE real-time hardware or VEOS must be registered at the host PC so that it can be accessed by ModelDesk.

Where to go from here

Information in this section

[How to Register a Platform..... 13](#)

A dSPACE real-time hardware or VEOS must be registered at the host PC so that it can be accessed by the dSPACE host tools.

[How to Refresh Platform Configurations..... 15](#)

If dSPACE real-time hardware or VEOS is registered at the host PC but not displayed in the Platform Manager, you can refresh the platform configuration.

How to Register a Platform

Objective

A dSPACE real-time hardware (single dSPACE processor or controller board, a multiprocessor system, MicroAutoBox, SCALEXIO system) or VEOS must be registered at the host PC so that it can be accessed by the dSPACE host tools. You must register a platform only once at a host PC. Independent from the dSPACE tool that you use for registering (ControlDesk, ConfigurationDesk, AutomationDesk, or ModelDesk), the platform is also registered for the other dSPACE tools.

Preconditions

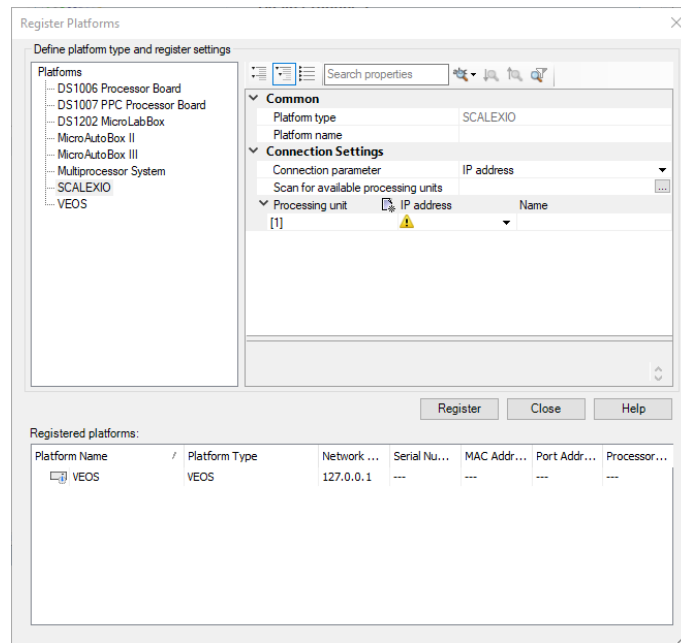
- To register a platform to access dSPACE real-time hardware, the hardware must be connected to the host PC.
- To register a platform to access VEOS, VEOS must be installed on the host PC.

Method

To register a platform

- 1 On the Platforms ribbon, click Platform Management – Register Platforms.

The Register Platforms dialog opens.



- 2 From the Platforms list, select the type of the platform you want to register.
- 3 Specify the connection settings for the platform you want to register. The number and kinds of properties depend on the selected platform type. For a description of the properties, refer to [Register Platforms](#) on page 85.
- 4 Click Register to complete the registration.
The registered platform is displayed with its registration settings in the Registered platforms list.
- 5 Repeat steps 2 ... 4 for all the platforms you want to register.
- 6 Click Close to close the Register Platforms dialog.

Result

You have registered platforms independently of ModelDesk experiments. The platforms are displayed in the Platform Manager. The registration data is stored in the recent platform configuration.

Next steps

You can manage the previously registered hardware or VEOS. For example, ModelDesk lets you remove it from the recent platform configuration or export the recent platform configuration. Refer to [Manage Platforms](#) on page 77.

Related topics

References

Manage Platforms	77
Real-Time Application - Load	69
Register Platforms	85

How to Refresh Platform Configurations

Objective	When a dSPACE real-time hardware or VEOS is registered at the host PC but not displayed in the Platform Manager, you can refresh the platform configuration. Then ModelDesk refreshes the hardware configuration displayed in the Platform Manager.
Platform configurations check	ModelDesk scans the recent hardware configuration and tries to register hardware that is not yet registered. ModelDesk also searches for registered platforms or platforms connected to your host PC without having to be registered in dSPACE tools which are not displayed in the Platform Manager yet, and adds them to the Platform Manager.
Method	<p>To refresh platform configurations</p> <ol style="list-style-type: none"> 1 On the Platforms ribbon, click Platform Management – Refresh Platform Configuration. ModelDesk performs the platform configurations check.
Result	You have refreshed the platform configurations. The view of the structure shown in the Platform Manager is updated.
Related topics	<p>References</p> <p>Refresh Platform Configuration..... 84</p>

Handling Simulation Applications

Introduction

When a platform is registered, ModelDesk can control the real-time and offline simulation application executed on the platform.

Where to go from here

Information in this section

[Compatibility of Firmware..... 16](#)

To give you guidelines for determining the correct firmware version.

[Managing Real-Time Applications on DS1006, Multiprocessor System, and MicroAutoBox II Platforms..... 18](#)

With ModelDesk you can handle and control a real-time application that is executed by a real-time hardware.

[Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms..... 19](#)

With ModelDesk you can handle and control a real-time application that is executed by a real-time hardware.

[Accessing the SCALEXIO or MicroAutoBox III System with Multiple dSPACE Products Simultaneously..... 21](#)

You can access a SCALEXIO or MicroAutoBox III system with multiple dSPACE products at the same time, if they run on the same PC, and you can access a SCALEXIO or MicroAutoBox III system from a second PC by using ControlDesk.

[Managing Offline Simulation Applications on VEOS Platforms..... 23](#)

With ModelDesk you can handle and control an offline simulation application that is executed by VEOS.

Compatibility of Firmware

Introduction

To give you guidelines for determining the correct firmware version.

General guideline

dSPACE recommends using only software products from the same dSPACE Release. This ensures maximum run-time compatibility.

Firmware compatibility guidelines

Firmware and real-time application

Firmware is downward-compatible.

This means:

- You can use the firmware from a dSPACE Release in the following cases:
 - The *firmware is of the same dSPACE Release* with which the real-time application was built.
 - The *firmware is of a newer dSPACE Release* than the dSPACE Release with which the real-time application was built.
- You cannot use the firmware from a dSPACE Release if the *firmware is of an older dSPACE Release* than the dSPACE Release with which the real-time application was built.

Hardware dependency of the required firmware version

- If you work with DS1007, DS1202 MicroLabBox, MicroAutoBox III, or SCALEXIO, use the firmware version that matches the dSPACE Release you are working with.

Host PC		Compatible Firmware Version				
dSPACE Release	Real-Time Testing Version	SCALEXIO	MicroAutoBox III	DS1202 MicroLabBox	DS1007	VEOS
RLS2021-A	5.0	5.1 5.0	5.1	2.16	3.16	5.2
RLS2020-B	4.4	5.0	5.0	2.14	3.14	5.1
RLS2020-A	4.3	4.6	4.6	2.12	3.12	5.0
RLS2019-B	4.2	4.5	4.5	2.10	3.10	4.5
RLS2019-A	4.1	4.4	–	2.8	3.8	4.4
RLS2018-B	4.0	4.3	–	2.6	3.6	4.3
RLS2018-A	3.4	4.2	–	2.4	3.4	4.2
RLS2017-B	3.3	4.1	–	2.2	3.2	4.1
RLS2017-A	3.2	4.0	–	2.0	3.0	4.0
RLS2016-B	3.1	3.5	–	1.7	2.6	3.7
RLS2016-A	3.0	3.4	–	1.5	2.4	3.6
RLS2015-B	2.6	3.3	–	1.3	2.2	3.5
RLS2015-A	2.5	3.2	–	–	2.0	3.4
RLS2014-B	2.4	3.1	–	–	–	3.3
RLS2014-A	2.3	3.0	–	–	–	3.2
RLS2013-B	2.2	2.3	–	–	–	3.1

- If you work with any other dSPACE real-time hardware, use the newest firmware version available.

For up-to-date information on firmware updates, refer to <http://www.dspace.com/go/firmware>.

Related topics

Basics

[Basics on Firmware.....25](#)

Managing Real-Time Applications on DS1006, Multiprocessor System, and MicroAutoBox II Platforms

Introduction

With ModelDesk you can handle and control a real-time application that is executed by a real-time hardware.

Loading an application

To load an application to the hardware, select the **Real-Time Application - Load** command from the platform's context menu, or drag an application file from File Explorer to the platform node.

The application is started automatically after it is loaded to the related dSPACE real-time hardware if the **simState** parameter is set to **RUN** (2). If the parameter is not set to **RUN**, you can visualize it in an instrument of ControlDesk and change its value to start the application.

Starting an application

Manual start of an application loaded to the platform is not possible.

Reloading an application

To reload the currently loaded application, select the **Real-Time Application - Reload** command from the platform's context menu.

Stopping an application

DS1006 and MicroAutoBox platforms To stop the real-time application loaded to the platform, select the **Stop RTP** command from the platform's context menu in the **Platform Manager**.

Multiprocessor System platform To stop the real-time application loaded to the platform, select the **Stop RTPs** command from the platform's context menu in the **Platform Manager**.

Unloading an application

The application is unloaded automatically from the platform when it is stopped. You cannot unload it manually.

Flash memory for stand-alone operation

When a real-time hardware contain a flash memory, loading or reloading an application to the flash memory allows you to use dSPACE real-time hardware as a stand-alone system without a connection to the host PC. When you restart

dSPACE real-time hardware, the application loaded to the flash memory is first copied to the RAM of the hardware. Then the application is started.

Note

To prevent the dSPACE real-time hardware from booting a flash application, you have to clear the application from the flash memory. If there is no application in the flash memory, the hardware enters the idle state after power-up.

Related topics

References

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Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms

Introduction

With ModelDesk you can handle and control a real-time application that is executed by a real-time hardware.

Loading an application

There are different ways to load an application to real-time hardware. The status of an application after loading is closely related to the way the application is loaded to the hardware.

To load an application to the dSPACE real-time hardware, you have the following possibilities:

- Via the **Platform Manager**: You can decide whether to load the application with or without subsequent start of the application:
 - Select the **Real-Time Application / Offline Simulation Application - Load and Start** command from the platform's context menu, or drag an application file from File Explorer to the platform node.
The application is always started automatically after it is loaded.
 - Select the **Real-Time Application / Offline Simulation Application - Load** command from the platform's context menu, or use the *right* mouse button to drag an application file from File Explorer to the platform node.
The application is not started after it is loaded. After downloading, the application state is **STOPPED**.

Starting an application	To start an application loaded to the platform, select the Start command from the application's context menu in the Platform Manager .
--------------------------------	--

Reloading an application	<p>You can decide whether to reload the currently loaded application with or without subsequent start of the application:</p> <ul style="list-style-type: none"> ▪ To reload the application and start it automatically, select the Reload and Start command from the application's context menu. ▪ To reload the application without starting it afterwards, select the Reload command from the application's context menu. After reloading, the application state is STOPPED.
---------------------------------	--

Stopping an application	<p>To stop the application loaded to the platform, select the Stop command from the application's context menu in the Platform Manager.</p> <p>The application is not unloaded automatically from the platform when it is stopped. You can unload it manually. Refer to Unload on page 94.</p>
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Unloading an application	To unload the application from the memory of the platform, select the Unload command from the application's context menu in the Platform Manager .
---------------------------------	--

Flash memory for stand-alone operation	When a real-time hardware contain a flash memory, loading or reloading an application to the flash memory allows you to use dSPACE real-time hardware as a stand-alone system without a connection to the host PC. When you restart dSPACE real-time hardware, the application loaded to the flash memory is first copied to the RAM of the hardware. Then the application is started.
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Note

To prevent the dSPACE real-time hardware from booting a flash application, you have to clear the application from the flash memory. If there is no application in the flash memory, the hardware enters the idle state after power-up.

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Accessing the SCALEXIO or MicroAutoBox III System with Multiple dSPACE Products Simultaneously

Accessing the SCALEXIO or MicroAutoBox III system from one PC

You can access a SCALEXIO or MicroAutoBox III system with the following dSPACE products at the same time if they run on the same PC:

- ConfigurationDesk
- ControlDesk
- AutomationDesk
- ModelDesk
- dSPACE XIL API MAPort implementation

Note

The products to access the SCALEXIO or MicroAutoBox III system must be installed from the same dSPACE Release.

Accessing the SCALEXIO or MicroAutoBox III system from a second PC

Another person can also access the SCALEXIO or MicroAutoBox III system by using ControlDesk running on a second PC.

Note

Consider the following restrictions when accessing the system from a second PC:

- Do not execute platform management functions from a second PC. These are functions such as:
 - Downloading a real-time application to the SCALEXIO or MicroAutoBox III system
 - Starting/stopping the real-time application on the SCALEXIO or MicroAutoBox III system
- Access to the SCALEXIO or MicroAutoBox III system from a second PC is restricted to measurement and recording tasks:
 - Do not use ControlDesk's Signal Editor from a second PC to stimulate variables of the real-time application running on the SCALEXIO or MicroAutoBox III system.
 - Do not use Real-Time Testing from a second PC to perform tests synchronously to the real-time application running on the SCALEXIO or MicroAutoBox III system
 - Do not use ControlDesk's Failure Simulation Module from a second PC to control the failure simulation hardware of the SCALEXIO system
- The products to access the SCALEXIO or MicroAutoBox III system (incl. ControlDesk running on a second PC) must be installed from the same dSPACE Release.

⚠ CAUTION

When you use AutomationDesk to carry out automated tests on a SCALEXIO or MicroAutoBox III system, do not use ControlDesk to change the values of model parameters that influence the currently running test, because this will falsify the results.

The person carrying out automated tests will not even be able to detect whether the SCALEXIO or MicroAutoBox III system is currently being accessed by ControlDesk.

Access levels

Access levels are provided by the system for accessing the:

- SCALEXIO or MicroAutoBox III system
- Real-time application (executable on the SCALEXIO or MicroAutoBox III system)

Depending on the action you perform, other users' access to the hardware and real-time application can be restricted. There are two access levels:

- Exclusive access
Other users have no access.
- Shared access
Other users have shared but not an exclusive access. Actions which need shared access can be carried out by several users at the same time.

Access required for specific actions

The following table shows actions in ConfigurationDesk, ControlDesk, AutomationDesk and ModelDesk for which each user needs exclusive or shared access to the hardware and/or to the real-time application.

Action		Required Access Level	
		To SCALEXIO or MicroAutoBox III System	To Real-Time Application
Registering hardware		Exclusive	None
Changing properties of the hardware ¹⁾	Change the system name or names of hardware components (for example, real-time PC or I/O unit)	Exclusive	None ²⁾
	Change internal load description of a channel ^{3), 4)}	Exclusive	None ²⁾
	Change load rejection settings of a channel ^{3), 4)}	Exclusive	None ²⁾
Handling real-time applications	Load application	Shared	Exclusive
	Unload application	Shared	Exclusive
	Start application	Shared	Shared
	Stop application	Shared	Shared

Action		Required Access Level	
		To SCALEXIO or MicroAutoBox III System	To Real-Time Application
ControlDesk's device state changes ⁵⁾	Start online calibration	Shared	Shared
	Start measuring/recording	Shared	Shared
Updating the firmware		Exclusive	None ²⁾

¹⁾ If you change a property, the hardware is accessed only when the new value is applied by ConfigurationDesk. The more properties are changed, the longer the update (and therefore the access) takes.

²⁾ Not possible when a real-time application is loaded

³⁾ Only possible in ConfigurationDesk

⁴⁾ Not applicable for MicroAutoBox III

⁵⁾ Only possible in ControlDesk. Each access level applies for the entire duration of the corresponding device state.

Examples of handling real-time applications

- While you *load* a real-time application, other users cannot unload it. However, they can start and stop it.
- While you *start* a real-time application, other users can access it, for example, to stop it.
- While one user starts ControlDesk's online calibration, other users cannot load or unload the real-time application. However, they can start and stop it.

Error messages

Whenever access is not possible, ConfigurationDesk, ControlDesk, AutomationDesk or ModelDesk displays an error message.

Related topics

Basics

[Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms.....](#) 19

Managing Offline Simulation Applications on VEOS Platforms


Introduction

With ModelDesk you can handle and control an offline simulation application that is executed by VEOS.

Using VEOS for offline simulation

VEOS is dSPACE software for the C-code-based simulation of virtual ECUs (V-ECUs) and environment VPUs on a PC.

To perform offline simulation with ModelDesk in conjunction with VEOS:

- You need VEOS to be installed on your host PC. For further details on VEOS, refer to [VEOS Manual](#) .

- You have to register a VEOS platform in the Platform Manager. For further details, refer to [How to Register a Platform](#) on page 13.

Loading an offline simulation application

An offline simulation application is described in an *OSA file*. To perform offline simulation, you have to load the OSA file or the corresponding SDF file to VEOS.

You can always load or reload the OSA file or SDF file to VEOS manually via the registered VEOS platform in the Platform Manager. For details, refer to [Real-Time Application / Offline Simulation Application - Load](#) on page 72 and [Reload](#) on page 74.

Configuring a simulation run

You can configure the simulation run of an offline simulation application loaded to VEOS via properties of a VEOS platform. For example, you can configure the simulation duration or a break time for the simulation run.

For further details, refer to [VEOS Simulation Time Options Properties](#) on page 60.

Pausing the simulation application

To pause the offline simulation application loaded to VEOS, use the Pause command.

Running a pausing simulation application stepwise

To run a pausing offline simulation application loaded to VEOS stepwise, use the Single Step command.

Stopping an application

To stop the application loaded to the platform, select the Stop command from the application's context menu in the Platform Manager.

The application is not unloaded automatically from the platform when it is stopped. You can unload it manually. Refer to [Unload](#) on page 94.

Unloading an application

To unload the application from the memory of the platform, select the Unload command from the application's context menu in the Platform Manager.

Related topics

References

Stop	93
Unload	94

Updating and Repairing the Firmware of dSPACE Real-Time Hardware

Introduction

Before you start a firmware update, you have to decide whether to update the firmware to a later version or to repair the currently installed firmware version.

Where to go from here

Information in this section

Basics on Firmware	25
Gives you information on the different kinds of firmware.	
Updating or Repairing the Firmware of SCALEXIO Systems	26
Gives you information on how to handle the firmware of SCALEXIO systems.	
How to Prepare the Firmware Update	27
Before you start an update or repair process, some preparations have to be made.	
How to Update Firmware	28
Gives you the instructions for the firmware update mode.	
How to Repair Firmware	30
Gives you the instructions for the firmware repair mode.	

Basics on Firmware

Introduction

You can execute a real-time application on dSPACE real-time hardware only if the different kinds of firmware are available. The loaded firmware version has to provide the functionality implemented in the real-time application.

Firmware features

The firmware for a hardware component provides basic functionality that is stored in a nonvolatile memory. For example, it includes functions for the communication between the host PC and the hardware, and can also provide I/O functions such as CAN or LIN protocol support, or complex I/O functions for an FPGA component.

For further information, refer to [Firmware Manager Manual](#) .

Firmware handling

Different tools are used to handle firmware of SCALEXIO systems and other dSPACE real-time hardware types:

- (for SCALEXIO systems) To handle the firmware of SCALEXIO systems, use ConfigurationDesk.
- (for all real-time hardware except SCALEXIO) To handle this type of firmware, use the Update Firmware Wizard in ModelDesk.

Related topics

Basics

[Updating or Repairing the Firmware of SCALEXIO Systems.....](#) 26

HowTos

[How to Prepare the Firmware Update.....](#) 27
[How to Repair Firmware.....](#) 30
[How to Update Firmware.....](#) 28

Updating or Repairing the Firmware of SCALEXIO Systems


Introduction

Gives you information on how to handle the firmware of SCALEXIO systems. To update or repair the firmware of SCALEXIO systems, ConfigurationDesk is used.

Specifics for SCALEXIO platforms

To ensure that real-time applications are downloaded without restrictions or side effects, and with proper functionality, the following conditions must be fulfilled:


- All the processing units of a SCALEXIO platform contain the firmware version that is available in the current RCP and HIL software installation.
- All the components of a SCALEXIO system (e.g., real-time PC and I/O boards) contain the same firmware version.

If there are firmware version deviations for a SCALEXIO platform, these are shown in the Platform Manager. The affected hardware components are marked by the  symbol. You can find the associated warning messages in the Log Viewer.

Handling firmware of SCALEXIO systems

To handle the firmware of SCALEXIO systems, ConfigurationDesk is used. Refer to [Updating the Firmware of SCALEXIO or MicroAutoBox III Hardware \(ConfigurationDesk Real-Time Implementation Guide !\[\]\(eabd9f9ababee93effadc3b380fe65fd_img.jpg\)](#)).

Related topics**Basics**

Basics on Firmware.....25
 Updating the Firmware of SCALEXIO or MicroAutoBox III Hardware
 (ConfigurationDesk Real-Time Implementation Guide )

How to Prepare the Firmware Update

Objective

The preparation of a firmware update consists of specifying some general firmware settings.

Preconditions

The following preconditions must be fulfilled for configuring the general firmware settings:

- The real-time hardware must be connected to the host PC.
- The real-time hardware must be switched on.
- The required firmware archive must be available.
 You can find the latest firmware archives on the dSPACE website at <http://www.dspace.com/go/firmware>.
- If a real-time application is loaded to the board's flash memory, it is recommended to clear the flash before starting the update process to avoid unpredictable output signals.
 If a real-time application is running, it is stopped by the firmware management.
- If you have registered a multiprocessor system, you can update only one processor at a time.
- If you have registered a multicore system with additional I/O boards, you have to select the core to which the I/O boards are connected for the update of the entire system. The other cores will be updated, too.

Note

- The archive format for DS1007 and MicroLabBox changed with Firmware Archives 2.0 contained in dSPACE Release 2015-B. To open an archive in the new format, you must use Firmware Manager 2.0 or later.
- The archive format for SCALEXIO changed with Firmware Archives 2.1 contained in dSPACE Release 2016-A. To open an archive in the new format, you must use Firmware Manager 2.1 or later.

Method	<p>To prepare the firmware update</p> <ol style="list-style-type: none"> 1 Open the Platform Manager. 2 If no real-time hardware is displayed in the Platform Manager, register the real-time hardware that you want to update. 3 Choose Update Firmware in the platform's context menu to open the Update Firmware Wizard. The wizard starts with the Select Mode dialog. 4 Select the firmware update mode. By default, the Update mode is set to update all firmware components of your real-time hardware with later firmware. With the Repair mode enabled, you can select the firmware components to be repaired. To switch to the repair mode, select Firmware repair mode in the Select Mode dialog. 5 Click Next to continue with the Select Firmware Archive dialog. The latest firmware archive for the selected platform is automatically set. Optionally, browse for another firmware archive. This might be useful if you want to update to a firmware version other than the latest or repair user firmware, for example. 6 Click Next to continue with the Select Firmware Components dialog. 				
Result	You have configured the settings which are required for a firmware update process in update or repair mode.				
Related topics	<p>HowTos</p> <table border="1"> <tr> <td>How to Repair Firmware.....</td> <td>30</td> </tr> <tr> <td>How to Update Firmware.....</td> <td>28</td> </tr> </table>	How to Repair Firmware.....	30	How to Update Firmware.....	28
How to Repair Firmware.....	30				
How to Update Firmware.....	28				

How to Update Firmware

Objective	Gives you the instructions for the firmware <i>update</i> mode.
Preconditions	The firmware update process has to be prepared with the Update Mode specified as described in How to Prepare the Firmware Update on page 27.

Safety precautions

WARNING

Risk of injury and/or material damage

Updating the firmware can cause uncontrolled movements of connected devices.

- Disconnect actuators and sensors from the associated real-time hardware before you start the update process.

NOTICE

Interrupting the update process disables the hardware

If the firmware update is interrupted, for example, by switching off the power, you have to restart the update process.

Note

Follow the instructions of the firmware management tool to correctly finish the firmware update process. For example, in some cases the hardware has to be rebooted to complete the firmware update.

Method

To update firmware

- 1 In the Select Firmware Components dialog, click Update to start the firmware update process.

In the **Update** column, the firmware components to be updated are marked and red. The components are not marked for update if the version of the currently installed firmware is identical to or later than the firmware available in the specified firmware archive.

If there are updatable firmware components, the update process starts. You can see the progress in the **Status** column. The initial '--' entry is replaced by a percentage. If the progress information cannot be detected continuously, only the states 50% and 100% are displayed. If the process successfully finished, an OK is shown, otherwise an error message is displayed.

If the firmware update will require more than 40 minutes, an estimate of the time is displayed. Then you can decide whether to start the process.

Interrupting a running firmware update process is not possible.

Note

You must not switch off the hardware during the firmware update process. This will cause a corrupted firmware.

Follow the given instructions to complete the firmware update. For example, some firmware components require a hardware restart.

Result

You have updated the firmware components of your hardware.

Related topics

HowTos

How to Prepare the Firmware Update.....	27
How to Repair Firmware.....	30

How to Repair Firmware

Objective

Gives you the instructions for the firmware *repair* mode.

Preconditions

The firmware update process has to be prepared with the Repair Mode specified as described in [How to Prepare the Firmware Update](#) on page 27.

Safety precautions

⚠ WARNING

Risk of injury and/or material damage

Updating the firmware can cause uncontrolled movements of connected devices.

- Disconnect actuators and sensors from the associated real-time hardware before you start the update process.

NOTICE

Interrupting the update process disables the hardware

If the firmware update is interrupted, for example, by switching off the power, you have to restart the update process.

Note

Follow the instructions of the firmware management tool to correctly finish the firmware update process. For example, in some cases the hardware has to be rebooted to complete the firmware update.

Method

To repair firmware

- 1 In the Select Firmware Components dialog, select the firmware components to be repaired in the Update column.
You can select only firmware components, whose current and available versions are identical. If the versions differ, the components are not displayed at all.

- 2 In the Select Firmware Components dialog, click Repair to start the firmware repair process.

This command is enabled only if at least one firmware component is selected for repairing.

If there are updatable firmware components, the repair process starts. You can see the progress in the Status column. The initial '--' entry is replaced by a percentage. If the progress information cannot be detected continuously, only the states 50% and 100% are displayed. If the process successfully finished, an OK is shown, otherwise an error message is displayed.

If the firmware repair process will require more than 40 minutes, an estimate of the time is displayed. Then you can decide whether to start the process. Interrupting a running firmware repair process is not possible.

Note

You must not switch off the hardware during the firmware repair process. This will cause a corrupted firmware.

Follow the given instructions to complete the firmware update. For example, some firmware components require a hardware restart.

Result

You have repaired the firmware components of your hardware.

Related topics

HowTos

How to Prepare the Firmware Update.....	27
How to Update Firmware.....	28

Reference Information

Where to go from here

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Platform Descriptions

Where to go from here

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Provides a description of the VEOS platform.	

DS1006 Processor Board Platform

Introduction

A platform that provides access to a DS1006 Processor Board connected to the ModelDesk PC for HIL simulation and function prototyping purposes.

Feature overview

For a feature overview of the DS1006 Processor Board, refer to [Feature Overview \(DS1006 Features !\[\]\(6059a5aa8b4ca7bb793408023d6c6e42_img.jpg\)](#)).

Configuring the platform

For instructions on configuring the platform, refer to [How to Register a Platform](#) on page 13.

Platform properties

The DS1006 Processor Board platform provides the following properties and settings:

Purpose	Refer to
To display details of the selected board.	Board Details Properties on page 49
To specify common properties of the platform.	Common Properties on page 51
To display the memory settings of the selected platform.	Memory Properties on page 57
To display the properties of the selected real-time application currently loaded to the platform.	Real-Time Application Properties on page 58
To display module version information for the selected platform.	Version Properties on page 61

Related commands

The DS1006 Processor Board platform provides the following commands:

Purpose	Refer to
To load a real-time application to the RAM of the selected hardware, and start it automatically.	Real-Time Application - Load on page 69
To view the properties of the selected platform.	Properties (Platform) on page 83
To reload the currently loaded application to the RAM.	Real-Time Application - Reload on page 89
To stop the application running on the selected platform.	Stop RTP on page 93
To update the firmware of the selected platform.	Update Firmware on page 95

Related topics**Basics**

[Feature Overview \(DS1006 Features !\[\]\(5361750c22c4e047a52f4eac1ec2d4cc_img.jpg\)\)](#)

HowTos

[How to Register a Platform..... 13](#)

DS1007 PPC Processor Board Platform

Introduction

A platform that provides access to a single multicore DS1007 PPC Processor Board or a DS1007 multiprocessor system consisting of two or more DS1007 PPC Processor Boards, connected to the host PC for HIL simulation and function prototyping purposes.

Feature overview

For a feature overview of the DS1007 PPC Processor Board, refer to [Feature Overview \(DS1007 Features !\[\]\(2bdfe261b986065ee0ac76460d6528c9_img.jpg\)\)](#).

Configuring the platform

For instructions on configuring the platform, refer to [How to Register a Platform](#) on page 13.

Platform properties

The DS1007 PPC Processor Board platform provides the following properties and settings:

Purpose	Refer to
To display details of the selected board.	Board Details Properties on page 49
To specify common properties of the platform.	Common Properties on page 51
To display the memory settings of the selected platform.	Memory Properties on page 57
To display the properties of the selected real-time application currently loaded to the platform.	Real-Time Application Properties on page 58
To display module version information for the selected platform.	Version Properties on page 61

Related commands

The DS1007 PPC Processor Board platform provides the following commands:

Purpose	Refer to
To load an application to the RAM of the selected hardware or to VEOS. After downloading, the application is not started.	Real-Time Application / Offline Simulation Application - Load on page 72
To view the properties of the selected platform.	Properties (Platform) on page 83
To reload the currently loaded application to the RAM. After reloading, the application is not started.	Reload on page 74
To stop the selected application.	Stop on page 93
To update the firmware of the selected platform.	Update Firmware on page 95

Related topics**Basics**

[Feature Overview \(DS1007 Features !\[\]\(626ce8ac21792b9405bfddfea8e0c96a_img.jpg\)\)](#)

HowTos

[How to Register a Platform.....](#) 13

DS1202 MicroLabBox Platform

Introduction A platform that provides access to a MicroLabBox connected to the host PC for function prototyping purposes.

Feature overview For a feature overview of MicroLabBox, refer to [Feature Overview \(MicroLabBox Features !\[\]\(bd1a142de767a21e5362c595f844a4ff_img.jpg\)](#)).

Configuring the platform For instructions on configuring the platform, refer to [How to Register a Platform](#) on page 13.

Platform properties The DS1202 MicroLabBox platform provides the following properties and settings:

Purpose	Refer to
To display details of the selected board.	Board Details Properties on page 49
To specify common properties of the platform.	Common Properties on page 51
To display the properties of the selected real-time application currently loaded to the platform.	Real-Time Application Properties on page 58
To display information identifying the hardware-related software.	Firmware Version Property on page 58

Related commands The DS1202 MicroLabBox platform provides the following commands:

Purpose	Refer to
To view the properties of the selected platform.	Properties (Platform) on page 83
To load an application to the RAM of the selected hardware or to VEOS. After downloading, the application is not started.	Real-Time Application / Offline Simulation Application - Load on page 72
To load an application to the RAM of the selected hardware or to VEOS, and start it automatically.	Real-Time Application / Offline Simulation Application - Load and Start on page 73
To reload the currently loaded application to the RAM. After reloading, the application is not started.	Reload on page 74
To reload the currently loaded application to the RAM. After reloading, the application is started.	Reload and Start on page 89
To unload the selected application.	Unload on page 94
To update the firmware of the selected platform.	Update Firmware on page 95

Related topics**Basics**

[Feature Overview \(MicroLabBox Features !\[\]\(eafc244b53721dd1ec133f0772f70fc7_img.jpg\)](#))

HowTos

[How to Register a Platform..... 13](#)

MicroAutoBox Platform

Introduction

A platform that provides access to a MicroAutoBox II connected to the ModelDesk PC.

Feature overview

For a feature overview of MicroAutoBox II, refer to [Feature Support \(MicroAutoBox II Features !\[\]\(d5d7044e5caf6907399af2dced8d6ff8_img.jpg\)](#)).

Configuring the platform

For instructions on configuring the platform, refer to [How to Register a Platform](#) on page 13.

Platform properties

The platform provides the following properties and settings:

Purpose	Refer to
To display details of the selected board.	Board Details Properties on page 49
To specify common properties of the platform.	Common Properties on page 51
To display details of the selected I/O board of the MicroAutoBox II.	I/O Board Properties on page 54
To display details of the selected I/O module.	I/O Module Details Properties on page 55
To display the memory settings of the selected platform.	Memory Properties on page 57
To display the properties of the selected real-time application currently loaded to the platform.	Real-Time Application Properties on page 58
To display module version information for the selected platform.	Version Properties on page 61

Related commands

The MicroAutoBox platform provides the following commands:

Purpose	Refer to
To load a real-time application to the RAM of the selected hardware, and start it automatically.	Real-Time Application - Load on page 69
To view the properties of the selected platform.	Properties (Platform) on page 83
To reload the currently loaded application to the RAM.	Real-Time Application - Reload on page 89
To stop the application running on the selected platform.	Stop RTP on page 93
To update the firmware of the selected platform.	Update Firmware on page 95

Related topics**Basics**

[Feature Support \(MicroAutoBox II Features !\[\]\(8d0f0e0fe25b320c33272c52aec1fbca_img.jpg\)](#))

HowTos

[How to Register a Platform..... 13](#)

MicroAutoBox III Platform

Introduction

A platform that provides access to a MicroAutoBox III connected to the host PC.

Feature overview

For a feature overview of MicroAutoBox III, refer to [Introduction to the MicroAutoBox III \(MicroAutoBox III Hardware Installation and Configuration !\[\]\(0d7ca0919e6c47bbd874bfa0189fe22e_img.jpg\)](#)).

Configuring the platform

For instructions on configuring the platform, refer to [How to Register a Platform](#) on page 13.

Platform properties

The platform provides the following properties and settings:

Purpose	Refer to
To specify the assignment of the selected platform in the experiment to a registered platform.	Assignment Properties on page 47
To display hardware information on the selected component of the DS1007, MicroAutoBox III, MicroLabBox, or SCALEXIO system.	Board Hardware Properties on page 50
To specify common properties of the platform.	Common Properties on page 51

Purpose	Refer to
To display information identifying the hardware-related software.	Firmware Version Property on page 58
To display information on the host interface settings.	Host Interface Properties on page 52
To display details on the selected component of the DS1007, MicroAutoBox III, MicroLabBox, or SCALEXIO system or VEOS simulator for identification purposes.	Identification Properties on page 53
To display information on the MAC address.	MAC Address Property on page 55
To display the APU characteristics of the angle clock of the selected angle unit (master APU).	Master APU Properties on page 55
To display the revision number of the board.	Product Version Property on page 58
To display the properties of the selected real-time application currently loaded to the platform.	Real-Time Application Properties on page 58
To display the unique identification number of the selected hardware element.	Serial Number Property on page 59

Related commands

The platform provides the following commands:

Purpose	Refer to
To load an application to the RAM of the selected hardware or to VEOS. After downloading, the application is not started.	Real-Time Application / Offline Simulation Application - Load on page 72
To load an application to the RAM of the selected hardware or to VEOS, and start it automatically.	Real-Time Application / Offline Simulation Application - Load and Start on page 73
To load an application to the flash memory of the selected hardware. After loading, the application is not started.	Real-Time Application - Load to Flash (DS1007/MicroLabBox/MicroAutoBox III/SCALEXIO) on page 70
To load an application to the flash memory of the selected hardware, and start it automatically.	Real-Time Application - Load to Flash and Start (DS1007/MicroLabBox/MicroAutoBox III/SCALEXIO) on page 71

Related topics

HowTos

[How to Register a Platform](#)..... 13

Multiprocessor System Platform

Multiprocessor System platform

A platform that provides access to:

- A multicore application running on a multicore DS1006 board
- A multiprocessor application on a multiprocessor system consisting of two or more DS1006 processor boards interconnected via Gigalink.

ModelDesk handles a multiprocessor/multicore system as a unit and uses one system description file (SDF file) to load the applications to all the processor boards/cores in the system.

Feature overview

For a feature overview of multiprocessor systems, refer to:

- [DS1006 Multiprocessor Systems \(DS1006 Features !\[\]\(49aa2e1da5fe39294864e9598c593810_img.jpg\)](#))

Configuring the platform

For instructions on configuring the platform, refer to [How to Register a Platform](#) on page 13.

Platform properties

The Multiprocessor System platform provides the following properties and settings:

Purpose	Refer to
To specify common properties of the platform.	Common Properties on page 51
To display the DS1006 processor boards that form the selected multiprocessor platform, or the DS1007 PPC Processor Boards that constitute the selected DS1007 platform, with their configuration settings.	Member Overview Properties on page 56
To display the processor boards of the multiprocessor system and their interconnections via Gigalinks.	Topology Information Properties on page 59

Related commands

The Multiprocessor System platform provides the following commands:

Purpose	Refer to
To collapse the platforms and subnodes of the node selected in the Platform Manager.	Collapse on page 66
To load a real-time application to the RAM of the selected hardware, and start it automatically.	Real-Time Application - Load on page 69
To view the properties of the selected platform.	Properties (Platform) on page 83
To reload the currently loaded application to the RAM.	Real-Time Application - Reload on page 89
To stop the applications running on the selected Multiprocessor System platform.	Stop RTPs on page 94
To update the firmware of the selected platform.	Update Firmware on page 95

Related topics**Basics**

[DS1006 Multiprocessor Systems \(DS1006 Features !\[\]\(99f58673407353e96a019fbca558fd72_img.jpg\)](#))

HowTos

[How to Register a Platform..... 13](#)

SCALEXIO Platform

Introduction

A platform that provides access to a single-core, multicore, or multiprocessor SCALEXIO system connected to the ModelDesk PC for HIL simulation and ECU testing purposes.

Feature overview

For a feature overview of the SCALEXIO Processing Unit, refer to [SCALEXIO Processing Unit \(SCALEXIO Hardware Installation and Configuration !\[\]\(c50c8b7b2cc2cf9ff925edec0ee94c0d_img.jpg\)](#)) and [DS6001 Processor Board \(SCALEXIO Hardware Installation and Configuration !\[\]\(8bed43dc33ecdde61e2f76c8f5517125_img.jpg\)](#)).

Configuring the platform

For instructions on configuring the platform, refer to [How to Register a Platform](#) on page 13.

Platform properties

The platform provides the following properties and settings:

Purpose	Refer to
To display hardware information on the selected component of the DS1007, MicroAutoBox III, MicroLabBox, or SCALEXIO system.	Board Hardware Properties on page 50
To specify common properties of the platform.	Common Properties on page 51
To display the properties of the selected real-time application currently loaded to the platform.	Real-Time Application Properties on page 58
To display details on the selected component of the DS1007, MicroAutoBox III, MicroLabBox, or SCALEXIO system or VEOS simulator for identification purposes.	Identification Properties on page 53
To display information on the uplink and downlink connections.	Network Properties on page 59
To display information identifying the hardware-related software.	Firmware Version Property on page 58
To display the APU characteristics of the angle clock of the selected angle unit (master APU).	Master APU Properties on page 55

Related commands

The SCALEXIO platform provides the following commands:

Purpose	Refer to
To load an application to the RAM of the selected hardware or to VEOS. After downloading, the application is not started.	Real-Time Application / Offline Simulation Application - Load on page 72
To load an application to the RAM of the selected hardware or to VEOS, and start it automatically.	Real-Time Application / Offline Simulation Application - Load and Start on page 73
To load an application to the flash memory of the selected hardware. After loading, the application is not started.	Real-Time Application - Load to Flash (DS1007/MicroLabBox/MicroAutoBox III/SCALEXIO) on page 70
To load an application to the flash memory of the selected hardware, and start it automatically.	Real-Time Application - Load to Flash and Start (DS1007/MicroLabBox/MicroAutoBox III/SCALEXIO) on page 71
To view the properties of the selected platform.	Properties (Platform) on page 83
To update the firmware of the selected platform.	Update Firmware on page 95
To reload the currently loaded application to the RAM. After reloading, the application is not started.	Reload on page 74
To reload the currently loaded application to the RAM. After reloading, the application is started.	Reload and Start on page 89
To reload the currently loaded application to the flash memory. After reloading, the application is not started.	Reload to Flash on page 75
To display the clients to which the selected SCALEXIO platform or SCALEXIO Processing Unit is connected.	Show Connected Clients on page 90
To reload the currently loaded application to the flash memory. After reloading, the application is started.	Reload to Flash and Start on page 76
To unload the selected application.	Unload on page 94

Related topics**Basics**

[DS6001 Processor Board \(SCALEXIO Hardware Installation and Configuration !\[\]\(dfbd6b3763a6d1d9afaa974f64e2e4b5_img.jpg\)\)](#)
[SCALEXIO Processing Unit \(SCALEXIO Hardware Installation and Configuration !\[\]\(b89ecf30df3dbaee65fa9f1829524a6e_img.jpg\)\)](#)

HowTos

[How to Register a Platform..... 13](#)

VEOS Platform

Introduction

A platform that configures and controls the offline simulation application running in VEOS and that also provides access to the application's environment VPU.

Configuring the platform

For instructions on configuring the platform, refer to [How to Register a Platform](#) on page 13.

Platform properties

The VEOS platform provides the following properties and settings:

Purpose	Refer to
To specify common properties of the platform.	Common Properties on page 51
To display details on the selected component of the DS1007, MicroAutoBox III, MicroLabBox, or SCALEXIO system or VEOS simulator for identification purposes.	VEOS Simulation Properties on page 60
To specify timing settings for the VEOS simulation for the selected platform.	VEOS Simulation Time Options Properties on page 60
To display the properties of the selected VPU.	VPU Properties on page 62

Related commands

The VEOS provides the following commands:

Purpose	Refer to
To load an application to the RAM of the selected hardware or to VEOS. After downloading, the application is not started.	Real-Time Application / Offline Simulation Application - Load on page 72
To load an application to the RAM of the selected hardware or to VEOS, and start it automatically.	Real-Time Application / Offline Simulation Application - Load and Start on page 73
To pause an offline simulation.	Pause on page 79

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Assignment Properties

Purpose	To specify the assignment of the selected platform in the experiment to a registered platform.
Properties	<p>Alias name Lets you specify the alias name of the connection that is used for assignment.</p> <p>Board name Lets you specify the board name used to identify the board or processing unit.</p> <p>Connection type Lets you specify the connection type of the platform hardware.</p> <ul style="list-style-type: none"> ▪ Select BUS if the platform hardware is installed in the host PC or in an expansion box connected to the host PC via a bus interface. ▪ Select NET if the platform hardware is connected to the host PC via Ethernet.

IP address / Net client Lets you specify the network client for assignment as an IP address.

or

Lets you specify the network client for assignment as an IP address or alias.

MAC address Lets you specify the MAC address of the selected processing unit of the SCALEXIO system, the selected processor board of the DS1007 or MicroAutoBox III platform, or selected platform of the DS1202 MicroLabBox platform. The MAC address is used to uniquely identify the hardware.

Mode Lets you select the assignment mode for the platform. The available assignment modes depend on the platform type.

Assignment Mode	Description
Assign to first available platform	(Not available for the Multiprocessor System platform) ControlDesk automatically assigns the platform to the first registered and unassigned platform of the relevant platform type it finds.
Assign to any equal platform	<p>ModelDesk assigns the platform to a registered and unassigned platform of the relevant platform type, according to the following assignment settings:</p> <ul style="list-style-type: none"> ▪ Alias name ▪ Board name ▪ Connection type ▪ Net client ▪ Port address ▪ XIL API MAPort implementation <p>The above assignment settings are platform-type-specific. The list below shows the settings available for the platform types:</p> <ul style="list-style-type: none"> ▪ DS1006: Port address and/or Board name, Connection type, Net Client (only for the Net connection type) ▪ MicroAutoBox: Board name (optional), Connection type, Net Client ▪ Multiprocessor System: Connection type <p>Multiprocessor System members: Port address</p> <ul style="list-style-type: none"> ▪ DS1007, DS1202 MicroLabBox, MicroAutoBox III, SCALEXIO: IP address or Board name ▪ VEOS: none ▪ XIL API MAPort platform: XIL API MAPort implementation
Assign to identical platform	<p>(Not available for the VEOS and XIL API MAPort platforms) ModelDesk assigns the platform to registered and unassigned dSPACE hardware of the relevant platform type, according to the following assignment settings:</p> <ul style="list-style-type: none"> ▪ Connection type ▪ Serial number ▪ MAC address <p>The above assignment settings are platform-type-specific. The list below shows the settings available for the platform types:</p> <ul style="list-style-type: none"> ▪ DS1006, MicroAutoBox, Multiprocessor System members: Serial number ▪ Multiprocessor System: Connection type <p>Multiprocessor System members: Serial number</p> <ul style="list-style-type: none"> ▪ DS1007, DS1202 MicroLabBox, MicroAutoBox III, SCALEXIO: MAC address

Note

If several platforms are assigned to dSPACE hardware in one step (for example, if you call the Refresh Platform Configuration command), the assignment modes are applied to the platforms in a certain order:

1. Assign to identical platform
2. Assign to any equal platform
3. Assign to first available platform

Model access port implementation Displays the XIL API MAPort implementation to be used with the selected XIL API MAPort platform.

Port address (Available only for the Multiprocessor System platform and only for the 'Assign to any equal platform' assignment mode) Displays the base address of the board as specified with the DIP switches or rotary switches on the DS1006, or lets you specify the base address of the board. When you register a multiprocessor system, the default processor names and board port addresses are specified like this: MASTER, 0x300 (first board), SLAVE, 0x310 (second board), SLAVE_B, 0x320 (third board), SLAVE_C, 0x330 (fourth board), etc. You should set a port addresses suitable for your real-time hardware.

Product name Displays the product name of the XIL API MAPort implementation.

Product version Displays the product version of the XIL API MAPort implementation.

Serial number Displays or lets you specify the serial number of the board. The number is used to uniquely identify the hardware.

Vendor name Displays the vendor of the XIL API MAPort implementation.

XIL API version Displays the XIL API version of the MAPort implementation.

Board Details Properties

Purpose	To display details of the selected board.
----------------	---

Properties	Battery voltage (Availability depends on the platform/device) Displays the voltage of the battery. The limits as set on the board are listed in brackets (n.b. means no border.)
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Board temperature (Availability depends on the platform/device) Displays the temperature of the board. The limits as set on the board are listed in brackets (n.b. means no border).

Board version Displays the board version.

Bus frequency Displays the frequency of the internal bus.

PHS bus address Displays the PHS bus address of the selected I/O board.

Port address Displays the base address of the board as specified with the DIP switches or the rotary switches on the board.

Processor frequency Displays the processor clock frequency.

Processor state Displays the state of the processor.

Processor temperature Displays the temperature of the processor. The value is updated cyclically.

Processor type Displays the processor type.

Run-time counter (Availability depends on the platform/device) Displays the run-time counter of the board in days, hours and minutes.

Serial number Refer to [Serial Number Property](#) on page 59.

Slave processor state Displays the current status of the slave DSP of the selected platform. A status (running, reset) is displayed only if an application is currently loaded on the slave DSP.

Board Hardware Properties

Purpose	To display hardware information on the selected component of the DS1007, MicroAutoBox III, MicroLabBox, or SCALEXIO system.
----------------	---

Properties	<p>Available application cores (Availability depends on the platform/device) Displays the number of processor cores available for real-time applications.</p> <p>Connector panel (Availability depends on the platform/device) Displays the variant of the connector panel.</p> <p>CPU (Availability depends on the platform/device) Displays the type of the board's central processing unit (CPU).</p> <p>Flash (Availability depends on the platform/device) Displays the total size of the flash memory on the board.</p> <p>Number of cores (Availability depends on the platform/device) Displays the number of processor cores of the hardware.</p>
-------------------	---

Processor frequency (Availability depends on the platform/device) Displays the clock frequency of the central processing unit (CPU).

Product version Refer to [Product Version Property](#) on page 58.

RAM size (Availability depends on the platform/device) Displays the total size of the board's RAM.

Common Properties

Purpose	To specify common properties of the platform.
Properties	<p>Active variable description Displays the variable description currently active on the selected platform/device.</p> <p>Board version (Availability depends on the platform/device) Displays the board version of the selected I/O board.</p> <p>CAN channels (Availability depends on the platform/device) Displays the number of CAN channels available on the selected CAN module.</p> <p>Description (Availability depends on the platform/device) Displays a description of the selected board.</p> <p>ECU image file (Availability depends on the platform/device) Displays the ECU Image file if available.</p> <p>Module description (Availability depends on the platform/device) Displays a description of the selected I/O module.</p> <p>Module type (Availability depends on the platform/device) Displays the type of the selected I/O module.</p> <p>Module version (Availability depends on the platform/device) Displays the module version of the selected I/O module.</p> <p>Platform name Displays the name of the selected platform. The name was specified during platform registration.</p> <p>Platform name in experiment Displays the name of the platform/device in the currently active experiment.</p> <p>Platform type Displays the type of the selected platform.</p> <p>Processor name (Relevant only for the Multiprocessor System platform) Displays or lets you specify the name of the selected processor board.</p> <p>When you register a multiprocessor system based on DS1006 boards, the default processor names and board port addresses are specified like this: MASTER, 0x300 (first board), SLAVE, 0x310 (second board), SLAVE_B, 0x320 (third board), SLAVE_C, 0x330 (fourth board), ... You should change the processor names</p>

according to the variable description to be used with the Multiprocessor System platform.





Processor name (Relevant only for the DS1007 PPC Processor Board platform) Displays the name of the CPU.

System type (Availability depends on the platform/device) Displays the processor board type the selected Multiprocessor System platform is based on. The value is 'DS1006'.

Connection Settings Properties

Purpose	To display the connection settings of the selected platform.
Properties	<p>Connection type Displays the connection type of the platform.</p> <p>MAC address (Availability depends on the platform/device) Displays the MAC address of the selected processor board.</p> <p>Network client Displays the network client as an alias or IP address.</p>

Host Interface Properties

Purpose	To display information on the host interface settings.
Properties	<p>IP address Displays the IP address of the selected hardware element.</p> <p>IP mode Displays whether the Ethernet network configuration to the host PC is set by a DHCP server or a static network configuration is used.</p> <p>MAC address Refer to MAC Address Property on page 55.</p> <p>Subnet mask Displays the subnet mask (network mask) of the DS1007, MicroLabBox, or the SCALEXIO Real-Time PC.</p>
Related platforms	<p>These properties are available for the following platforms:</p> <ul style="list-style-type: none"> ▪ DS1007 PPC Processor Board Platform (ControlDesk Platform Management ) ▪ DS1202 MicroLabBox Platform (ControlDesk Platform Management ) ▪ MicroAutoBox III Platform (ControlDesk Platform Management ) ▪ SCALEXIO Platform (ControlDesk Platform Management )

Identification Properties

Purpose	To display details on the selected component of the DS1007, MicroAutoBox III, MicroLabBox, or SCALEXIO system or VEOS simulator for identification purposes.
Properties	<p>Board name (Availability depends on the platform/device) Lets you specify the board name of the selected platform. The board name must match the setting specified in the application to be loaded.</p> <p>Board type Displays the board type.</p> <p>DS number (Availability depends on the platform/device) Displays the dSPACE identity number.</p> <p>Host name (Availability depends on the platform/device) Displays the host name of the PC whose VEOS installation you access.</p> <p>Installation path (Availability depends on the platform/device) Displays the VEOS installation path on the PC you are accessing.</p> <p>IP address Displays the IP address of the selected hardware element.</p> <p>MAC address Refer to MAC Address Property on page 55.</p> <p>Member of rack (Availability depends on the platform/device) Lets you specify the name of the rack the SCALEXIO Processing Unit belongs to (the rack name must match the setting in the application to be loaded), or displays the rack in which the I/O unit or the DS2907 controller is installed.</p> <p>If you specify a rack that does not exist yet, a corresponding rack element is created in the assembly view and the selected element is moved to it. If you clear the entry in the Member of rack edit field, the assembly view displays the selected element on top level. Racks that do not contain any elements disappear from the assembly view.</p> <p>Member of unit (Availability depends on the platform/device) Displays the name of the I/O unit the board is inserted into.</p> <p>Name (Availability depends on the platform/device) Lets you specify or displays the name of the selected hardware element.</p> <p>Ethernet cards: If you do not specify a name for an Ethernet card, a default name consisting of the MAC address in brackets, followed by 'no name assigned' is used.</p> <p>PCI/PCle cards: For a PCI/PCle card supported by dSPACE, the name cannot be changed.</p>

SCALEXIO racks: Racks are displayed in the assembly view. If a SCALEXIO rack element in the assembly view is selected and you clear its Name entry, all its contained elements are displayed at top level in the assembly view.

Product version (Availability depends on the platform/device) Displays the product version of the VEOS installation you access.

Serial number Refer to [Serial Number Property](#) on page 59.

Slot(s) (Availability depends on the platform/device) Displays the slot number the board is installed in. If the board uses more than one slot, all required slots are listed.

Slot (Relevant only for inter-FPGA connections) Displays the slot number of the base board that is used for the connection.

Solution (Availability depends on the platform/device) Displays the name of the current FPGA I/O solution.

System name (Availability depends on the platform/device) Displays the system name of the SCALEXIO Processing Unit.

Type Displays the type of the selected hardware element.

Type (Relevant only for inter-FPGA connections) Displays the type of connection.

Unit name (Availability depends on the platform/device) Displays the I/O unit the DS2551 IOCNET Router or DS2680 I/O Unit belongs to.

Vendor (Availability depends on the platform/device) Displays the vendor of the transceiver.

Vendor part number (Availability depends on the platform/device) Displays the vendor-specific part number of the transceiver.

I/O Board Properties

Purpose

To display details of the selected I/O board of the MicroAutoBox II.

Properties

I/O board revision Displays the revision of the I/O board of the MicroAutoBox II.

I/O board serial number Displays the serial number of the I/O board of the MicroAutoBox II.

I/O board type Displays the type of the I/O board of the MicroAutoBox II.

I/O Module Details Properties

Purpose	To display details of the selected I/O module.
Properties	<p>Date of adjustment (Availability depends on the platform/device) Displays the date the I/O module was adjusted last.</p> <p>FPGA version (Availability depends on the platform/device) Displays the FPGA version number of the selected I/O module.</p> <p>I/O module name Displays the name of the I/O module.</p> <p>Module interrupts Displays the number of interrupts that are set for this I/O module.</p> <p>Module position Displays the position of the I/O module to identify modules of the same type.</p> <p>Module revision Displays the revision of the I/O module of the MicroAutoBox II.</p> <p>Module speed Displays the speed of the I/O module of the MicroAutoBox II.</p> <p>Slot number (Availability depends on the platform/device) Displays the number of the COM module or the slot number the selected interface module is connected to.</p>

MAC Address Property

Purpose	To display information on the MAC address.
Properties	<p>MAC address (Availability depends on the platform/device) Displays the MAC address of the selected hardware element.</p>

Master APU Properties

Purpose	To display the APU characteristics of the angle clock of the selected angle unit (master APU).
----------------	--

Properties	Maximum speed	Displays the upper limit of the speed measurements.
	Protocol version	Displays the protocol version of the APU.
	Resolution	Displays the resolution of the angle counter.

Member Overview Properties

Purpose	To display the DS1006 processor boards that form the selected multiprocessor platform, or the DS1007 PPC Processor Boards that constitute the selected DS1007 platform, with their configuration settings.
----------------	--

Properties	CPU	(Availability depends on the platform/device) Displays the CPU of the processor board belonging to the selected DS1007 multiprocessor system.
	Name	(Availability depends on the platform/device) Displays the names of the DS1006 boards that form the selected multiprocessor system. These are the platform names which are used for the processor boards in the experiment.
	Platform name	(Availability depends on the platform/device) Displays assignment information for the members of the DS1006-based multiprocessor system. If the member is currently assigned to hardware, the platform name of the assigned processor board is displayed. If the member is currently not assigned, 'unassigned' is displayed.
	Port address	(Available only for the Multiprocessor System platform and only for the 'Assign to any equal platform' assignment mode) Displays the base address of the board as specified with the DIP switches or rotary switches on the DS1006, or lets you specify the base address of the board. When you register a multiprocessor system, the default processor names and board port addresses are specified like this: MASTER, 0x300 (first board), SLAVE, 0x310 (second board), SLAVE_B, 0x320 (third board), SLAVE_C, 0x330 (fourth board), etc. You should set a port addresses suitable for your real-time hardware.
	Processor board	(Availability depends on the platform/device) Displays the names of the DS1007 boards that constitute the selected DS1007 multiprocessor system.
	Processor name	(Relevant only for the Multiprocessor System platform) Displays or lets you specify the name of the selected processor board. When you register a multiprocessor system based on DS1006 boards, the default processor names and board port addresses are specified like this: <ul style="list-style-type: none"> ▪ MASTER, 0x300 (first board) ▪ SLAVE, 0x310 (second board) ▪ SLAVE_B, 0x320 (third board)

- SLAVE_C, 0x330 (fourth board)
- ...

You should change the processor names according to the variable description to be used with the Multiprocessor System platform.

Processor name (Relevant only for the DS1007 platform) Displays or lets you specify the name of the selected processor board.

When you register a multiprocessor system based on DS1007 PPC Processor Boards, the default processor names are empty. If you load the real-time application to the DS1007 PPC Processor Board platform, its contained application processes are assigned to the cores of the DS1007 PPC Processor Boards. You can configure the assignment between application processes and the cores by naming the cores according to the CPU names specified in the multiprocessor model underlying the application. In special cases, however, you cannot edit the processor names.

Processor name unavailable (Availability depends on the platform/device) Indicates that no processor name information is available. The selected DS1007 platform represents a DS1007 single-processor system, i.e., only one DS1007 PPC Processor Board was selected during platform registration.

Serial number (For the Multiprocessor System platform available only for the 'Assign to identical platform' assignment mode) Displays or lets you specify the serial number of the board. The number is used to uniquely identify the hardware.

Trace file (Availability depends on the platform/device) Displays the name of the variable description (TRC) file that is currently active for the selected board that belongs to the multiprocessor system.

Memory Properties

Purpose	To display the memory settings of the selected platform.
----------------	--

Properties	<p>Flash EEPROM size Displays the size of the board's flash memory.</p> <p>Global RAM size Displays the size of the board's global RAM.</p> <p>L2 cache size Displays the size of the board's L2 cache.</p> <p>Local RAM size Displays the size of the board's local RAM.</p>
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Product Version Property

Purpose To display the revision number of the board.

Properties **Product version** Displays the revision number of the board.

Real-Time Application Properties

Purpose To display the properties of the selected real-time application currently loaded to the platform.

Properties

- Application** Displays the name of the real-time application related to the selected application process.
- Build date** Displays the date and time when the real-time application was built.
- Full path** Displays the full path to the real-time application file on the PC.
- Load date** Displays the date and time when the real-time application was loaded.
- Name** Displays the name of the real-time application loaded to the hardware of the selected platform.
- Participants** Displays the IP addresses of the hardware components the application processes belonging to the real-time application are loaded to. If the application processes of the real-time application are loaded on several processing units, the IP addresses of these units are displayed in a comma-separated list.
- State** (Availability depends on the platform/device) Displays the current state of the selected real-time application.

Firmware Version Property


Purpose To display information on the firmware running on the hardware.

Properties **Firmware version** Displays the version number of the firmware that is currently installed on the selected hardware.

Serial Number Property

Purpose	To display the unique identification number of the selected hardware element.
Properties	Serial number Displays the serial number of the selected hardware element.

Topology Information Properties

Purpose	To display the processor boards of the multiprocessor system and their interconnections via Gigalinks.
Properties	<p>Processor Displays the processor names.</p> <p>Gigalink 0 Displays which member of the multiprocessor system is connected to Gigalink port number 0 of the selected processor board. NC indicates that the port is not used for connection via Gigalinks.</p> <p>Gigalink 1 Displays which member of the multiprocessor system is connected to Gigalink port number 1 of the selected processor board. NC indicates that the port is not used for connection via Gigalinks.</p> <p>Gigalink 2 Displays which member of the multiprocessor system is connected to Gigalink port number 2 of the selected processor board. NC indicates that the port is not used for connection via Gigalinks.</p> <p>Gigalink 3 Displays which member of the multiprocessor system is connected to Gigalink port number 3 of the selected processor board. NC indicates that the port is not used for connection via Gigalinks.</p> <p>Gigalink topology unavailable (Available only if no topology check has been performed yet) Indicates that currently no Gigalink topology information is available for the multiprocessor system. To get topology information, you must execute a Gigalink topology check. Refer to Check Gigalink Topology (ControlDesk Platform Management ).</p>

Network Properties

Purpose	To display information on the uplink and downlink connections.
----------------	--

Properties

Downlink 1 ... Downlink x (Available for SCALEXIO processing hardware, and SCALEXIO I/O units) Displays the downlink connections. Downlink means the direction to other slot I/O units, MultiCompact I/O units, LabBoxes, or SCALEXIO processing hardware. Connections to unregistered systems are marked as such.

Uplink (Available for SCALEXIO IOCNET routers, SCALEXIO I/O units, SCALEXIO I/O boards, and the DS2907 Battery Simulation Controller) Displays the unit name of the uplink connection. Uplink means the direction to the SCALEXIO Processing Unit or I/O unit.

VEOS Simulation Properties

Purpose

To display the properties of the offline simulation application that is currently loaded to the platform.

Properties

Build date/time Displays when the offline simulation application (OSA) file was built or modified.

Full path Displays the full path to the offline simulation application (OSA) file in the file system.

System name Displays the name of the simulation system of the loaded offline simulation application.

Simulation state Displays the state of the offline simulation.

Related topics**References**

[VEOS Simulation Time Options Properties..... 60](#)

VEOS Simulation Time Options Properties

Purpose

To specify timing settings for the VEOS simulation for the selected platform.

Properties

Break time Lets you enter a time in seconds where the simulation breaks automatically. You can resume the simulation via the Start or Single Step command. Infinity indicates that the simulation must not pause automatically.

Real-time acceleration factor Lets you specify a factor to accelerate or decelerate the simulation run in relation to real time. With a factor of 1, the simulation run is (nearly) executed in real time. A factor greater than 1 accelerates the simulation run, a factor less than 1 decelerates it. A value of 0 means that the simulation run is executed as fast as possible. To avoid the loss of measurement and stimulation data, VEOS automatically decelerates the simulation run if more measurement data is generated than the experiment software, e.g., ControlDesk, can sample. VEOS also decelerates the simulation if stimulation data is not received in time. This is independent of the specified real-time acceleration factor, i.e., receiving complete measurement data has higher priority than achieving the specified real-time acceleration factor.

For more information, refer to [Simulation in soft real time](#) (VEOS Manual )

Single step time Lets you specify the duration of one simulation step in seconds. The duration specification is used when you perform a single-step simulation, refer to [Single Step](#) on page 91. If you specify a duration of 0 seconds, one single simulation command is executed per simulation step.

Stop time Lets you specify the simulation duration in seconds. Specify Infinity for an endless simulation run.

Synchronization behavior Lets you specify how to synchronize the VEOS simulation time options values when the VEOS platform goes online:

- **Write values to assigned platform:** The values are written from the experiment platform to the assigned platform.
- **Read values from assigned platform:** The values are read from the assigned platform to the experiment platform.

After going online, the values are identical.

Related topics

References

[VEOS Simulation Properties](#)..... 60

Version Properties

Purpose

To display module version information for the selected platform.

Description

Displays the versions of hardware and software modules of the platform hardware. Available only if the platform is in the 'connected' platform state.

Properties	FPGA type	Displays the FPGA type of the selected hardware.
	Piggy-back module version	Displays the version of the selected piggy-back module.
	Status	Displays the software versions and statuses related to the platform.
	Version	Displays the module versions of the hardware and the software of a DS1006 Processor Board, or MicroAutoBox II, the application and the connected peripheral boards (I/O modules in the case of MicroAutoBox II).

VPU Properties

Purpose	To display the properties of the selected VPU.	
Properties	Author	Displays the author of the selected VPU.
	Build date	Displays the date and time when the selected VPU was built.
	Description	Displays the description for the selected VPU.
	Drift	Displays the timer drift value of the selected VPU. The value specifies the drift between the local VPU time and the global simulation time. <ul style="list-style-type: none"> ▪ A drift value less than 0 means that the local VPU timer is slower than the global simulation timer. For example, if the timer drift value is -0.5, the global simulation time runs twice as fast as the local VPU time. ▪ If the timer drift value is 0, the local VPU time and the global simulation time are identical. ▪ With a drift value greater than 0, the local timer runs faster than the global timer. For example, if the timer drift value is 1, the local VPU time advances twice as fast as the global simulation time.
	Name	Displays the name of the selected VPU.
	Offset	Displays the timer offset value. The value specifies the timer offset between the local VPU time and the global simulation time. For example, a positive timer offset value means that the global simulation time is in the future in relation to the local VPU time.
	Type	Displays the type (V-ECU or environment VPU) of the selected VPU.
	VpuHost PID	Displays the process identifier (PID) of the current VPU process (VpuHost.exe).

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Clear System

Access

You can access this command via:

Ribbon	Platforms – Platform Management
Context menu of	None
Shortcut key	None
Icon	

Purpose

To clear the entire system you are currently working with.

Result

ModelDesk clears the system by erasing the recent platform configuration. The Platform Manager and the device drivers are reset to their initial states.

Note

- This command deletes any registered platform from the recent platform configuration and not only the platform you are currently working with.
- Clearing the recent platform configuration is relevant to each dSPACE software installed on your PC that provides platform management.

Tip

Before clearing the system, you can use the **Manage Recent Platform Configuration** dialog, to export the currently active recent platform configuration. Importing this configuration allows you to recover the system after you have cleared it.

Refer to [Manage Platforms](#) on page 77.

Related topics

References

Refresh Interface Connections.....	84
--	--------------------

Collapse

Access

You can access this command via:

Ribbon	None
Context menu of	Platform Manager
Shortcut key	None
Icon	None

Purpose

To collapse the platforms and subnodes of the node selected in the **Platform Manager**.

Result

ModelDesk hides the subnodes and platforms of the node selected in the **Platform Manager**.

Related topics


References

[Expand..... 67](#)

Create Support Info

Access

You can access the command via:

Ribbon	Platforms – Platform Management
Context menu of	Platform Manager
Shortcut key	None
Icon	

Purpose

To generate an XML file containing textual information on platforms/devices that are currently detected by the **Platform Manager**.

Result

To help dSPACE Support in analyzing an observed problem, the **SupportInfo.xml** file is generated. The file contains relevant information on all the platforms that are currently detected by the **Platform Manager**. The file is saved automatically, and the path is displayed in a message.

The `SupportInfo.xml` file is overwritten each time you call the `Create Support Info` command.

Related topics

HowTos

[How to Collect Diagnostic Information via dSPACE Installation Manager \(Providing Diagnostic Information !\[\]\(b93c3e1add16fe46100bba7a6da1e82f_img.jpg\)\)](#)

Expand

Access

You can access this command via:

Ribbon	None
Context menu of	Platform Manager
Shortcut key	None
Icon	None

Purpose

To expand the collapsed platforms and subnodes of the node selected in the Platform Manager.

Result

ModelDesk now displays the hidden subnodes and platforms of the node selected in the Platform Manager.

Related topics

References

[Collapse..... 66](#)

Explore Logged Data

Access

This command is available only for platforms that support data logging or flight recording.

The following platforms support data logging:

- MicroAutoBox III
- SCALEXIO system based on a DS6001 Processor Board
(except for SCALEXIO multiprocessor systems)

The following platforms support flight recording:

- DS1007 PPC Processor Board
- DS1202 MicroLabBox
- MicroAutoBox II

The hardware must be connected to the host PC. You can access the command via:

Ribbon	None
Context menu of	Platform Manager – platform
Shortcut key	None
Toolbar icon	None

Purpose

To save the logged data currently available in a USB mass storage device connected to the platform hardware.

Result

ModelDesk opens the **Logged Data on Mass Storage Device** dialog, which displays the connected platform hardware and lists the files which were written to the USB mass storage device during flight recording. The logged data is written in BIN format or MF4 format, depending on the used platform. You can select BIN or MF4 files from the list and upload them to the host PC. Multiple selection is possible by pressing **Ctrl** or **Shift** when clicking a file. The target folder is selected in a standard Windows dialog.

You can also delete obsolete BIN or MF4 files from the USB mass storage device.

Description

The dialog's status bar displays information on the selected file (file type, modification date, and size).

Logged Data on Mass Storage Device dialog

To display the files stored in a USB mass storage device, and to upload BIN or MF4 files to the host PC or delete BIN or MF4 files from the USB mass storage device. In the dialog, you can access the following commands via the context menu:

Upload Lets you upload the selected BIN or MF4 files to the specified target folder on the host PC.

Delete Lets you delete the selected BIN or MF4 files from the USB mass storage device.

Related topics**HowTos**


[How to Upload Flight Recorder Data Written to a USB Mass Storage Device \(ControlDesk Measurement and Recording !\[\]\(bd1a142de767a21e5362c595f844a4ff_img.jpg\)\)](#)

[How to Upload Logged Data \(ControlDesk Measurement and Recording !\[\]\(e2376d476d06eb31946dc01a69a4403a_img.jpg\)\)](#)

Real-Time Application - Load

Access

This command is available only for the following platforms: DS1006, MicroAutoBox, and Multiprocessor System. The platform hardware must be connected to the host PC. You can access the command via:

Ribbon	None
Context menu of	Platform Manager – platform
Shortcut key	None
Icon	
Others	Drag an application file from File Explorer to the platform in the Platform Manager

Purpose

To load a real-time application to the RAM of the selected hardware, and start it automatically.

Result

ModelDesk opens a standard Open dialog that lets you select an application or variable description file. Depending on the hardware type, the file must be in the PPC/RTA/x86 or SDF file format.

Description

The selected application is loaded to the RAM of the selected hardware. After downloading, the application is started automatically if the **simState** parameter is set to **RUN (2)**.

Before the application is loaded, ModelDesk checks whether an application is already running. If one is, you are prompted to stop it and load the new application.


Related topics**Basics**

[Managing Real-Time Applications on DS1006, Multiprocessor System, and MicroAutoBox II Platforms..... 18](#)

Real-Time Application - Load to Flash (DS1007/MicroLabBox/MicroAutoBox III/SCALEXIO)

Access

This command is available only for the following platforms: DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO. The platform hardware must be connected to the host PC. You can access the command via:

Menu bar	None
Context menu of	Platform Manager – platform
Shortcut key	None
Icon	
Others	Use the <i>right</i> mouse button to drag an application file from File Explorer to the platform in the Platform Manager.

Purpose

To load an application to the flash memory of the selected hardware. After loading, the application is not started.

Note

- Relevant for DS1007 platforms: The command is available only for DS1007 systems registered as a single processor system. Loading an application to the flash memory of a DS1007 system consisting of two or more DS1007 PPC Processor Boards is not possible.
- Relevant for SCALEXIO platforms: The command is available only for SCALEXIO systems registered as a single processor system. For other SCALEXIO systems, loading an application to the flash memory is not possible.

Result


A standard Open dialog is opened for you to select an application file or the corresponding variable description file. The file must be in the RTA or SDF file format. After loading, the application state is **STOPPED**.

Description

Before the application is loaded, ModelDesk checks whether an application is already running. If one is, you are prompted to stop it and load the new application.

Note

An application that was already in the RAM will be overwritten when you load an application to the flash memory.

The  platform state icon next to the application icon in the **Platform Manager** indicates that the application was loaded from the flash memory to the RAM. If the platform is rebooted, the application in the flash memory is automatically started.

Related topics


Basics

[Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms.....](#) 19

Real-Time Application - Load to Flash and Start (DS1007/MicroLabBox/MicroAutoBox III/SCALEXIO)

Access

This command is available only for the following platforms: DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO. The platform hardware must be connected to the host PC. You can access the command via:

Ribbon	None
Context menu of	Platform Manager – platform
Shortcut key	None
Icon	
Others	Use the <i>right</i> mouse button to drag an application file from File Explorer to the platform in the Platform Manager .

Purpose

To load an application to the flash memory of the selected hardware, and start it automatically.

Note

- Relevant for DS1007 platforms: The command is available only for DS1007 systems registered as a single processor system. Loading an application to the flash memory of a DS1007 system consisting of two or more DS1007 PPC Processor Boards is not possible.
- Relevant for SCALEXIO platforms: The command is available only for SCALEXIO systems registered as a single processor system. For other SCALEXIO systems, loading an application to the flash memory is not possible.

Result

ModelDesk opens a standard **Open** dialog that lets you select an application. The application file does not need to be within an experiment.


The application is loaded to the flash memory, copied to the RAM and then started.

Description

Before the application is loaded, ModelDesk checks whether an application is already running. If one is, you are prompted to stop it and load the new application.

Note

An application that was already in the RAM will be overwritten when you load an application to the flash memory.

The  platform state icon next to the application icon in the **Platform Manager** indicates that the application that is running was started from the flash memory. If the platform is rebooted, the application in the flash memory is automatically started.


Related topics**Basics**

[Managing Real-Time Applications on DS1006, Multiprocessor System, and MicroAutoBox II Platforms..... 18](#)

Real-Time Application / Offline Simulation Application - Load




Access

This command is available only for the following platforms: DS1007, DS1202 MicroLabBox, MicroAutoBox III, SCALEXIO, and VEOS. For DS1007, MicroLabBox, MicroAutoBox III, and SCALEXIO platforms, the platform hardware must be connected to the host PC. You can access the command via:

Ribbon	None
Context menu of	Platform Manager – platform
Shortcut key	None
Icon	
Others	Use the <i>right</i> mouse button to drag an application file from File Explorer to the platform in the Platform Manager .

Purpose	To load an application to the RAM of the selected hardware or to VEOS. After downloading, the application is not started.				
Result	<p>A standard Open dialog is opened for you to select an application file or the corresponding variable description file:</p> <ul style="list-style-type: none"> ▪ DS1007, MicroLabBox, MicroAutoBox III, SCALEXIO: You can select an RTA or SDF file. ▪ VEOS: You can select an OSA or SDF file. <p>The selected application is loaded to the RAM of the selected hardware or to VEOS. After downloading, the application state is STOPPED.</p> <p>VEOS: The Platform Manager displays the loaded offline simulation application and the virtual ECU(s) and the (optional) environment VPU contained in the OSA file.</p>				
Description	Before the application is loaded, ModelDesk checks whether an application is already running. If one is, you are prompted to stop it and load the new application.				
Related topics	<p>Basics</p> <table> <tr> <td>Managing Offline Simulation Applications on VEOS Platforms.....</td> <td>23</td> </tr> <tr> <td>Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms.....</td> <td>19</td> </tr> </table>	Managing Offline Simulation Applications on VEOS Platforms.....	23	Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms.....	19
Managing Offline Simulation Applications on VEOS Platforms.....	23				
Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms.....	19				


Real-Time Application / Offline Simulation Application - Load and Start

Access	<p>This command is available only for the following platforms: DS1007, DS1202 MicroLabBox, MicroAutoBox III, SCALEXIO, and VEOS. For DS1007, MicroLabBox, MicroAutoBox III, and SCALEXIO platforms, the platform hardware must be connected to the host PC. You can access the command via:</p> <table> <tr> <td>Ribbon</td><td>None</td></tr> <tr> <td>Context menu of</td><td>Platform Manager – platform</td></tr> <tr> <td>Shortcut key</td><td>None</td></tr> <tr> <td>Icon</td><td></td></tr> <tr> <td>Others</td><td>Drag an application file from File Explorer to the platform in the Platform Manager¹⁾</td></tr> </table>	Ribbon	None	Context menu of	Platform Manager – platform	Shortcut key	None	Icon		Others	Drag an application file from File Explorer to the platform in the Platform Manager ¹⁾
Ribbon	None										
Context menu of	Platform Manager – platform										
Shortcut key	None										
Icon											
Others	Drag an application file from File Explorer to the platform in the Platform Manager ¹⁾										

¹⁾ If you use the *right* mouse button to drag the application file, a context menu is opened for you to select an action.





Purpose	To load an application to the RAM of the selected hardware or to VEOS, and start it automatically.				
Result	<p>A standard Open dialog opens for you to select an application file or variable description file:</p> <ul style="list-style-type: none"> ▪ DS1007, MicroLabBox, MicroAutoBox III, SCALEXIO: The selected file must be in the RTA or SDF file format. ▪ VEOS: The selected file must be in the OSA or SDF file format. <p>The selected application is loaded to the RAM of the selected hardware or to VEOS. After downloading, the application is started automatically.</p> <p>VEOS: The Platform Manager displays the loaded offline simulation application and the virtual ECU(s) and the (optional) environment VPU contained in the OSA file.</p>				
Description	Before the application is loaded, ModelDesk checks whether an application is already loaded. If one is, you are prompted to unload it and load the new application.				
Related topics	<p>Basics</p> <table> <tr> <td>Managing Offline Simulation Applications on VEOS Platforms.....</td> <td>23</td> </tr> <tr> <td>Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms.....</td> <td>19</td> </tr> </table>	Managing Offline Simulation Applications on VEOS Platforms.....	23	Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms.....	19
Managing Offline Simulation Applications on VEOS Platforms.....	23				
Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms.....	19				

Reload

Access	<p>This command is available only for the following platforms: DS1007, DS1202 MicroLabBox, MicroAutoBox III, SCALEXIO, and VEOS. An application must be loaded. You can access the command via:</p>	
Ribbon	None	
Context menu of	Platform Manager – platform – application	
Shortcut key	None	
Icon		

Purpose	To reload the currently loaded application to the RAM. After reloading, the application is not started.
Result	ModelDesk reloads the selected real-time application/offline simulation application on the selected platform/to VEOS. After reloading, the application state is STOPPED .
Related topics	<p>Basics</p> <p>Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms..... 19</p>

Reload to Flash

Access	<p>This command is available only for the following platforms: DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO. An application must be loaded. You can access the command via:</p> <table border="1"> <tr> <td>Ribbon</td><td>None</td></tr> <tr> <td>Context menu of</td><td>Platform Manager – platform – application</td></tr> <tr> <td>Shortcut key</td><td>None</td></tr> <tr> <td>Icon</td><td></td></tr> </table>	Ribbon	None	Context menu of	Platform Manager – platform – application	Shortcut key	None	Icon	
Ribbon	None								
Context menu of	Platform Manager – platform – application								
Shortcut key	None								
Icon									
Purpose	To reload the currently loaded application to the flash memory. After reloading, the application is not started.								
Result	<p>ModelDesk reloads the selected real-time application on the selected platform. After reloading, the application state is StoppedFromFlash.</p> <div> <p>Note</p> <p>An application that was already in the flash memory will be overwritten if you reload the application to the flash memory.</p> </div> <p>The  platform state icon next to the application icon in the Platform Manager indicates that the running application was loaded from the flash memory.</p>								


Related topics**Basics**

[Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms.....](#) 19

Reload to Flash and Start

Access

This command is available only for the following platforms: DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO. An application must be currently loaded. You can access the command via:

Ribbon	None
Context menu of	Platform Manager – platform – application
Shortcut key	None
Icon	

Purpose

To reload the currently loaded application to the flash memory. After reloading, the application is started.


Result

The selected application is reloaded on the selected platform. The reload process is executed to the flash memory.

After reloading, the application state is **RunningFromFlash**.

Note

An application that was already in the flash memory will be overwritten when you reload the application to the flash memory.

The  platform state icon next to the application icon in the Platform Manager indicates that the application that is running was started from the flash memory.


Related topics**Basics**

[Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms.....](#) 19

Manage Platforms

Access

You can access this command via:

Ribbon	Platforms – Platform Management
Context menu of	Platform Manager
Shortcut key	None
Icon	

Purpose

To display and manage the platforms that were registered in your system.

Result

ModelDesk opens the Manage Recent Platform Configuration dialog, which lets you manage your recent platform configuration. You can remove elements from the recent platform configuration and hide registered platforms in the drop-down lists in ModelDesk. You can import configurations for registered platforms from an XML file or export the recent hardware configuration to an XML file.

Description

When you register a single dSPACE processor or controller board, a multiprocessor system, a SCALEXIO system, or an XIL API MAPort platform, ModelDesk stores the registration data in the recent platform configuration.

After you close the Manage Recent Platform Configuration dialog, ModelDesk may open a dialog prompting you to refresh the interface connections. If so, call the [Refresh Interface Connections](#) command. Refer to [Refresh Interface Connections](#) on page 84.

Manage Recent Platform Configuration dialog

To manage the registered platforms and import or export the configuration of registered platforms.

Recent Platform Configuration Lists the platforms that were registered in your system and whose registration data is stored in the recent platform configuration, and displays some information on the registered platforms.

Commands The following commands are available via buttons and from the menus or context menus:

Command	Access	Description
Activate	<ul style="list-style-type: none"> Context menu of an inactive platform Shortcut key: Alt+A 	Lets you activate the selected inactive platform(s). An active platform is displayed in the Platform Manager .
Collapse	Context menu of a platform	Lets you collapse the member items of the platform selected in the platform list.

Command	Access	Description
Deactivate	<ul style="list-style-type: none"> Context menu of an active platform Shortcut key: Alt+D 	Lets you deactivate the selected platform(s). An inactive platform is hidden. It is not displayed in the Platform Manager.
Expand	Context menu of a platform	Lets you expand the collapsed elements of the platform selected in the platform list.
Export	<ul style="list-style-type: none"> Button File menu Shortcut key: Alt+E 	Lets you select the XML file you want to export the recent platform configuration to.
Group by Active State	View menu	Lets you group the platforms according to their Active state.
Group by Platform Type	View menu	Lets you group the platforms according to their platform type.
Import	<ul style="list-style-type: none"> Button File menu Shortcut key: Alt+I 	<p>Lets you select the XML file containing the platform configuration you want to import. The currently active platform configuration is replaced by the content of the imported XML file.</p> <div> Note <p>You are recommended to import only recent platform configurations that you previously exported.</p> </div>
Refresh	<ul style="list-style-type: none"> View menu Context menu of a platform Shortcut key: F5 	Lets you refresh the visualization of the recent platform configuration in the dialog.
Remove	<ul style="list-style-type: none"> Button Edit menu Context menu of a platform Shortcut key: Del 	<p>Lets you remove the currently selected platform from the recent hardware configuration. The platform is no longer available as an assignable registered platform and is no longer displayed in the Platform Manager.</p> <div> Note <p>You are recommended to perform the Refresh Interface Connections command after removing a platform that required registration at the device driver.</p> </div>
Remove All	<ul style="list-style-type: none"> Button Edit menu Shortcut key: Shift+Del 	<p>Lets you remove all listed platforms from the recent hardware configuration. The platforms are no longer available as assignable registered platforms and are no longer displayed in the Platform Manager.</p> <div> Note <p>You are recommended to perform the Refresh Interface Connections command after removing a platform that required registration at the device driver.</p> </div>

Command	Access	Description
Remove Multiprocessor	Context menu of a Multiprocessor System platform	Lets you remove the selected Multiprocessor System platform from the recent hardware configuration. However, all the DS1006 processor boards of the multiprocessor system are converted to single platforms, which are then listed as separate platforms in the platform list.
Select All	<ul style="list-style-type: none"> Context menu of a platform Shortcut key: Ctrl+A 	Lets you select all the items in the platform list.
Sort Alphabetically	View menu	Lets you sort the platform list alphabetically in ascending order by platform names.

Related topics

References

[Register Platforms..... 85](#)

Pause

Access

This command is available only for the VEOS platform, and if an application is currently running. You can access this command via:

Ribbon	None
Context menu of	Platform Manager – VEOS platform - application
Shortcut key	None
Icon	None

Purpose

To pause an offline simulation.

Result

The offline simulation pauses.

You can restart the offline simulation with the **Start** command or continue it stepwise with the **Single Step** command.

Related topics**Basics**

[Managing Offline Simulation Applications on VEOS Platforms.....](#) 23

References

[Real-Time Application / Offline Simulation Application - Load.....](#) 72
[Real-Time Application / Offline Simulation Application - Load and Start.....](#) 73
[Single Step.....](#) 91
[Start.....](#) 92
[Stop.....](#) 93

Platform Manager

Access

You can access this command via:

Ribbon	View – Switch Controlbars – Controlbar
Context menu of	None
Shortcut key	None
Icon	None




Purpose












To show or hide the Platform Manager.



Description



Platform Manager A software component represented by a controlbar. It provides functions to handle platforms and the applications assigned to the platforms.

Platform list Lists the platforms available in your system that are currently connected to the platform hardware or corresponding simulators. The list contains all the platforms that were registered in ModelDesk or that are connected to your host PC without having to be registered, including the boards, modules and units belonging to the platforms' inventories. Platforms that are contained in the current ModelDesk project but are currently disconnected are not displayed. The platform list also provides information on the *platform state* and on the *platform membership*:

Platform Icon	Platform State Icon	Description
	(None)	Platform is connected.
	(None)	Platform is disconnected.
	(None)	Platform is unplugged.

Platform Icon	Platform State Icon	Description
	(None)	Platform is disabled.
	 ¹⁾	An application is running on the dSPACE real-time hardware or in VEOS.
		An application was loaded from the flash memory of the dSPACE real-time hardware. The application is running.
	 ¹⁾	The application is stopped, and the dSPACE real-time hardware or VEOS is reset.
(None)	 ²⁾	The application is loaded on the hardware, but it was terminated. It must be reloaded.
(None)	 ²⁾	The status of the application is undefined. This icon is displayed if you register a SCALEXIO platform consisting of processing units with application processes already running on them, but not all the application processes belonging to the parent application are part of your registered SCALEXIO platform.
		There are firmware inconsistencies. For example, the firmware version of a SCALEXIO processing hardware differs from the firmware version of your current RCP and HIL software installation, or hardware components belonging to the SCALEXIO platform contain different firmware versions. Associated warning messages are shown in the Message Viewer .

¹⁾ For the SCALEXIO and VEOS platforms, the  and  icons are displayed beside the application icon, not beside the platform icon.

²⁾ Available only for SCALEXIO platforms. The  and  icons are displayed beside the application or application process icon.

Views of platforms For SCALEXIO platforms, the Platform Manager provides two views of the displayed platforms. You can switch between them via context menu.

- **Assembly view:** The platform's mechanical topology is displayed. The platform is displayed with assembly components, such as racks and units arranged according to the assembly structure.
- **Network view:** The network-based view of the registered hardware is displayed. The platform is displayed without assembly components like racks and units.

Positioning the controlbar You can shift controlbars to any position inside the working area or dock them at the border of the working area. For instructions on positioning controlbars, refer to [How to Customize the Screen Arrangement \(ModelDesk Basics !\[\]\(529949c2c3dadbaa4e538e8c643454bc_img.jpg\)\)](#).

Related commands

The Platform Manager provides the following commands:

Purpose	Refer to
To generate an XML file containing textual information on platforms/devices that are currently detected by the Platform Manager.	Create Support Info on page 66
To collapse the platforms and subnodes of the node selected in the Platform Manager.	Collapse on page 66
To expand the collapsed platforms and subnodes of the node selected in the Platform Manager.	Expand on page 67
To display and manage the platforms that were registered in your system.	Manage Platforms on page 77
To register dSPACE real-time hardware and VEOS.	Register Platforms on page 85

There are commands that are platform-specific. Refer to:

- [DS1006 Processor Board Platform](#) on page 34
- [MicroAutoBox Platform](#) on page 38
- [Multiprocessor System Platform](#) on page 41
- [SCALEXIO Platform](#) on page 42
- [VEOS Platform](#) on page 44

Related topics**Basics**

[Basics of Platform Manager..... 10](#)

Platform Management Page

Access

This page is part of the **ModelDesk Options** dialog.

Purpose

To specify general settings for seeking the platforms during ModelDesk startup.

Dialog settings

Seek connected platforms on startup Lets you specify whether to search for registered platforms when ModelDesk is started.

- If the checkbox is selected, ModelDesk scans the recent hardware configuration and searches
 - For registered platforms connected via bus interface

- For registered and connected SCALEXIO systems, DS1007 boards, MicroLabBoxes, MicroAutoBox III units, and VEOS
The platforms that are found are displayed in the **Platform Manager**.
- If the checkbox is cleared, ModelDesk does not search for connected and registered platforms during startup.

Seek MicroAutoBox II and platforms connected via slot CPU, too (Available only if Seek connected platforms on startup is selected) Lets you specify whether ModelDesk should also search for registered MicroAutoBox II units and registered platforms connected via slot CPU during startup.

Note

When you enable this option, the startup process can be affected by long timeouts.

Display platform message dialogs Lets you specify to display message boxes containing messages on the real-time hardware or VEOS. If selected, message boxes display messages generated by the real-time hardware or VEOS due to errors that might result from your application. If the checkbox is cleared, no message boxes are displayed.
ModelDesk shows the messages in the **Message Viewer** in either case.

Related topics

References

[Options \(ModelDesk Basics !\[\]\(e474458956c9a37fbf9586ddb60a7fa1_img.jpg\)](#))

Properties (Platform)

Access This command is available only if a platform is selected. You can access it via:

Ribbon	None
Context menu of	Platform Manager – platform
Shortcut key	Enter
Icon	None

Purpose To view the properties of the selected platform.

Result The platform properties are displayed in the **Properties** pane. You can also change the properties.


Related topics**HowTos**

[How to Register a Platform..... 13](#)

Refresh Interface Connections

Access

You can access the command via:

Ribbon	Platforms – Platform Management
Context menu of	None
Shortcut key	None
Icon	

Purpose

To refresh the interface connections between ModelDesk and the hardware.

Result

- DS1007, MicroAutoBox III, MicroLabBox, SCALEXIO, and VEOS: Using the command interrupts the connection to the platform temporarily.
- All other platforms: ModelDesk refreshes the interface connections by resetting the device drivers of the platform connections (via bus interface or Ethernet) and reinitializing the **Platform Manager** with the information from the recent hardware configuration. The device drivers for bus connections are always reset, but the device drivers for network connections are reset only if at least one platform using the network connection is registered.

Related topics**References**

[Clear System..... 65](#)

Refresh Platform Configuration

Access




You can access this command via:

Ribbon	Platforms - Platform Management
Context menu of	Platform Manager

Shortcut key	None
Icon	

Purpose	To refresh the hardware configuration.
Result	The platform configurations are refreshed. The view of the structure shown in the Platform Manager is updated.
Related topics	<div>HowTos<div>How to Refresh Platform Configurations..... 15</div></div>

Register Platforms

Access	<div>You can access this command via:</div> <table><tr><td>Ribbon</td><td>Platforms – Platform Management</td></tr><tr><td>Context menu of</td><td>Platform Manager</td></tr><tr><td>Shortcut key</td><td>None</td></tr><tr><td>Icon</td><td></td></tr></table>	Ribbon	Platforms – Platform Management	Context menu of	Platform Manager	Shortcut key	None	Icon	
Ribbon	Platforms – Platform Management								
Context menu of	Platform Manager								
Shortcut key	None								
Icon									
Purpose	To register dSPACE real-time hardware and VEOS.								
Result	ModelDesk now recognizes the registered platform.								
Description	The registered platform is displayed in the Platform Manager. The registration data is stored in the recent hardware configuration. The Platform Manager can remember the configuration when ModelDesk is restarted.								



Register Platforms dialog

To specify the register settings for a single processor or controller board, a multiprocessor system, MicroAutoBox II or a SCALEXIO Processing Unit, and to get information on the platforms registered so far.

Platforms Lets you select the platform type being registered.

Platform properties Lets you view and specify the register settings for the platform. The available properties depend on the selected platform type.

Property	Description
Common Properties	
Custom name	(Available only for the SCALEXIO platform) Lets you specify a name for the selected SCALEXIO platform. After registration, the name is displayed in the Platform Manager . If you do not specify a custom name, "SCALEXIO Real-Time PC" is displayed in the Platform Manager .
Multiprocessor type	(Available only for the Multiprocessor System platform) Displays the processor board type the selected Multiprocessor System platform is based on. The value is "DS1006".
Platform type	Displays the type of the selected platform, for example, DS1006 Processor Board.
Topology check	(Available only for the Multiprocessor System platform) Lets you specify if ModelDesk checks the topology of the selected DS1006-based multiprocessor system. If enabled, ModelDesk checks if all the processor boards of the system are interconnected via Gigalinks. ModelDesk does <i>not</i> check whether the topology of the connected boards is compatible with the topology required by the real-time application to be loaded to the system, i.e., it does not check whether the correct Gigalink ports of the processor boards are used for interconnection. The topology check is performed: <ul style="list-style-type: none"> ▪ When the multiprocessor system is connected ▪ When you load an application to the multiprocessor system
Connection Settings Properties	
Connection parameter	(Available for the SCALEXIO platform) Lets you select the connection parameter to specify member processing units (SCALEXIO). You can select one of the following connection parameters: <ul style="list-style-type: none"> ▪ Alias name ▪ Board name ▪ IP address ▪ MAC address
Connection type	(Not available for the SCALEXIO platform) Lets you specify the connection type of the platform hardware. <ul style="list-style-type: none"> ▪ Select BUS if the platform hardware is installed in the host PC or in an expansion box connected to the host PC via a bus interface. ▪ Select NET if the platform hardware is connected to the host PC via Ethernet. For MicroAutoBox II and VEOS, only the NET connection type is available.
IP address	(Available for the SCALEXIO platform) Lets you specify the network client for assignment. You can enter it or select it from the list of formerly used entries. You can also scan the local network for connected platform hardware. To do so, click the Scan for available processing units input field to open the Scan Local Network dialog. For details, refer to Scan Local Network for Processing Units dialog on page 88.
MAC address	(Available for the SCALEXIO platform) Lets you specify the MAC address of the SCALEXIO Processing Unit. It is used to identify the identical hardware. You can also scan the local network for connected platform hardware. To do so, click the Scan for available processing units input field to open the Scan Local Network dialog. For details, refer to Scan Local Network for Processing Units dialog on page 88.

Property	Description
Network client	(Available for the NET connection type of the DS1006; also available for the MicroAutoBox and VEOS) Lets you specify the network client as an alias or IP address.
Port address	(Not available for the SCALEXIO platform and the MicroAutoBox) Lets you specify the base address of the board as specified with the DIP switches or the rotary switches on the board.
Multiprocessor Configuration Properties	
Processors	<p>Lets you specify the number of processors belonging to the multiprocessor system. Click  to add a processor, or click  to delete the selected processor.</p> <div> <p>Tip</p> <p>You should specify the maximum number of processors, since you cannot add members to a multiprocessor system that is already registered.</p> </div>
Processor name	<p>Displays or lets you specify the name of the selected processor board.</p> <p>When you register a multiprocessor system, ModelDesk specifies default processor names and board port addresses like this: MASTER, 0x300 (first board), SLAVE, 0x310 (second board), SLAVE_B, 0x320 (third board), SLAVE_C, 0x330 (fourth board), ... You should change the processor names according to the variable description to be used with the Multiprocessor System platform.</p>
Port address	Lets you specify the base address of the board as specified with the DIP switches or the rotary switches on the board.

Note

If you register a DS1006-based multiprocessor system, the connection type and network client are specified for the multiprocessor system, so these settings are valid for all the processor boards belonging to the multiprocessor system. The port addresses are specified individually for the processor boards in the Multiprocessor configuration.

Register Lets you complete the registration. The registered platform is displayed together with the platform properties in the Registered platforms list. The registered platform is also displayed in the Platform Manager.

Registered platforms list Displays all the registered platforms with the following information: platform name, platform type, serial number/identifier, MAC address, network client, and port address.

You can customize the display in the Registered platforms list using the following commands available from the context menu of column headers:

- **Best Fit:** Lets you optimize the width of the selected column.
- **Best Fit (all columns):** Lets you optimize the widths of all columns according to the width of the editor or browser.
- **Column Chooser:** Lets you open a dialog for customizing the columns of the platforms list. To add a column to the list, drag it from the opened dialog to the list header. To remove a column from the list, drag its header to the dialog.
- **Sort Ascending:** Lets you sort the list alphabetically in ascending order according to the selected column.

- **Sort Descending:** Lets you sort the list alphabetically in descending order according to the selected column.

Scan Local Network for Processing Units dialog

To scan the local network for connected platform hardware or simulators, and select one or more platforms or a simulator to register.


Type Lets you select the filter item type you want to use to filter the results list. If you select 'None', no filtering is applied.

Value Lets you enter a filter string.

Match whole word Lets you specify to search only for a matching pattern substring.

(Re)scan Lets you start a new scan process. ModelDesk scans the subnetwork your host PC is connected to for connected processing units matching the specified filter settings, and refreshes the results list.

List of available processing units Displays all the processing units that the specified filter found in the network during the scan process. The results list contains the IP address, MAC address, board name, system name and serial number for each processing unit that was found. If the scan process is performed for VEOS, the results list contains the IP address and host name for each found simulator, together with the respective product version and installation path of the VEOS installation on the simulator.



To select a processing unit for registration, click its entry and then press the  button. The selected element is moved to the list of selected processing units, where you can transfer its connection parameter value to the **Register Platforms** dialog.

Tip

You can multiselect processing units.

List of selected processing units Displays all the processing units selected for registration so far. When you click **Apply**, the listed platform hardware is assigned to the platform you want to register, and the connection parameter value of each list item is transferred to the **Register Platforms** dialog.

The following buttons are available to move elements from one list to the other:

	Moves the selected element(s) from the Available processing units list to the Selected processing units list.
	Moves the selected element(s) from the Selected processing units list to the Available processing units list.

Apply Lets you confirm the selection of processing unit(s) for registration. When you click this button, the connection parameter value of each element in the **Selected processing units** list is stored in the **Register Platforms** dialog.


Related topics**HowTos**

[How to Register a Platform..... 13](#)

Real-Time Application - Reload

Access

This command is available only for the following platforms: DS1006, MicroAutoBox, and Multiprocessor System. An application must be currently loaded. You can access the command via:

Ribbon	None
Context menu of	Platform Manager – platform
Shortcut key	None
Icon	

Purpose

To reload the currently loaded application to the RAM.

Result

ModelDesk reloads the application that belongs to the active SDF file of the selected platform to the RAM. The application always starts automatically after it is reloaded.

Related topics**Basics**

[Managing Real-Time Applications on DS1006, Multiprocessor System, and MicroAutoBox II Platforms..... 18](#)

Reload and Start

Access

This command is available only for the following platforms: DS1007, DS1202 MicroLabBox, MicroAutoBox III, SCALEXIO, and VEOS. An application must be currently loaded. You can access the command via:

Ribbon	None
Context menu of	Platform Manager – platform – application

Shortcut key	None
Icon	

Purpose To reload the currently loaded application to the RAM. After reloading, the application is started.

Result The selected application is reloaded.
After reloading, the application state is **RUNNING**.

Related topics

Basics


[Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms..... 19](#)

Show Connected Clients

Access

You can access this command via:

Ribbon	None
Context menu of	<ul style="list-style-type: none"> Platform Manager – SCALEXIO platform Platform Manager – Processing units of a SCALEXIO platform
Shortcut key	None
Icon	None

Purpose To display the clients to which the selected SCALEXIO platform  or SCALEXIO Processing Unit is connected.

Connected Client Overview dialog

To get details on the clients that are currently connected to the selected SCALEXIO platform or SCALEXIO processing unit.

For each processing unit, the **Connected Client Overview** dialog displays all the client processes that access the unit.

Host Name Displays the host name of the client that is connected to the selected processing unit.

- IP Address** Displays the IP address of the client that is connected to the selected processing unit.
- User Name** Displays the user name of the client that is connected to the selected processing unit.
- Connection Time** Displays the time when the client connection to the selected processing unit was established.
- Process Name** Displays the name of the client process that accesses the selected processing unit.
- Refresh** Lets you update the display of the client processes.

Related topics

References

SCALEXIO Platform.....	42
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Single Step

Access

This command is available only for the VEOS platform, and if an application is currently pausing or stopped. You can access this command via:

Ribbon	None
Context menu of	Platform Manager – VEOS platform – application
Shortcut key	None
Icon	None

Purpose

To run a pausing or stopped offline simulation stepwise.

Result

The next step of an offline simulation is executed. You can run all the steps separately in consecutive order.

Description

You can use this command to inspect an offline simulation in detail. Each time you use the command, the next simulation step is executed.

Related topics**Basics**

[Managing Offline Simulation Applications on VEOS Platforms..... 23](#)

References

[Pause..... 79](#)
[Real-Time Application / Offline Simulation Application - Load..... 72](#)
[Real-Time Application / Offline Simulation Application - Load and Start..... 73](#)
[Start..... 92](#)
[Stop..... 93](#)

Start

Access

This command is available only for the following platforms: DS1007, DS1202 MicroLabBox, MicroAutoBox III, SCALEXIO, and VEOS, and if an application is loaded. You can access this command via:

Ribbon	None
Context menu of	Platform Manager – platform – application
Shortcut key	None
Icon	None

Purpose

To start the selected application.

Description

ModelDesk starts the selected application loaded on the platform.

Relevant for VEOS: An offline simulation starts from the beginning, or a pausing offline simulation continues.

Related topics**Basics**

[Managing Offline Simulation Applications on VEOS Platforms..... 23](#)
[Managing Real-Time Applications on DS1006, Multiprocessor System, and MicroAutoBox II Platforms..... 18](#)

Stop

Access

This command is available only for the following platforms: DS1007, DS1202 MicroLabBox, MicroAutoBox III, SCALEXIO, and VEOS, and if an application is currently running. You can access this command via:

Ribbon	None
Context menu of	Platform Manager – platform – application
Shortcut key	None
Icon	None

Purpose

To stop the selected application.

Description

ModelDesk stops the selected application running on the platform.

The application is not unloaded automatically when it is stopped. If you want to unload it, choose Unload from the application's context menu.

Related topics

Basics

Managing Offline Simulation Applications on VEOS Platforms.....	23
Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms.....	19

Stop RTP

Access

This command is available only for the following platforms: DS1006 and MicroAutoBox. You can access this command via:

Ribbon	None
Context menu of	Platform Manager – platform
Shortcut key	None
Icon	None

Purpose

To stop the application running on the selected platform.

Description

ModelDesk stops the real-time application on the currently selected platform.

Related topics**Basics**

[Managing Real-Time Applications on DS1006, Multiprocessor System, and MicroAutoBox II Platforms..... 18](#)

Stop RTPs

Access

This command is available only for the Multiprocessor System platform. You can access this command via:

Ribbon	None
Context menu of	Platform Manager – platform
Shortcut key	None
Icon	None

Purpose

To stop the applications running on the selected Multiprocessor System platform.

Description

ModelDesk stops the real-time applications on the currently selected Multiprocessor System platform.


Related topics**Basics**

[Managing Real-Time Applications on DS1006, Multiprocessor System, and MicroAutoBox II Platforms..... 18](#)

Unload

Access

This command is available only for the following platforms: DS1007, DS1202 MicroLabBox, MicroAutoBox III, SCALEXIO, and VEOS. An application must be loaded. You can access this command via:

Ribbon	None
Context menu of	Platform Manager – platform – application
Shortcut key	None
Icon	

Purpose To unload the selected application.

Description ModelDesk unloads the application from the memory of the selected platform.

Related topics

Basics

Managing Real-Time Applications on DS1007, DS1202 MicroLabBox, MicroAutoBox III, and SCALEXIO Platforms..... 19

Update Firmware

Access This command is available only for dSPACE real-time platforms. You can access this command via:

Ribbon	None
Context menu of	Platform Manager – platform
Shortcut key	None
Icon	None

Purpose To update the firmware of the selected platform.

Result The firmware is updated to the latest firmware version.

Note

- It is recommended to perform the **Refresh Interface Connections** command after updating the firmware.
- After updating the MicroAutoBox II firmware, you have to turn off the MicroAutoBox II. The firmware changes take effect after restart.

Description ModelDesk checks whether the ModelDesk installation contains appropriate firmware which is later than the firmware that is currently installed on the hardware. If a later version is available, the firmware is updated.

The Update Firmware Wizard opens for updating or repairing firmware components for the following real-time platforms:

- DS1006
- DS1007
- MicroAutoBox II
- MicroAutoBox III
- MicroLabBox
- SCALEXIO

For the other platforms the dialog settings vary or you have to use another tool.

- DS1552 Multi-I/O Module of a MicroAutoBox II:

DS1401UpdateExtIO

The Update Firmware Wizard provides the following dialogs to configure and start a firmware update.

Specifics for SCALEXIO platforms To ensure real-time applications are downloaded without restrictions or side effects, and with proper functionality, the following conditions must be fulfilled:

- All the processing units/processor boards of a SCALEXIO platform contain the firmware version that is available in the current RCP and HIL software installation.
- All the components of a SCALEXIO system (for example, real-time PC and I/O boards) contain the same firmware version.

Firmware version deviations for a SCALEXIO platform are indicated in the Platform Manager. The affected hardware components are marked by the ⚠ symbol. You can find associated warning messages in the Message Viewer.

Note

Note the following restrictions when you use a SCALEXIO system:

- The Update Firmware Wizard supports SCALEXIO systems as of dSPACE Release 2015-B. If you want to update the firmware version on a SCALEXIO system to an earlier version, you have to use ControlDesk or ConfigurationDesk from an earlier dSPACE Release.
- If your SCALEXIO system contains a DS2655M2 Digital I/O Module, a firmware update from firmware version 3.2 or earlier to a firmware version 3.3 or later, might lead to an error and the update process is then stopped.

To finish the firmware update you have to do the following steps:

- Restart the SCALEXIO system.
- Call the Refresh Interface Connections command in the Platform Manager.
- Repeat the firmware update process.
- If your SCALEXIO system contains one or more new hardware components that are not already supported by the currently active firmware on the SCALEXIO Processing Unit or DS6001 Processor Board, a firmware update might lead to an error and the update process is then aborted.

To finish the firmware update, perform the following steps:

- Restart the SCALEXIO system.
- Call the Refresh Interface Connections command in the Platform Manager.
- Repeat the firmware update process.

Select Mode dialog

Lets you select the firmware update mode.

- **Firmware update mode**

The firmware handling process is configured for updating all firmware components of the real-time hardware to a later version.

- **Firmware repair mode**

The firmware handling process is configured for repairing the selected firmware components of the real-time hardware by reloading the same firmware versions.

Next > Opens the next dialog.

OK Closes the Update Firmware Wizard without starting a firmware update.

Select Firmware Archive dialog

To select the firmware archive to be loaded.

Currently selected archive Displays the selected firmware archive. If the firmware archives are installed on the default installation path, either the latest firmware archive for the registered and selected real-time hardware is displayed,

or the firmware archive that you specified manually via the **Browse for archive** button.

Archive selection Lets you select the firmware archive to be used for firmware update.

- **Select an archive from installation**

By default, the latest firmware archive is selected that corresponds to the active dSPACE Release installation.

- **Select an archive from file system**

Lets you select a firmware archive in another version or from another path.

< Back Opens the previous dialog to change the update mode.

Next > Opens the next dialog.

OK Closes the Update Firmware Wizard without starting a firmware update.

Select Firmware Components dialog

To start the prepared firmware update.

Name Displays the names of the selected platform, its hardware components, and the related firmware components.

Current FW Displays the firmware versions currently loaded to the listed hardware components.

Available FW Displays the firmware versions available in the specified firmware archive.

Update

- In firmware update mode, the firmware components to be updated are marked. You cannot modify the selection.
- In firmware repair mode, you have to select at least one firmware component to enable the repair process.

Status Displays the status of the firmware update process. If the firmware component does not provide progress information, only the states 50% and 100% are displayed. If the update process finished successfully, the status is set to OK.

Update/Repair

- In firmware update mode, the **Update** button is enabled to start a firmware update process if later firmware versions are available in the firmware archive than those currently loaded to the hardware.
- In firmware repair mode, the **Repair** button is enabled to start a firmware repair process, if the firmware versions of the loaded firmware components and the versions of the specified firmware archive are identical, and if you have selected at least one firmware component in the **Update** column to be repaired.

< Back Opens the previous dialog to change the selected firmware archive.

OK Closes the Update Firmware Wizard without starting a firmware update.

Related topics

Basics

[Basics on the Firmware Manager \(Firmware Manager Manual !\[\]\(a03a7eb2f4046e1d3c76772003e549ea_img.jpg\)\)](#)

Troubleshooting

Introduction

If a problem related to platform management comes up, the following topics provide a collection of possible malfunctioning scenarios and how to solve the problem.

Update Process of a SCALEXIO System Aborts

Problem

The update of the firmware of a SCALEXIO system leads to an error and aborts.

Solution

If your SCALEXIO system contains one or more new hardware components that are not already supported by the currently active firmware on the SCALEXIO Processing Unit or DS6001 Processor Board, a firmware update might lead to an error and the update process is then aborted.

To finish the firmware update, perform the following steps:

- Restart the SCALEXIO system.
- Call the Refresh Interface Connections command in the Platform Manager.
- Repeat the firmware update process.

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