Release Notes RobotStudio 5.10

RELEASE NOTES ROBOTSTUDIO 5.10 .................................................................................................................... 1

RELEASE INFORMATION .......................................................................................................................................... 4

Release Name ........................................................................................................................................................................... 4
Release Information ................................................................................................................................................................. 4
Release Date ............................................................................................................................................................................. 4
Robot Libraries ........................................................................................................................................................................ 4
ABB Robot Libraries included in RobotStudio 5.10 ........................................................................................................ 5
Track Libraries ........................................................................................................................................................................ 5

Supported Platforms .......................................................................................................................................................... 6
Supported Operating Systems ........................................................................................................................................ 6
Recommended Hardware ................................................................................................................................................ 6
Supported RobotWare Versions .................................................................................................................................. 7
Support for future RobotWare versions ............................................................................................................................... 7

CHANGES IN ROBOTSTUDIO 5.10 ........................................................................................................................... 8

New Features in RobotStudio 5.10 ......................................................................................................................................... 8
New robot models ..................................................................................................................................................... 8
CATIA V5 converter support of CATProduct ............................................................................................................ 8

Languages ................................................................................................................................................................................. 9

CAD Converter ........................................................................................................................................................................ 9
Supported CAD Formats and Versions ..................................................................................................................... 9
CAD Converter Options .......................................................................................................................................... 10
Demo stations & Tutorials ........................................................................................................................................... 10

ROBOTSTUDIO 5.10 IMPROVEMENTS ................................................................................................................... 11

Limitations Solved in RobotStudio 5.10 ............................................................................................................................... 11
Default folders for “Stations” and “Systems” changed for Chinese and Japanese .......................................................... 11
Controller start timeout extended to 240 s ....................................................................................................................... 11
Attaching part to tool with two toolframes ......................................................................................................................... 11
Load Geometry checkbox returns to enabled state ........................................................................................................ 11
Move/Copy bodys to new part- show only reposition question for first body .............................................................. 11
Dual Core Support .................................................................................................................................................. 11
Corrected Support Cases ........................................................................................................................................... 12

ROBOTSTUDIO INFORMATION .................................................................................................................................. 13

Code Snippets .................................................................................................................................................................. 13

Instruction Templates ....................................................................................................................................................... 14

Create System from Layout Wizard ............................................................................................................................... 15

Tracks ........................................................................................................................................................................... 15

Supported external axis configurations ............................................................................................................................. 15

LIMITATIONS IN ROBOTSTUDIO 5.10 .......................................................................................................................... 16

Visual Studio Tools for Applications ............................................................................................................................... 16

Properties and methods that use the type System.Drawing.Color will not work in VSTA ........................................ 16

Static events cannot be called from applications developed in VSTA ....................................................................... 16

Debugging of VSTA Applications ................................................................................................................................... 16

VSTA Library add-ins not available ............................................................................................................................... 16

Use Visual Studio 2005 Express for advanced add-in ..................................................................................................... 16

Known Limitations in RobotStudio 5.10 .......................................................................................................................... 17

RobotWare 5.06 Compatibility ....................................................................................................................................... 17

RobotWare 5.07 Compatibility ....................................................................................................................................... 17

Move/Copy of Virtual Controller systems ..................................................................................................................... 17

Problems starting virtual controllers for RobotWare 5.07.05 or earlier on dual core PCs ........................................... 17

Synchronization is time consuming ................................................................................................................................ 18

Virtual FlexPendant ............................................................................................................................................. 18

Write protected systems ............................................................................................................................................... 18

JointTargets for external axis .......................................................................................................................................... 18

Importing RobotStudio 2.x/3.x/4.x mechanisms might cause problems .............................................................................. 18

Custom Display Settings ............................................................................................................................................... 18

Problems when undoing Boolean operations on Geometry ............................................................................................. 18

Out of memory ................................................................................................................................................................ 19

Array of robtargets, tooldata and workobjects are not supported .................................................................................... 19

LOCAL declarations in RAPID are not supported in Layout mode ................................................................................. 19

The RAPID functions Offs and RelTool are not fully supported ....................................................................................... 19

Multiple Serial Ports option ............................................................................................................................................. 19

Virtual FlexPendant might fail during restart ................................................................................................................ 19

Direct3D limitations ........................................................................................................................................................... 19

Lower simulation performance for Play in Program Editor .............................................................................................. 20

AutoConfiguration does not support positioners ........................................................................................................... 20

Error message starting system with IRB260/660 ............................................................................................................ 20

Incorrect error message “IRBxxx: Could not change motor state” ................................................................................... 20

Modeling Mode: Intersect of parts may not work correctly ............................................................................................ 20

License may not be automatically installed with the “Internet” option if behind a FireWall ........................................... 20

Not possible to activate non-motion tasks from RobotStudio .......................................................................................... 21

Working range of IRB340 ................................................................................................................................................ 21

Path handling of instructions with multiple joint targets ................................................................................................. 21
Error Message "Position Outside Reach" ................................................................. 21
Process time is displayed only for Simulation - Play in Time Slice mode ........................................... 21
Minor difference in process time of "Simulation Play" and "Program Editor Play" .................................... 21
Event Manager: Simulation cannot be triggered by analog system signals ................................................ 22
The error message "Unable to save the station. One reason for this error may be that there is not enough space to store the data," ........................................................................................................... 22
Virtual Flex Pendent: Emergency Stop button ......................................................................................... 22
Use Direct3D on Windows Vista for improved performance ....................................................................... 22
Use CAD Converter when converting CATIA V4 files ............................................................................. 22

ROBOTSTUDIO 5.10 KEYBOARD SHORTCUTS ................................................................................. 23
Release Information

**Release Name**

The release name is RobotStudio 5.10

The release contains the following products:

- RobotStudio 5.10 DVD build 2400

  The RobotStudio DVD contains the following product versions:

  - RobotStudio 5.10 build 2400
  - RobotWare 5.10.00.01 build 0147
  - RobotStudio Online 5.10.00.01 build 0147

RobotStudio 5.10 is available in seven languages (see section below). RobotWare 5.10 is available in 14 languages (see Release Note 5.10 RobotWare.pdf available on the RobotStudio DVD.). RobotStudio Online is available in five languages (see section below).

The installed program versions are displayed if you select Start → Settings → Control panel → Add/Remove programs. Select the program (according to the list above) and select “Support information”. The program version is displayed in the table.

**Release Information**

The information should be considered as last minutes information and most up-to-date.

For more information please visit the support web site at http://www.abbroboticssoftware.com. There you can find a discussion forum, e-learning and software downloads. Visit also our web site at http://www.abb.com/roboticssoftware for more information and updates.

**Release Date**

Release date 2008-01-30

**Robot Libraries**

The folder *ABB Library* contains libraries of robots, tools, external axes, positioners and equipment. Track configuration files to be used for track motions or type *RTT* or *IRBTx003* (*x* = 4, 6, or 7) can be found in the Track folder, see section Track Configuration Files. For configuration of tracks of type *IRBTx004*, (*x* = 4, 6, or 7) there is an additional options mediapool in the Mediapool folder installed in the same folder as RobotWare (..\%ProgramFiles\%ABB Industrial IT\Robotics IT\MediaPool\). The current version of the
Track additional option is called Track.5.09.0010. It supports RobotWare 5.09 and 5.10 and subrevisions of those releases.

The ABB Library also contains template robot systems for all included robot models.

Some typical MediaPools for different combinations of robots and external axis (positioners) are installed to the MediaPool directory. The mediapool for StandAloneControllers is available on the RobotStudio DVD and may be used for non-standard, third party.

**ABB Robot Libraries included in RobotStudio 5.10**

<table>
<thead>
<tr>
<th>Robot Model</th>
<th>Library Name</th>
</tr>
</thead>
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<tr>
<td>IRB140_5_81__01.rslib</td>
<td>IRB4450S_30_240__01.rslib</td>
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<td>IRB140_5_81_C_01.rslib</td>
<td>IRB6400R_200_250__01.rslib</td>
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<td>IRB140_6_81_C_01.rslib</td>
<td>IRB6400R_200_280__01.rslib</td>
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<td>IRB1400_5_144__01.rslib</td>
<td>IRB660_180_315__01.rslib</td>
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<td>IRB1400H_5_128__01.rslib</td>
<td>IRB660_250_315__01.rslib</td>
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<td>IRB6600_175_255__01.rslib</td>
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<td>IRB7600_300_280__01.rslib</td>
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<tr>
<td>IRB4400S_30_243__01.rslib</td>
<td>IRB840_01.rslib</td>
</tr>
</tbody>
</table>

**Track Libraries**

RobotStudio is distributed with the following track types that are available in the Track folder of the ABB Library.
Supported Platforms

Before you install RobotStudio, make sure your system conforms to the following requirements:

Supported Operating Systems

Microsoft Windows XP Professional with Service Pack 2 or higher.
Microsoft Windows Vista Business or Enterprise

Note: The Windows Firewall will try to block features necessary to run RobotStudio and RobotStudioOnline properly. Make sure to unblock these features when asked (Industrial Robot Discovery Server, RobotStudio StudioAppFramework module, Virtual RobotController (all published by ABB)). The blocking state of a certain program can be viewed and changed at Start/Control Panel/Windows Security Center/Windows Firewall. Read more on www.microsoft.com

Note: To run RobotStudio on the 64-bit edition of XP or Vista you need to first install .NET Framework 2.0 for 64-bit OS (NetFx64.exe) and XML 6 for x64. These files can be downloaded from www.microsoft.com.

Note: RobotStudio Online 5.10 and PC-SDK 5.10 does not support 64-bit operating systems.

Recommended Hardware

High performance desktop or laptop workstation:

CPU: 2.0 GHz or faster processor
Memory: 1 GB system memory at minimum, 2 GB if running Windows Vista, stations with several robot systems, or large CAD-models.
Free disk-space: 5+ GB free space
Graphics card: High performance DirectX 9 or OpenGL-compatible graphics card with the corresponding up-to-date drivers installed
Display settings: Screen resolution: 1280 x 1024 pixels or higher
DPI: Normal size (96 dpi)
Mouse: Three button mouse  

DVD-ROM Drive  

**Supported RobotWare Versions**  
RobotStudio 5.10 is distributed with RobotWare 5.10 and works with  
- RobotWare 5.06, all revisions,  
- RobotWare 5.07.01 & 5.07.05 and later revisions,  
- RobotWare 5.08.01 and later revisions, and  
- RobotWare 5.09, all revisions  
- RobotWare 5.10  

*Note: See Section Known Limitations in RobotStudio 5.10 for more information about compatibility with RobotWare versions 5.06, 5.07, 5.08 and 5.09.*  

**Support for future RobotWare versions**  
RobotStudio 5.10 may support, but is not guaranteed to support, future minor or major revisions of RobotWare. However, a necessary, but maybe not sufficient, requirement for RobotStudio to support any later RobotWare version is that the corresponding version of the Robot Communication Runtime is installed in addition to RobotWare.  

There are two ways to ensure that the appropriate Robot Communication Runtime is installed when installing a new RobotWare version.  

1. Install the same version of RobotStudio Online as RobotWare. This will also upgrade the Robot Communication Runtime.  
2. Install the Robot Communication Runtime separately. The Runtime can be found in the Utility folder of the RobotWare CD.  

*Note: The latest RobotWare CD can be requested from your local ABB representative.*
Changes in RobotStudio 5.10

This section describes the changes that have been made in RobotStudio 5.10

New Features in RobotStudio 5.10

New robot models

The following robot models have been added to RobotStudio

- IRB140
  - IRB140T - 6 kg / 0.81 m
  - IRB140 - 6 kg / 0.81 m

- IRB1600
  - IRB1600 - 6 kg / 1.2 m
  - IRB1600 - 6 kg / 1.45 m
  - IRB1600 - 8 kg / 1.2 m
  - IRB1600 - 8 kg / 1.45 m

- IRB6640
  - IRB6640 – 180 kg / 2.8 m
  - IRB6640 – 205 kg / 2.75 m
  - IRB6640 – 130 kg / 3.2 m
  - IRB6640ID - 200 kg /2.55 m
  - IRB6640ID – 170 kg /2.75 m

- IRB6660
  - IRB6660 – 130 kg / 3.1 m

CATIA V5 converter support of CATProduct

By using the RobotStudio add-in AssemblyImport.dll that is available on the RobotStudio DVD, CATIA V5 assemblies of type CATProduct can be imported into RobotStudio with the part structure kept. CATProduct assemblies can also be converted using the CAD Converter without installing the AssemblyImport.dll, but then the part structure is discarded and all parts of the assembly are put into one single SAT-file.

To install the add-in, copy the file to the Addins folder of the RobotStudio installation and restart RobotStudio to enable the feature. A new menu item called “Import Assembly” will appear below the “Import Geometry” menu item.

Note: The CATIA V5 converter requires a separate license.
Languages

The following languages are supported in RobotStudio 5.10:

- English
- French
- German
- Spanish
- Italian
- Chinese (simplified Chinese, mainland Chinese) \(^1\)\(^2\)
- Japanese \(^1\)\(^2\)

Notes:
1) The language is only supported in the RobotStudio, the virtual controller and the Virtual Flex Pendant – it is not supported in RobotStudio Online.
2) The language support for Asian languages (Chinese, Korean, Japanese) has some specific limitations in the controller and Virtual FlexPendant:
   - TPWrite, TPRead, and TPPrint do not work in Asian languages – use English text.
   - Printing error text from RAPID (instruction ErrWrite) does not work in Asian languages
   - use English text.

CAD Converter

Supported CAD Formats and Versions

RobotStudio includes advanced CAD import capabilities such as:

- ACIS (reads/writes versions v6 to R18)
- IGES (reads versions up to 5.3, writes version 5.3)
- STEP (reads versions AP203 and AP214 (geometry only), writes version AP214)
- VDAFS (reads VDAFS up to 2.0, writes VDAFS 2.0)
- CATIA V4 (reads versions 4.1.9 to 4.2.4)
- CATIA V5 (reads CATIA V5 R2 to R18)
- Inventor (reads versions 6 to 12)
- Pro/Engineer (reads versions 16 to Wildfire3)

Note: The CAD converters require separate licenses (except ACIS).
CAD Converter Options

The CAD Converter options can be set by using the Advanced button of the Settings dialog of the CAD Converter. By pressing the Advanced button the CADConverter.ini file is opened. The file specifies all available options for CAD conversion. The change an option, simply uncomment the line by removing the semi-colon and modify the option as desired. All options are described in the file AcisInterOpConnectOptions.pdf of the RobotStudio DVD.

Demo stations & Tutorials

There are three demo stations included in this version. Instructions on how to access and use these can be found on the Start Page under Learn To Use/Demo Stations. Follow these instructions carefully.

Note: Only two of them are available from the Start Page (Demo Exhaust Pipe_Pack&Go.zip and Demo FlexLoader_Pack&Go.zip). The third one (PalletDemo_Pack&Go.zip) can be found together with the previous two in the users’s RobotStudio/Station folder.

On the Start Page you will also find a collection of tutorials on how to use RobotStudio. These can be found under Learn To Use/Tutorials.
RobotStudio 5.10 Improvements

Limitations Solved in RobotStudio 5.10

A large number of limitations have been solved in RobotStudio 5.10. This section highlights a few of them which may be of general interest.

Default folders for “Stations” and “Systems” changed for Chinese and Japanese

The Virtual Controller does not support asian characters why the default folders for “Stations” and “Systems” have been changed to English instead of being translated (CQ7001, 6974)

Controller start timeout extended to 240 s

The timeout for controller startup has been extended to 240 s to allow sufficient startup time for systems with complicated configuration, e.g. systems with several external axes (CQ6950).

Attaching part to tool with two toolframes

Support for attaching parts to tools with two toolframes has been added (CQ6851).

Load Geometry checkbox returns to enabled state

The state of the checkbox “Load Geometry” that is available in the file dialog, when opening stations and libraries will always return to “enabled” state after having been disabled. The reason is to ensure that geometries are always loaded by default (CQ6935)

Move/Copy bodys to new part- show only reposition question for first body.

When copying or moving multiple bodies to a new part, a question appears that asks the user if he wants to reposition the bodies relatively to the new part. This question previously appeared for each part but has been changed to only appear once for the selected set (CQ5569).

Dual Core Support

The Virtual Controller has been improved to take advantage of the dual core feature available on some CPUs.
## Corrected Support Cases

<table>
<thead>
<tr>
<th>Headline</th>
<th>Support ID</th>
<th>Internal ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATIA V5 converter not working properly with CATproducts files (see RobotStudio 5.10 Improvements)</td>
<td>PDD DSE7428</td>
<td>CQ6473</td>
</tr>
<tr>
<td>Save station fails after Pack&amp;Go</td>
<td>PDD DSE7530</td>
<td>CQ6734</td>
</tr>
<tr>
<td>Multiple selection in graphic window does not work correctly</td>
<td>PDD DSE7623</td>
<td>CQ6786</td>
</tr>
<tr>
<td>Changed libraries are not loaded into a station, instead the previous version is imported</td>
<td>PDD DSE7626</td>
<td>CQ6787</td>
</tr>
<tr>
<td>Deactivating a collision set while objects are colliding does not refresh the graphics window</td>
<td>PDD DSE7687</td>
<td>CQ6833</td>
</tr>
<tr>
<td>Error in the 'Create system from layout' dialog box while inputing system name and location</td>
<td>PDD DSE7690</td>
<td>CQ6845</td>
</tr>
<tr>
<td>Program Editor problem if not simulation setup is done from Layout Mode</td>
<td>PDD DSE7703</td>
<td>CQ6854</td>
</tr>
<tr>
<td>Program browser does not show all procedures within a module</td>
<td>PDD DSE7728</td>
<td>CQ6887</td>
</tr>
<tr>
<td>MoveAbsJ instructions not updated when referenced work object is deleted</td>
<td>PDD DSE7739</td>
<td>CQ6917</td>
</tr>
<tr>
<td>Coordinate filter in Place functions does not use selected coordinate system</td>
<td>PDD DSE7753</td>
<td>CQ6920</td>
</tr>
<tr>
<td>Trying to open an encoded module with Program Editor generates an exception</td>
<td>PDD DSE7755</td>
<td>CQ6922</td>
</tr>
<tr>
<td>JumpToTarget not possible if WObj not used</td>
<td>PDD DSE7780</td>
<td>CQ6948</td>
</tr>
<tr>
<td>Problem while importing a CATPart file</td>
<td>PDD DSE7810</td>
<td>CQ6961</td>
</tr>
<tr>
<td>Operating mode changes from Auto to Manual when stepping through program if Reachability is activated</td>
<td>SG071012-7136</td>
<td>CQ6918</td>
</tr>
<tr>
<td>Unknown Error - Move along path when Offs is used.</td>
<td>FR070403-1279</td>
<td>CQ6441</td>
</tr>
<tr>
<td>Cannot Import Geometry on inventor (ipt) files</td>
<td>DK071211-9193</td>
<td>CQ7003</td>
</tr>
<tr>
<td>Modules not sorted in alphabetical order in Program Browser</td>
<td>NZ071219-9479</td>
<td>CQ7056</td>
</tr>
</tbody>
</table>
RobotStudio Information

**Code Snippets**

The Program Editor of RobotStudio 5.10 contains Code Snippets that are integrated with the Pick List. Code Snippets are pieces of code that can be inserted into the editor on user request. RobotStudio 5.10 comes with a number of predefined Code Snippets, see below

- array2x2x4.snippet
- array2x4.snippet
- array2x4x2.snippet
- array4x2.snippet
- function with return value bool.snippet
- module header.snippet
- procedure parameters.snippet
- procedure with error handler.snippet
- robtarget.snippet
- tooldata.snippet
- TRAP routine example.snippet
- wobjdata.snippet


The RobotStudio .snippet files are stored per user and located in the folder

C:\<Documents and Settings>\<user name>\RobotStudio\Code Snippets,

where the folder <Documents and Settings> may be configured to have different names, e.g. for ABB staff it is called *Data*. It may also be translated on localized versions of Windows.

**Note:** The language specified in the .snippet file to be used in the RobotStudio Program Editor must be RAPID, whereas the Microsoft examples are targeted towards other programming languages. However, the structure and format is the same. See also the predefined .snippet files installed with RobotStudio 5.10
Instruction Templates

The ‘Instruction Template Manager’ can be used to add support for instructions other than the pre-defined set that comes with RobotStudio by default. For example, a robot controller system with the RobotWare Dispense option comes with specialized move instructions related to glueing, i.e. DispL and DispC. The user can manually define instruction templates for these using the ‘Instruction Template Manager’. The instruction templates can be exported to XML-format for later reuse.

For some common processes RobotStudio 5.10 comes with pre-defined XML files that can be imported and used for robot controller systems with that has the appropriate RobotWare options. The instruction templates provided add support for the following RobotWare options:

- Cap (Continuous Application Process)
- Disp (Dispense)
- Trigg (Fixed Position Events)
- Spot Pneumatic
- Spot Servo
- Spot Servo Equalizing

The provided XML files contain both Move and Action instructions.

The instruction template files can be found in the ‘Instruction Templates’ folder of the RobotStudio 5.10 DVD.

Note: RobotStudio ArcWeld PowerPac is recommended when using RobotWare Arc.
Create System from Layout Wizard.

Create System from Layout allows the user to create complex controller systems with just a few mouse clicks. Simply import the desired robots, positioners and track libraries, and run through the wizard.

Tracks

The following tracks with lengths from 1.7 to 11.7 meters are supported. The track can run in a separate task or in a robot task. The system allows 1-3 tracks per task (dependent of the TCP manipulator type).

- IRBT4003
- IRBT6003
- IRBT7003
- RTT_Bobin
- RTT_Marathon

Supported external axis configurations

SingleMove (all in same task)

- TCP Robot + IRBP_A
- TCP Robot + IRBP_B
- TCP Robot + IRBP_C
- TCP Robot + IRBP_D
- TCP Robot + IRBP_K
- TCP Robot + IRBP_L
- TCP Robot + IRBP_R
- TCP Robot + IRBP_A + Track
- TCP Robot + IRBP_K + Track
- TCP Robot + IRBP_L + Track
- TCP Robot + 2 x IRBP_L + Track

MultiMove (all in separate tasks)

- 2 x TCP Robot + IRBP_A
- 2 x TCP Robot + IRBP_B
- 2 x TCP Robot + IRBP_C
- 2 x TCP Robot + IRBP_D
- 2 x TCP Robot + IRBP_K
- 2 x TCP Robot + IRBP_L
- 2 x TCP Robot + IRBP_R

Note: A TCP robot is defined as a robot that has inverse kinematics, e.g. all standard IRB robots.
Limitations in RobotStudio 5.10

**Visual Studio Tools for Applications**

Properties and methods that use the type `System.Drawing.Color` will not work in VSTA.

This is a limitation of the Visual Studio Tools for Applications (VSTA) environment.

*Note:* There is a new VSTA-class `VSTABridge` that can be used to workaround this problem, see API documentation.

Static events cannot be called from applications developed in VSTA.

This affects for example the Simulation – Tick event.

*Workaround:* Create a standard add-in if static events are to be used. Alternatively, use the `VSTABridge` class that can workaround this problem, see API documentation.

Debugging of VSTA Applications

When debugging a VSTA application that adds menu items to the RobotStudio environment, then the menu will not be removed when the program execution stops. This may cause multiple entries of the same menu to be added in RobotStudio. This only affects VSTA add-ins being debugged and not completed VSTA add-ins.

*Workaround:* Restart RobotStudio to remove the extra menus.

VSTA Library add-ins not available

In the Add-ins browser there is a folder for so-called VSTA Library add-ins. This feature is not available.

Use Visual Studio 2005 Express for advanced add-in

The purpose of VSTA is to write custom actions and minor utilities. For advanced add-in development use Visual Studio 2005 Express that can be downloaded free of charge from [http://msdn.microsoft.com/vstudio/express/](http://msdn.microsoft.com/vstudio/express/).
Known Limitations in RobotStudio 5.10

RobotWare 5.06 Compatibility

RobotWare 5.06 is supported with the following limitations,

- The sync to VC function may cause corrupt RAPID programs. The problem appears when lines (i.e. targets, paths) are removed from the RAPID program and paths are added to the RAPID program in the same "Sync to VC" operation. As a consequence, the new path may be added after the ENDMODULE statement. This problem doesn’t appear when running a RobotWare 5.07 or later.

- The Program Editor does not support RobotWare 5.06, but requires RobotWare 5.07 or later.

- The Create System from Layout Wizard does not support RobotWare 5.06, but requires RobotWare 5.07 or later.

RobotWare 5.07 Compatibility

A limitation in the versions 5.07.02, 5.07.03, 5.07.04 of RobotWare may cause the VC to system failure state during cold start (I-start) on certain PCs. The problem is due to the ctrl.bin-file not being correctly created during cold-start (I-start).

Workaround: Create an empty ctrl.bin file in the INTERNAL folder of the controller system, and then perform a warm start.

Note: The problem will reappear if the system is cold-started. The limitation is solved in RobotWare 5.08.

Move/Copy of Virtual Controller systems

Warm started systems cannot be moved to another location and/or PC. This will result in a non-working VC.

A typical symptom of the problem is that the Virtual Controller reports Failed to retrieve procedure.

Workaround and recommended method of working:

1. Use ‘Pack & Go’ to pack the station and system backups in a zip-file.
2. Use ‘Unpack & Work’ to unpack the zip file created by ‘Pack & Go’.

Problems starting virtual controllers for RobotWare 5.07.05 or earlier on dual core PCs

There might be problems running virtual controllers on a computer equipped with dual core processors. To workaround this problem you need to disable the dual core in the BIOS.
**Synchronization is time consuming**

The synchronization procedure is time consuming. This affects synchronization to and from VC as well as the move commands ‘Move Along Path’ and ‘Execute Move Instruction’

**Virtual FlexPendant**

The control panel of the Virtual FlexPendant (VFP) might affect the performance of the graphical window if placed inside this. If this is the case on your computer make sure to set the display mode of the VFP to simple mode. This is done by unchecking the ‘Enable transparency’ option in the Tools/Options… dialog (a restart of the VFP is required after changing mode). The refreshing of the graphical view might however still be somewhat delayed, especially when moving the VFP rapidly over the screen.

**Write protected systems**

It's not possible to change parameters, such as BaseFrame, on a write protected system. If you experience problems with this - make sure that the system folder is not write protected.

**JointTargets for external axis**

JointTargets for external axis are not visualized in the graphical window.

**Importing RobotStudio 2.x/3.x/4.x mechanisms might cause problems**

The following problems might occur when importing mechanisms generated in RobotStudio 2.x/3.x/4.x.

- The base frame is placed in the local origin of the mechanism.
- The mechanism is not repositioned correctly relative the base frame value in the Virtual Controller.
- Import of stations containing process instructions, e.g. ArcL, ArcC etc, is not fully supported. The recommendation is to save the RAPID-program to file and import this file into RobotStudio 5 (Note: The needed motion instruction descriptions must exist in the station before importing the program)

**Note**: The recommendation is to always use IRC5 mechanisms where possible.

**Custom Display Settings**

The program only fully supports "Small Fonts" (Normal size @ 96dpi).

**Problems when undoing Boolean operations on Geometry**

Undoing a Boolean operation might not succeed. To recover from these problems you need to delete the items that caused the problem.
Out of memory

The application might fail when out of memory due to import of very large ACIS-files or load of very large stations. There is no immediate workaround for this problem.

Array of robtargets, tooldata and workobjects are not supported

RAPID programs containing arrays of tooldata, robtargets and workobjects are not supported, i.e. they will not be synchronized to the station.

LOCAL declarations in RAPID are not supported in Layout mode

RobotStudio does not LOCAL declarations of data or routines. RobotStudio will show an error message if such declarations are used.

The RAPID functions Offs and RelTool are not fully supported

RobotStudio doesn’t fully support instructions using Offs or RelTool functions. They will be synchronized and will appear in the element browser, but commands such as “View Tool at Target” and “Locate Target” will not work. Targets used in the instructions will not be visible in the graphics.

Multiple Serial Ports option

A system configured with the “Multiple Serial Ports” option might lead to a complete freeze of the computer. There is a problem with the driver of the built-in modem card on the IBM T42 and T43. The modem must not be allocated to COM1-COM3.

Workaround: Change the allocation of the modem, or remove this system option.

Virtual FlexPendant might fail during restart

Performing a warm start from the Virtual FlexPendant might lead to a crash of the VFP. It can however be opened again right after.

Workaround: Restart the virtual controller from RobotStudio.

Direct3D limitations

1. The screen saver and password lock feature of Windows may cause RobotStudio to hang when the computer is unlocked.

Workaround: Disable the screen saver and password lock feature when using Direct3D. This is done by setting the screen saver to “(None)” on the “Screen Saver” tab of the “Display” dialog that is opened from Start/Settings/Control Panel/Display/Screen saver

2. The following two settings in the ‘Graphics Performance’ dialog (Tools/Options) have no effect

- Cull back-facing triangles.
• Enable two-sided lighting.

**Workaround:** Select the graphical object in the object browser and open the "Graphics Appearance" dialog box (context menu) that handle these options per object instead.

3. The following setting in the 'Graphics Performance' dialog (Tools/Options) is irrelevant when Direct3D is used:
   - Store model data on graphics card.

**Workaround:** None.

4. The following setting in the "Graphics Appearance" dialog (Tools/Options) has no effect (Rendering tab, Curve Properties section):
   - Line width.

**Workaround:** None.

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**Lower simulation performance for Play in Program Editor**

The simulation performance may be lower on some PCs when using the Play button of the program editor compared to the Play button of the Simulation Menu or Simulation Toolbar (CQ5870).

**AutoConfiguration does not support positioners**

(CQ5686)

**Error message starting system with IRB260/660**

Starting a system with IRB260/660 gives you an error message: "The number of joints is different between the model and VC". The reason is that the IRB260/660 is modeled with six joints in RobotStudio of which two are locked, but has four joints in the VC (CQ5375).

**Incorrect error message “IRBxxx: Could not change motor state”**

When starting the VC, the error message “IRBxxx: Could not change motor state” may appear in the output window. This message may be displayed even though the VC has started successfully (CQ5375).

**Modeling Mode: Intersect of parts may not work correctly.**

The body-intersect feature may give incorrect results in some cases due to a limitation in ACIS.

**License may not be automatically installed with the “Internet” option if behind a FireWall.**

The RobotStudio license may not be automatically installed if the PC is behind a firewall.

**Workaround:** Disable firewall, or use “E-mail” option instead.
Not possible to activate non-motion tasks from RobotStudio

Only motion tasks can be activated from RobotStudio (CQ6383).

**Workaround:** Use Virtual FlexPendant to activate wanted Normal tasks before pressing Play button.

Working range of IRB340

In some cases, it may be possible to Jump To target and get Configurations for targets that are outside the working range of IRB340. This is due to the working range being defined as a cylinder and not only defined by the joint limits. It is however not possible to jog the robot to these targets (CQ6463).

Path handling of instructions with multiple joint targets

The path functions, Rotate, Translate, and Mirror do not work as expected with instructions containing via points as joint targets. The functions will leave the joint targets as is. Interpolate Path gives an Unknown Error and Tool Compensation reports an error message (CQ6609).

Error Message **“Position Outside Reach”**

The functions AutoConfiguration, Configuration and View Robot at Target may give rise to error messages **“Position Outside Reach”** in the RobotStudio Output window.

The error messages are due to that the functions iterate over many different robot configurations to find a solution. For each of the failing tries to find a suitable configuration, a **“Position Outside Reach”** message will be displayed in the Output window (CQ6326).

Process time is displayed only for Simulation - Play in Time Slice mode

This is the only combination for which correct cycle time can be guaranteed when custom mechanisms are involved in the simulation. It is only in Time Slice mode that RobotStudio controls the time and can synchronize the execution of the Virtual Controller with custom mechanisms. For simulations that only involve robot motion the cycle time is correct for other combinations as well (Program Editor – Play and FreeRun). The Process Timer will become yellow when the process time cannot be guaranteed (CQ6658).

Minor difference in process time of “Simulation Play” and “Program Editor Play”

The cycle time deviation between “Simulation Play” and “Program editor” is 0.05 s (constant). The difference is due to that the program execution is started in different ways in the two scenarios. The play button of the Program Editor starts program execution in the same way as the FlexPendant, whereas the play button of the Simulation toolbar uses a slightly different mechanism. When executing program from the program editor, it takes a small amount of time for RobotStudio to be aware that the simulation has started why the “Program Editor” cycle time is 0.05 s smaller. The process time of the “Simulation” play is more accurate.
Event Manager: Simulation cannot be triggered by analog system signals

The event manager only support analog station signals, not analog system signals. This is due to a limitation in the Robot Communication Runtime (CQ6556).

The error message "Unable to save the station. One reason for this error may be that there is not enough space to store the data.”

This error may be due to incorrect installation of VSTA. Re-installation of VSTA may solve the problem. VSTA is available on the RobotStudio DVD in the folder

```
<DVD>/RobotStudio/ISSetupPrerequisites\{B422736E-33AC-47AB-9F9D-15EF74EC4813}\vsta_aide.msi
```

Virtual Flex Pendent: Emergency Stop button

When the emergency stop button is pressed on the Virtual FlexPendant it cannot be reset through the VC Control Panel. The button must be reset on the Virtual FlexPendant (CQ5587).

Use Direct3D on Windows Vista for improved performance

Windows Vista is optimized for Direct3d, why it is recommended to use it as the graphics renderer for RobotStudio. This can be changed in RobotStudio → Main Menu → Tools → Options → Graphics → Renderer → Direct3D.

Use CAD Converter when converting CATIA V4 files

It is recommended to use the CAD Converter when converting CATIA V4 files instead of importing the files directly into RobotStudio using "Import Geometry".

Note: The CATIA V4 converter requires a separate license.
# RobotStudio 5.10 Keyboard Shortcuts

<table>
<thead>
<tr>
<th>Command</th>
<th>Modifiers</th>
<th>Key</th>
<th>Command</th>
<th>Modifiers</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
<td></td>
<td>Delete marked lines</td>
<td>CTRL+SHIFT</td>
<td>L</td>
</tr>
<tr>
<td>Activate menu bar</td>
<td></td>
<td>F10</td>
<td>Delete to beginning of word</td>
<td>CTRL</td>
<td>Backspace</td>
</tr>
<tr>
<td>Open API Help</td>
<td>ALT</td>
<td>F1</td>
<td>Delete to end of word</td>
<td>CTRL</td>
<td>Delete</td>
</tr>
<tr>
<td>Open Help</td>
<td></td>
<td>F1</td>
<td>Indent</td>
<td></td>
<td>Tab</td>
</tr>
<tr>
<td>Open RobotStudio Online</td>
<td></td>
<td>F6</td>
<td>Make the selected text lower case</td>
<td>CTRL+SHIFT</td>
<td>U</td>
</tr>
<tr>
<td>Open Virtual Flex Pendant</td>
<td></td>
<td>F5</td>
<td>Make the selected text upper case</td>
<td>CTRL</td>
<td>U</td>
</tr>
<tr>
<td>Switch between windows</td>
<td>CTRL</td>
<td>T</td>
<td>Move to beginning of document</td>
<td>CTRL</td>
<td>Home</td>
</tr>
<tr>
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<td>Move to visible bottom</td>
<td>CTRL</td>
<td>Page Down</td>
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<td>Move to visible top</td>
<td>CTRL</td>
<td>Page Up</td>
</tr>
<tr>
<td>Take Screenshot</td>
<td>CTRL+SHIFT</td>
<td>R</td>
<td>Open line above</td>
<td>CTRL</td>
<td>Enter</td>
</tr>
<tr>
<td>Teach Move Instruction</td>
<td>CTRL+SHIFT</td>
<td>R</td>
<td>Open line below</td>
<td>CTRL+SHIFT</td>
<td>Enter</td>
</tr>
<tr>
<td>Teach Target</td>
<td>CTRL</td>
<td>R</td>
<td>Outdent</td>
<td>SHIFT</td>
<td></td>
</tr>
<tr>
<td>Toggle View Representation</td>
<td></td>
<td>F7</td>
<td>Paste</td>
<td>SHIFT</td>
<td>Insert</td>
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