Release Notes

RobotStudio

6.04.00.01

Revision: -

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1 Release Information

1.1 General

Release Name

The release name is RobotStudio 6.04.00.01 and the build number is 6.04.7152.0140.

Release Date

The release date is November 10th, 2016.

Demo stations

The following demo stations are included in this version.

- Demo AW Station
- Demo Solar Simulation
- Demo Exhaust Pipe
- Demo FlexLoader

They are stored in the Pack & Go format (.rspag) and can be opened with the command Unpack & Work on the Share section of the RobotStudio menu.

ScreenMaker Demo Station and Project

There is a demo station and associated ScreenMaker project available.

- SCM_ExampleProject *(ScreenMaker Project)*
- SCM_ExampleStation *(RobotStudio station)*

These files are found in the *'Addins/ScreenMaker/Samples'* folder under the RobotStudio installation folder.

Tutorials

Tutorials are available at the RobotStudio product pages at
http://www.abb.com/roboticssoftware

Documentation

User documentation for RobotStudio is available from the *Help* button ( ) in the upper-right corner of RobotStudio.

The complete documentation in PDF for RobotWare including RobotStudio is available on DVD and can be ordered separately from ABB.

1.2 System recommendation

Recommended Software

Operating System	
Microsoft Windows 7 SP1	32-bit edition
Microsoft Windows 7 SP1 (recommended)	64-bit edition
Microsoft Windows 10 (recommended)	64-bit edition

> **ℹ️ Note**
>
> The Windows Firewall will try to block features necessary to run RobotStudio. 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 http://www.microsoft.com.

Recommended Hardware

Item	Requirement
CPU	2.0 GHz or faster processor, multiple cores recommended
Memory	3 GB if running Windows 32-bit 8 GB or more if running Windows 64-bit (recommended)
Disk	10+ GB free space, solid state drive (SSD)
Graphics card[1]	High-performance, DirectX 11 compatible, gaming graphics card from any of the leading vendors. For the Advanced lightning mode Direct3D feature level 10_1 or higher is required.
Screen resolution	1920 x 1080 pixels or higher is recommended
DPI	Normal size (100% / 96 dpi) up to Large size (150% / 144 dpi) Only Normal size supported for Integrated Vision.
Mouse	Three-button mouse
3D Mouse [optional]	Any 3D mouse from 3DConnexion, see http://www.3dconnexion.com.

[1] A note on graphics cards and PC hardware. RobotStudio will not benefit from the additional features of so-called 'Professional' or 'Workstation' graphics cards. The price level of these are at a much higher range than gaming graphics cards with comparable performance from a RobotStudio point of view. High-end gaming PCs are very suitable for offline programming with RobotStudio. Such a PC will provide good performance for a limited budget.

1.3 Simulation Models

Robot Libraries

IRB Variant	IRB Variant	IRB Variant
120 3kg/0.58m	4400S 30kg	6700 200 kg/2.8m SW
120T 3kg/0.58m	4450S 30kg	6700 205 kg/2.8m MH3
1200 5kg/0.9m BTM (./FGL/*FPL)	4600 20kg/2.5m	6700 205 kg/2.8m
1200 5kg/0.9m STD (./FGL/*FPL)	4600 20kg/2.5m Type C	6700 140 kg/2.85m MH
1200 7kg/0.7m BTM (./FGL/*FPL)	4600 45kg/2.05m Type C	6700 140 kg/2.85m SW
1200 7kg/0.7m STD (./FGL/*FPL)	4600 60kg/2.05m	6700 155 kg/2.85m MH3
140 5kg/0.8m Type A/B	4600 60kg/2.05m Type C	6700 155 kg/2.85m
140 5kg/0.8m Type C	460	6700 220 kg/2.65m MH
140 6kg/0.8m Type C	4600 40kg/2.55m	6700 220 kg/2.65m SW
140T 5kg/0.8m Type C	4600 40kg/2.55m Type C	6700 235 kg/2.65m MH3
1400 Type A/B	4600 45kg/2.05m	6700 235 kg/2.65m
1400H Type A/B	6400R 200kg/2.5m	6700 175 kg/2.6m MH
1410	6400R 200kg/2.8m	6700 175 kg/2.6m SW
1520ID	6400R 120kg/2.5m	6700 200 kg/2.6m MH3
1600 5kg/1.2m	6400R 150kg/2.8m	6700 200 kg/2.6m
1600 5kg/1.2m Type A	6400R 150kg/2.8m	6700 220kg/3.0m MH
1600 5kg/1.45m	6400R 100kg/3.0m	6700 220kg/3.0m SW
1600 5kg/1.45m Type A	640	6700 245kg/3.0m MH3
1600 6kg/1.2m	660 180kg/3.15m	6700 245kg/3.0m
1600 6kg/1.45m	660 250kg/3.15m	6700 270kg/2.7m MH
1600 7kg/1.2m	6600 175kg/2.55m	6700 270kg/2.7m SW
1600 7kg/1.2m Type A	6600 175kg/2.80m	6700 300kg/2.7m MH3
1600 7kg/1.45m	6600 225kg/2.55m	6700 300kg/2.7m
1600 7kg/1.45m Type A	6600ID 185kg/2.55m	*6700 Inv 210kg/2.9m MH6
1600 8kg/1.2m	6620 150kg/2.2m	*6700 Inv 210kg/2.9m SW6
1600 8kg/1.45m	6620LX-150/1.9m	*6700 Inv 245kg/2.9m
1600 10kg/1.2m	6640 130kg/3.2m	*6700 Inv 245kg/2.9m MH3
1600 10kg/1.45m	6640 180kg/2.55m	*6700 Inv 270kg/2.6m MH6
1600ID 4kg/1.5m	6640 185kg/2.8m	*6700 Inv 270kg/2.6m SW6
*1660ID 4kg/1.55m	6640 205kg/2.75m	*6700 Inv 300kg/2.6m
1660ID 6kg/1.55m	6640 235kg/2.55m	*6700 Inv 300kg/2.6m MH3
2400 10kg	6640ID 170kg/2.75m	7600 150kg/3.5m
2400 16kg	6640ID 200kg/2.55m	7600 325kg/3.1m
2400L	6640 150kg/2.55m DP6	7600 340kg/2.8m
2600 12kg/1.65m	6640 165kg/2.8m DP6	7600 400kg/2.55m
2600 20kg/1.65m	6640 185kg/2.75m DP6	7600 500kg/2.55m
2600 12kg/1.85m	6640 200kg/2.55m DP6	7600 500kg/2.3m
2600ID 8kg/2.0m	6650 125kg/3.2m	7600 150kg/3.5m MH3
2600ID 15kg/1.85m	6650 200kg/2.75m	7600 325kg/3.1m MH3
260	6650ID 170kg/2.75m	7600 340kg/2.8m MH3
340	6650S 125kg/3.5m	7600 400kg/2.55m MH3
360 1kg/1130 Std No axis 4	6650S 200kg/3.0m	7600 500kg/2.55m MH3
360 1kg/1130 Wash-down No axis 4	6650S 90kg/3.9m	7600 390kg/3.1m MH6
360 1kg/1130 Standard	6650S 100kg/3.5m MH6	7600 320kg/2.8m MH6
360 1kg/1130 Wash-down	6650S 190kg/3.0m MH6	7600 390kg/2.55m MH6
360 1kg/1130 Stainless	6650S 100kg/3.5m SW6	7600 390kg/3.1m SW6
360 1kg/800 Std No axis 4	6650S 190kg/3.0m SW6	7600 320kg/2.8m SW6
360 1kg/800 Wash-down No axis 4	6650S 125kg/3.5m MH3	7600 390kg/2.55m SW6
360 1kg/800 Std	6650S 200kg/3.0m MH3	760
360 1kg/800Wash-down	6650S 90kg/3.9m MH3	8700 475kg/4.2m MH6
360 3kg/1130 Std No axis 4	6600 100kg/3.35m	8700 475kg/4.2m SW6
360 3kg/1130 Wash-down No axis 4	6660 130kg/3.1m	8700 550kg/4.2m MH3
360 3kg/1130 Standard	6660 205kg/1.9m	8700 550kg/4.2m
360 3kg/1130 Wash-down	6700 145 kg/3.2m MH	8700 630kg/3.5m MH6
360 3kg/1130 Stainless	6700 145 kg/3.2m SW	8700 630kg/3.5m SW6
360 1kg/1600 Standard	6700 150 kg/3.2m MH3	8700 800kg/3.5m MH3
360 6kg/1600 Standard	6700 150 kg/3.2m	8700 800kg/3.5m
360 8kg/1130 Standard	6700 155 kg/3.05m MH	*910SC 3kg/0.45m
4400 45kg	6700 155 kg/3.05m SW	910SC 3kg/0.55m
4400 60kg	6700 175 kg/3.05m MH3	*910SC 3kg/0.65m
4400L 10kg	6700 175 kg/3.05m	**940
4400L 30kg	6700 200 kg/2.8m MH	14000

* New in RobotStudio 6.04.
** requires the StandAlone Controller mediapool that is available for download from Add-Ins tab / RobotApps / RobotWare Add-Ins

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ℹ Note

All simulation models in the table are installed with RobotStudio, but only the robots in the current product range are displayed in the ABB Library gallery. To import any other robot you need to browse to the file on disk.

Robot Libraries Paint

Variant
52 short vertical arm
52 std vertical arm
540-12 std arm
580-12 std arm
580-12 short arm
5300-12 left
5300-12 right
5320-1500
5320-2000
5350/01 Type Left
5350/01 Type Right
5350/02 Type Left Side Left
5350/02 Type Left Side Right
5350/02 Type Right Side Left
5350/02 Type Right Side Right
5400-12 std arm
5400-13 std arm
5400-14 std arm
5400-22 process arm
5400-23 process arm
5400-24 process arm
5400-12 std arm axis 2 +60 deg
5400-13 std arm axis 2 +60 deg
5400-14 std arm axis 2 +60 deg
5500 35A b_00 / b_80
5500 35B b_00 / b_80
5500 ProArm 35A b_00 / b_80
5500 ProArm 35B b_00 / b_80

Track Libraries

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

| Track family	Length
IRBT2005	2 m to 21 m
IRBT4003	1.7 m to 10.7 m
IRBT4004	1.9 m to 19.9 m
IRBT6003	1.7 m to 10.7 m
IRBT6004	1.7 m to 19.7 m
IRBT7003	1.7 m to 10.7 m
IRBT7004	1.7 m to 19.7 m
RTT_Bobin	1.7 m to 11.7 m
RTT_Marathon	1.7 m to 11.7 m
Paint Rails left and right versions	2 m to 20 m
IRB5350 Rail left and right versions	3 m to 10 m
Elevated Rail left and right versions	3 m to 10 m

2 What's new in RobotStudio 6.04

Overview

RobotStudio 6.04 contains several new features and enhancements described in this section.

2.1 New robots

IRB 6700 Inverted

The 6700 family has got a new member in the IRB 6700 Inverted which is designed for suspended mounting. It comes in two sizes that has reach 2.6 m and 2.9 m, respectively. It can be ordered as a naked robot or with dress pack for material handling or spot welding, with or without the LeanID wrist.
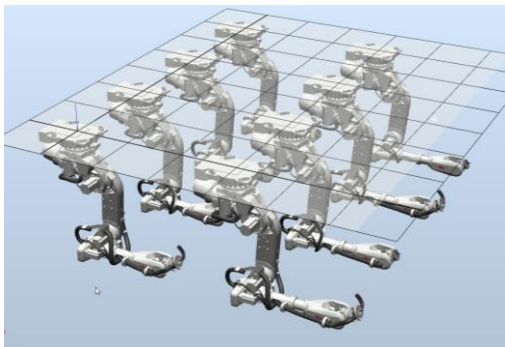
IRB 1200 Foundry Plus

The IRB 1200 is available with the Foundry Plus protection.
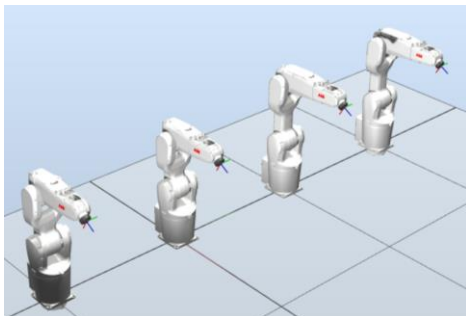
IRB 1660ID 1.55 m / 4 kg

The IRB 1660ID has got a smaller sibling in the new 4 kg variant. The reach is the same as the 6 kg version that was introduced with RobotStudio 6.03.01.

2.2 YuMi

Collision Avoidance for Smart Gripper

The Smart Gripper can be included in the collision avoidance function of the YuMi by using the new configuration tool in RobotStudio 6.04.
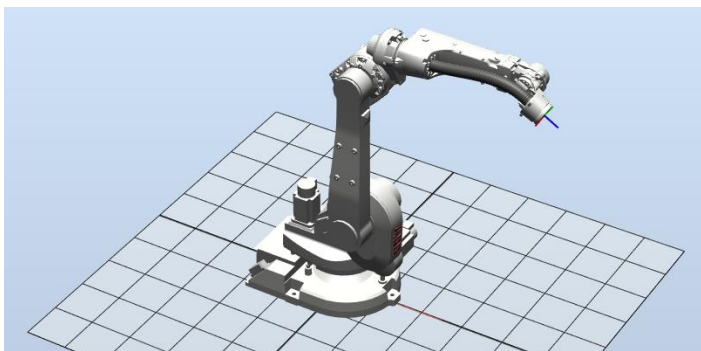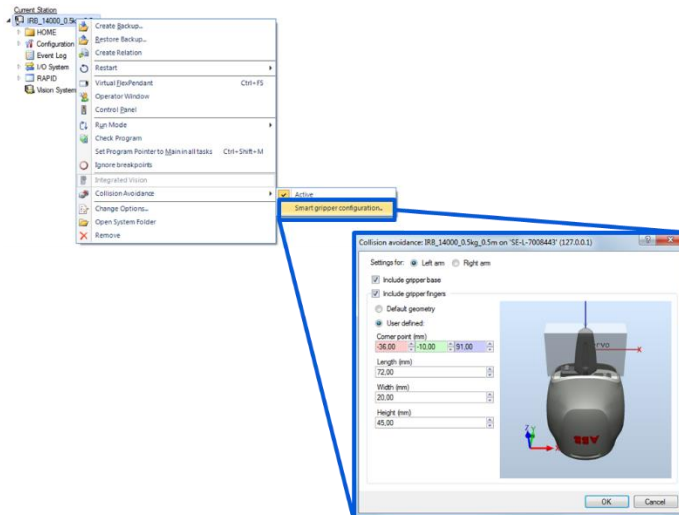

New definition of arm angle and configuration data

The arm angle and arm configuration data has been re-defined in RobotWare and RobotStudio 6.04. If you have an existing YuMi program created with RobotWare 6.03 or earlier you can configure YuMi to use the old arm angle definition using the Configuration Editor (MOC.CFG). The old definition will eventually be made obsolete in future versions of RobotWare.
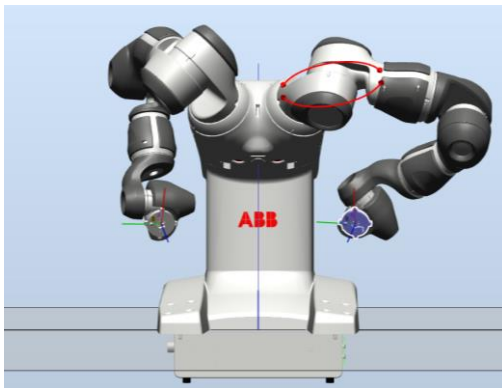
TCP Trace

The TCP Trace function has been improved and is now able to color the trace depending on the value of any selected signal, e.g. the TCP speed. Markups can be created to indicate event log messages during the path execution or any motion related events such as 'Target changed'.
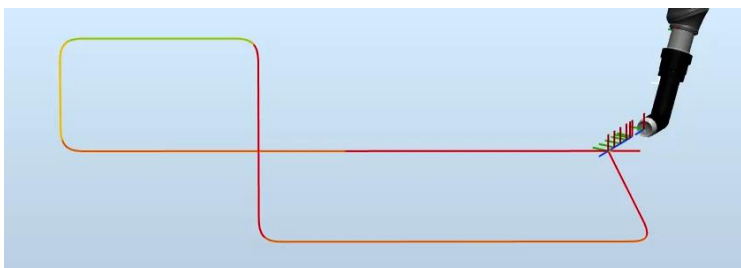
2.3 Data Recovery

Overview

There are four ways to help protect and recover your data in the event of a software failure: auto-save of RAPID, auto-save of stations, automatic backup of station files and automatic backup of virtual controllers. This is configured in the RobotStudio options.

Auto-save of RAPID for virtual controllers

Unapplied RAPID changes will automatically be saved by RobotStudio for possible recovery in the event of a software failure. RAPID changes made to a virtual controller since the last restart will be also automatically saved. These face the risk of being lost if the virtual controller need to be restarted without first being properly shut-down.
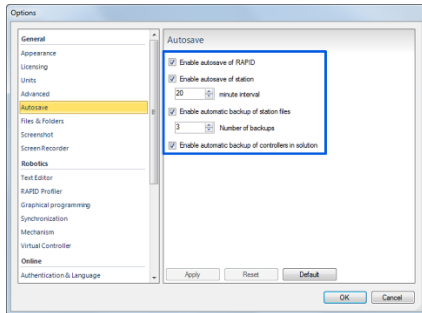

1. Edit RAPID

2. In the event of a software failure (RS or VC). Re-open the station.

3. Review and approve auto-saved changes
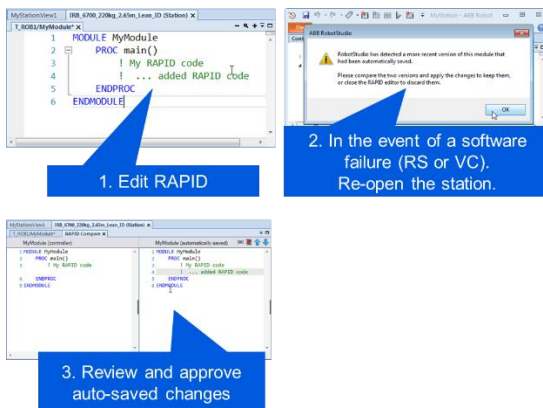
Auto-save of station

Changes made to a RobotStudio station since the last save operation will automatically be saved by RobotStudio at a regular interval if configured in the RobotStudio options. Changes will be stored in a file next to the original station file. The auto-save function requires a Solution.

1. Business as usual

2. File created (.rsautosave)

3. In the event of a software failure, re-open station. If AutoSave data detected...

4. Original .rsstn renamed to .bak
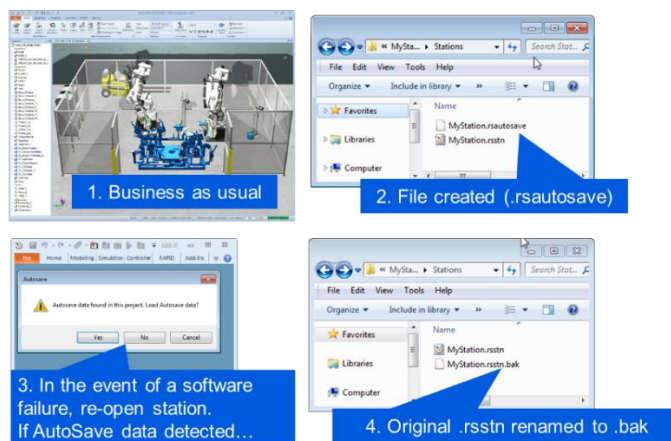
Automatic backup of station files

When working with a RobotStudio Solution, station files may be optionally backed up automatically when saving. The last saved file will be copied to a sub-folder and renamed prior to saving the new changes. The maximum number of backup files is specified in the RobotStudio Options.
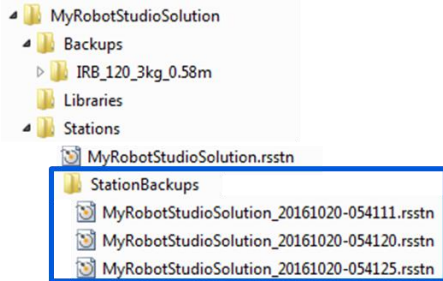
Automatic backup of virtual controllers

The virtual controllers that are part of a RobotStudio station may optionally be backed up when saving the station. The backup is stored in the solution structure. Only the latest backup will be stored.
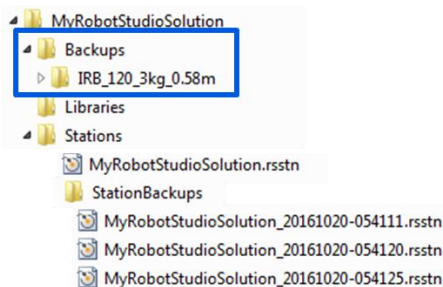
2.4 Visualization and Offline Programming

Virtual Reality – HTC Vive

RobotStudio 6.04 and its Station Viewer works with HTC Vive. The HTC Vive comes with motion tracking sensors for location and orientation tracking of the headset and the hand controls. The hand controls can be used to interact with the virtual reality environment.

The functionality available in the VR environment can be customized by creating add-ins with e.g. Microsoft Visual Studio using the extensibility API that we are providing as a beta version in 6.04.

Note that the HTC Vive integration in RobotStudio 6.04 may change since it is still being developed and has not yet settled on a final solution regarding the interaction design.

The use of HTC Vive requires a high-performance gaming PC. Please check the supplier web page for details (http://www.vive.com/).

Add signals and properties in the Smart Component Design view.

Smart Component signals and properties can be added directly in the design view. Virtual Controller signals cannot be added in this view, but be made accessible through a drop-down menu. Through the connection context menu it is possible to display its properties or delete it. Double-clicking on a smart component in the design view will open its design view.
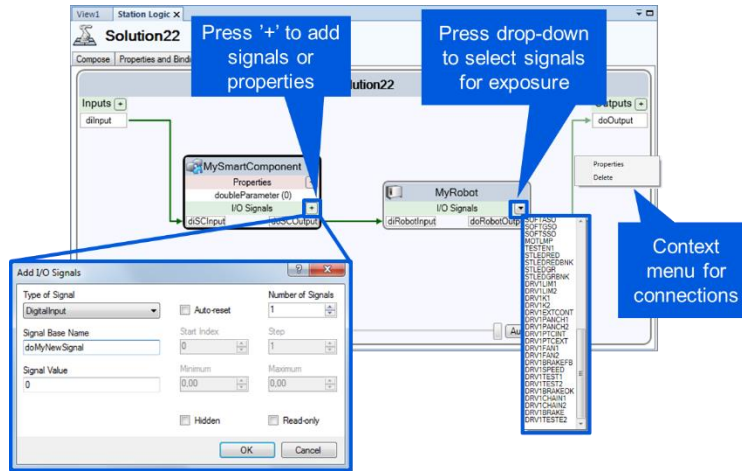
Create LOCAL RAPID declarations through RAPID synchronization

Before a target is synchronized to RAPID from the station the first time, it can be configured as being Local which will result in the creation of LOCAL robtargets in RAPID.
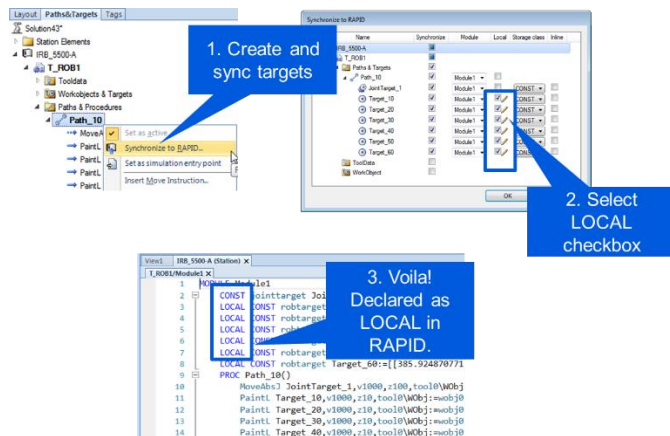
Graphics statistics

The new Statistics windows in the Graphics Tool tab will display the number of bodies, facets, triangles and vertices contained by a part. The information is useful when you want to improve the graphics performance in which case you want to identify the part(s) that has the biggest impact and try to reduce its load.
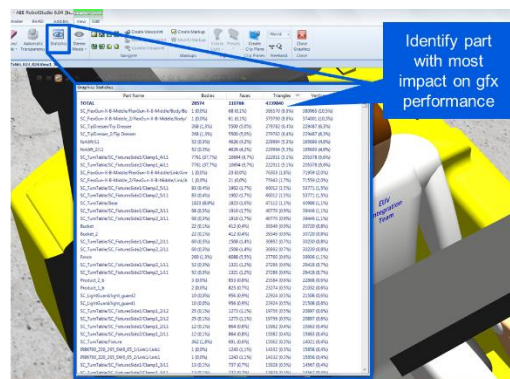
2.5 Commissioning

Shortcut to RobotWare Utility folder with general configuration files

When loading configuration parameters in RobotStudio 6.04 you get a shortcut to the Utilities folder of RobotWare. It contains template configuration files for various external equipment.
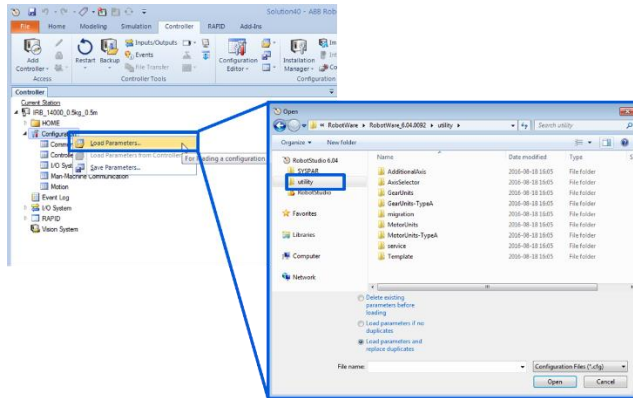
Compare files and folders

The comparison tool of RobotStudio has been improved in 6.04. It can compare any two folders and files. It is made 'RAPID-aware' in that you can exclude the backup time-stamp of the backinfo.txt file, PERS variables, comments, casing and spaces.

Compare folders:
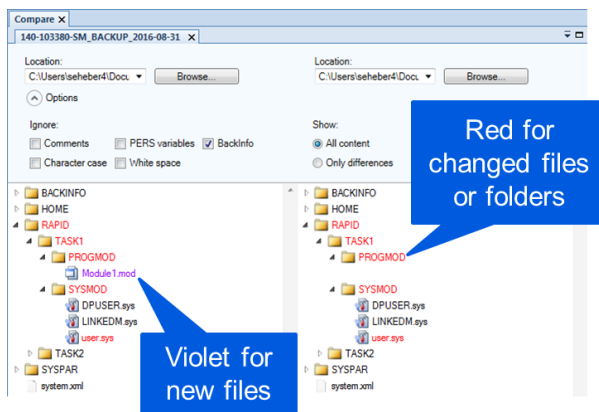
Compare files:
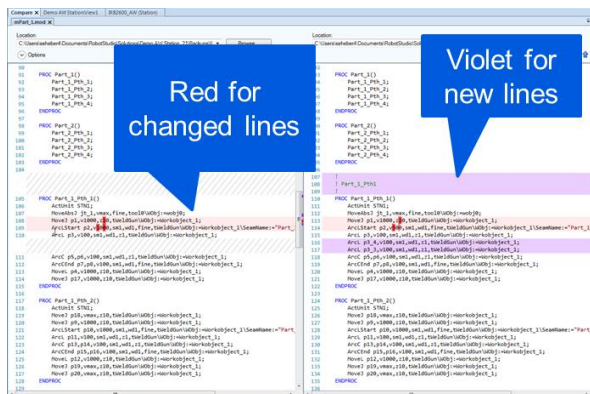
Clear log of in RobotStudio and in the controller

The new button 'Delete all logs' will clear the event log window both in RobotStudio and on the FlexPendant.
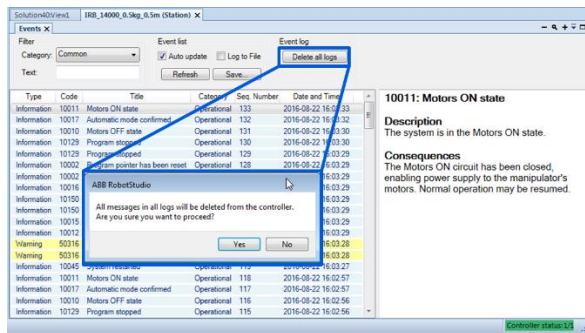
SafeMove 1st generation: old SafeMove Configurator discontinued

The old SafeMove Configurator have been discontinued in favor of Visual SafeMove for 1st generation. The latter has got new icons in the same style as Visual SafeMove for 2nd generation.
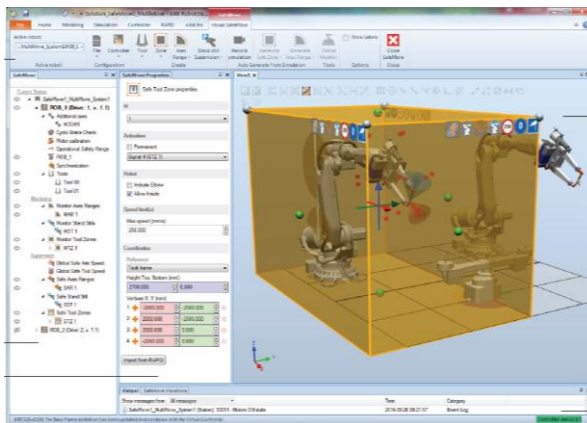
SafeMove 2nd generation: General Output

The function 'External PowerSupply' has been given the option to stay activated regardless of the operating mode as opposed to how is used to be where it got disabled when the enabling device was released in manual mode. The desired behavior of the signal can be configured in the Post-Logic. Due to the generalized behavior it has been renamed to 'General Output'.
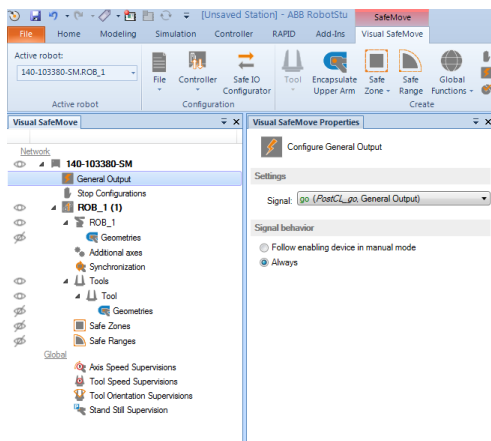
Shortcut to change RobotWare options for virtual controller in station

A shortcut to the Change Options dialog allows easy change of options for virtual controllers in a station.
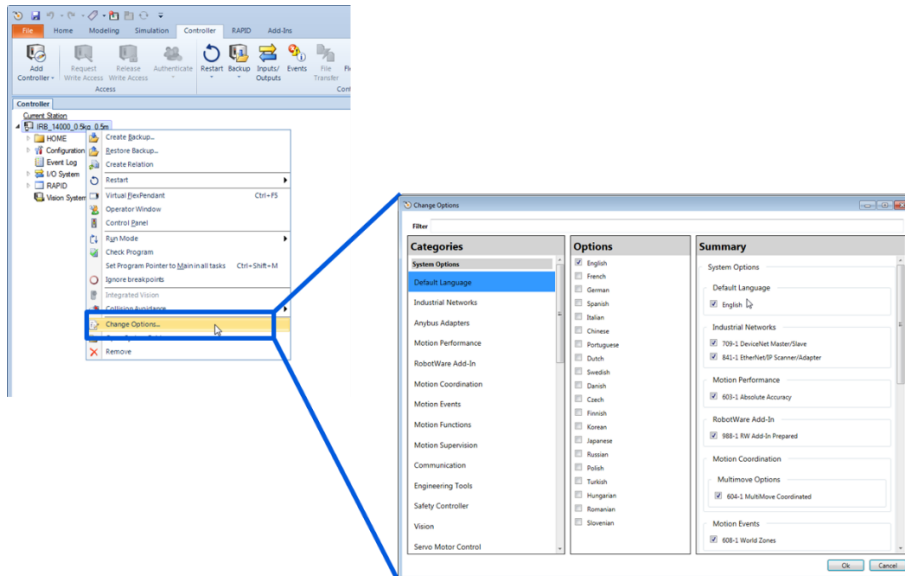
2.6 Fleet Management - Jobs

Command-line Job execution and Job scheduling

If the Job has been saved it can be executed from the command-line using the executable RunJob.exe available in the folder:

…\Program Files (x86)\...\RobotStudio 6.0x\Bin\Addins\FleetManagement

Note that RunJob.exe must be executed from its original location and must thus not be moved as it is dependent on the other RobotStudio files. By creating a batch file for the job, it can be scheduled using Windows Task Scheduler.
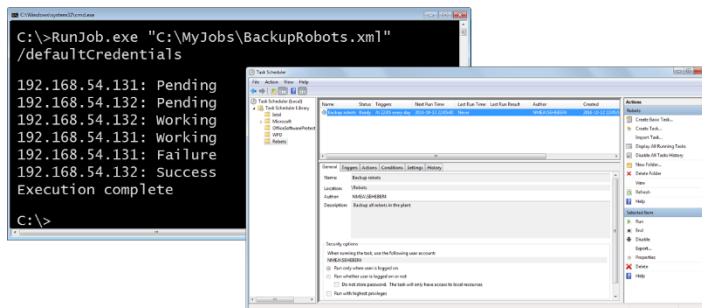
New action: Backup Program Modules

The new action 'Backup Program Modules' will back up only the program modules (.mod files). The motivation is to save only the relevant files if the purpose is to identify changes in program modules.
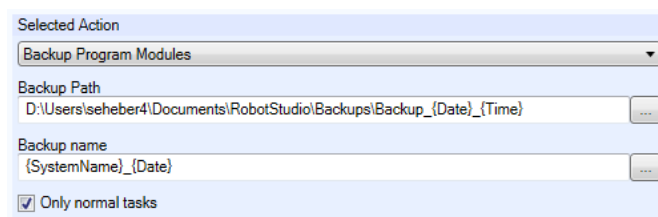
New Action: Compare folders

The new compare function can be executed through a Job. This is useful e.g. when comparing changes between two consecutive backups for each controller.

New action: Read Device Information

Any information from the Device Browser can be read through Jobs, e.g... fan speed, temperature (CPU and main computer) or memory.

Improved action: Read/Write File or Directory

The Read/Write File actions have been extended with support for directories.

Improved action: Search RAPID data – extended with support for individual fields

The action 'Search RAPID data' has been extended with support for individual record fields.
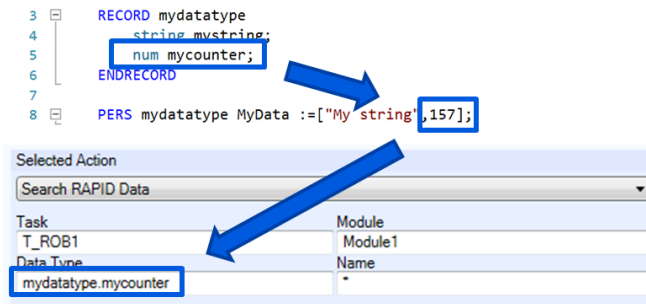
Ease-of-use: Improved UI for replacement strings

The user interface for building dynamic file and folder names using so-called replacement strings have been improved. The strings are now selectable from the browse button ('…').
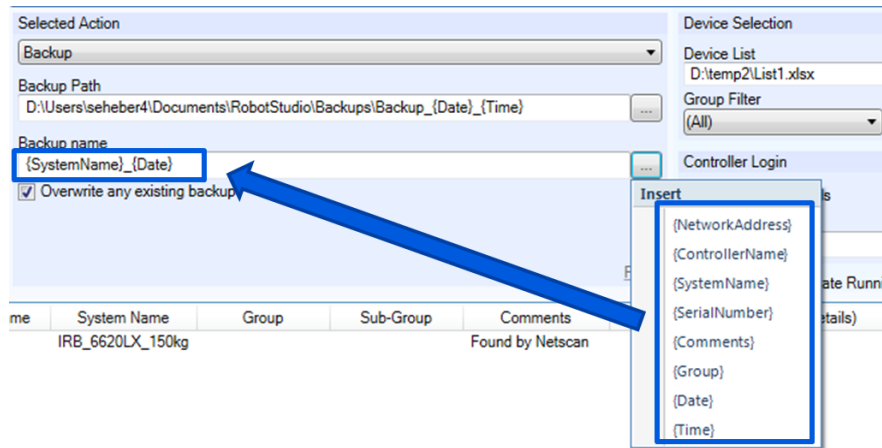
Ease-of-use: Open folder location for Excel reports

The location for the resulting Excel report can be opened from the context menu of the History browser.
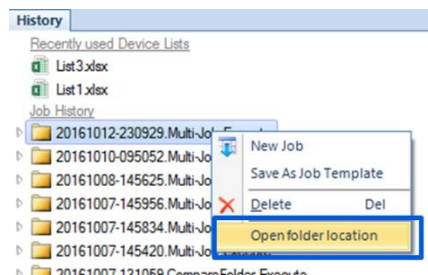
Ease-of-use: Serial number in report

The serial number has been added to the Excel report.

	A	B	C	D	E
1	Network Address	Controller Name	System Name	Serial Number	Task
2	LocalVC/{C51ED5A6-	SE-L-7008443	IRB_120_3kg_0.58m	0000-0	T_ROB1
3					

Multi-action Jobs

A Job can now consist of several actions. This is useful when you take a backup that you want to compare with a previous backup. Then you can create a job with two actions, Backup and Compare Folders.
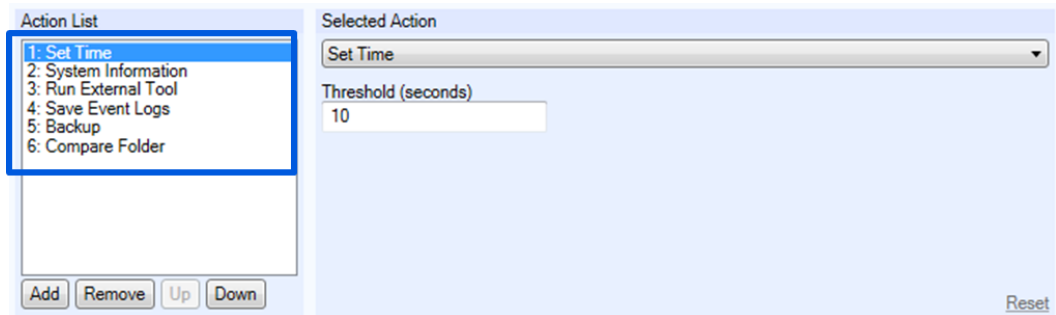
32-bit / 64- bit versions

RobotStudio is available in both 32- and 64-bit versions. From 6.04 onwards, the 64-bit version has been made the default version and thus the title does not display the bitness of it. Instead, the bitness has been added to the title bar of the 32-bit version. In general it is always recommended to use the 64-bit version whenever possible, in particular if you work with offline programming.

Summary of 32/64-bit support	32-bit	64-bit
ScreenMaker	✓	✗
Integrated Vision	✓	✗
SolidWorks CAD Converter	✗ (2015+)	✓
EPS Wizard	✓	✓
Visual SafeMove (1st & 2nd gen)	✓	✓
Everything else in RobotStudio	✓	✓

The long term goal is to discontinue the 32-bit version which will be done when the 32-bit limitaions for ScreenMaker and Integrated Vision are resolved.

3 Late Breaking Information

Overview

This section describes changes and additions done after the Operating Manual was finalized.

Jobs – Allow execution state running

By default, a Job will not execute if the controller is executing a program (Execution state = Running).
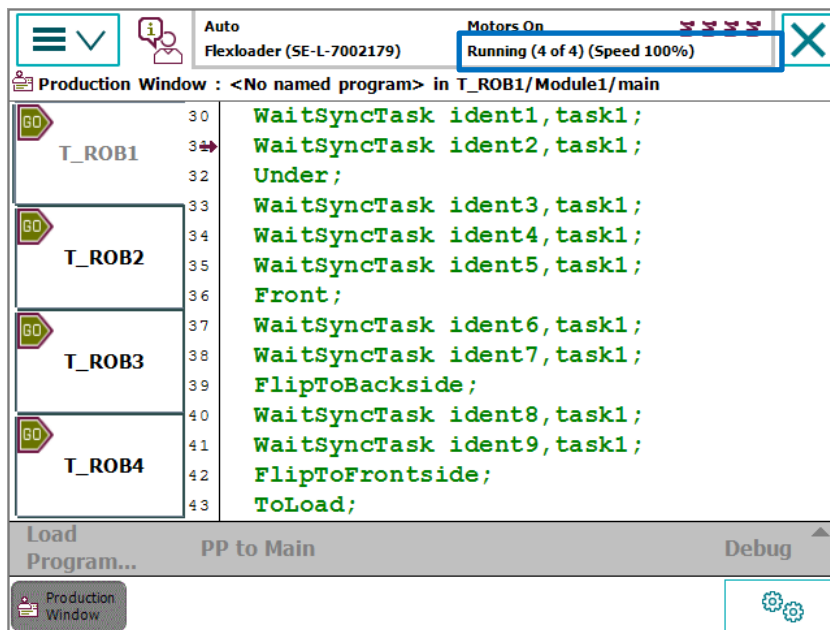
The reason is to reduce the risk of disturbing production if the robots are performing sensitive path following applications such laser cutting, dispending or arc welding. The option may be considered for Jobs that may put load on the controller, e.g. the Backup, and Search RAPID Data (if doing a general search with wild-cards).
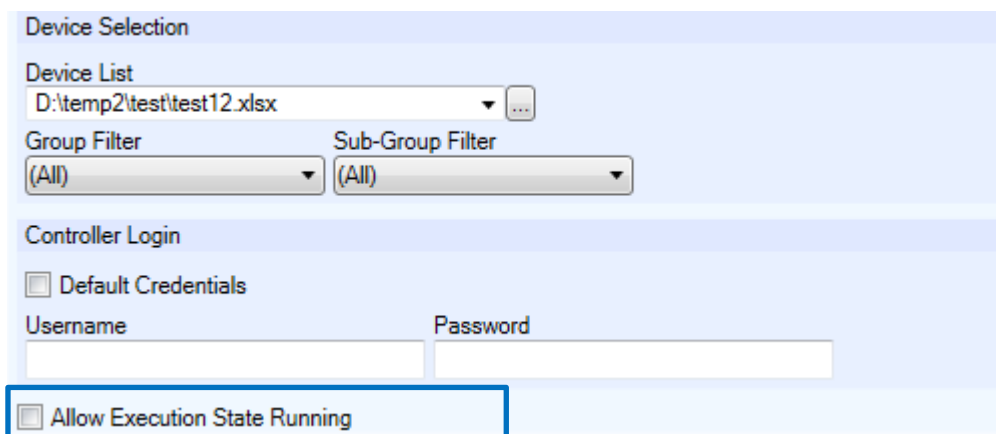
4 Corrections

4.1 Corrections made in 6.04.00.01

Overview

This section describes the corrections made in 6.04.00.01

Product Defect Documents (PDD)

ID	Title
7813	Crash when using scrollwheel in popup menu with attachment target objects
7828	Pre- and post-logic missing in Safety Report for SafeMove 2nd generation

4.2 Corrections made in 6.04

Overview

This section describes the corrections made in 6.04.

Product Defect Documents (PDD)

ID	Title
3320	RS throws exception when Auto Update of Event Viewer is selected
3913	Exception when creating a target with align orientation option
4086	Motion Supervision Axis 4 at 4 IRB6620LX
4656	Cannot install system if DefaultUser has only Default group
4897	Don't show this again checkbox using unlicensed RobotStudio
5160	System from layout allows system with more than 2 YuMi arms
5379	Ability to model tools with component groups
5501	not possible to click ok: mechanic with 2 axis connected with factor 1
5514	RS6.02 RC1 - Errors and improvements in the 5 supplied demo rspag
5584	RobotStudio File Transfer state update issue
5774	Visual SafeMove should have Online Monitor button within page
5785	Jobs Read File does not have browse to select different folder
5806	Sometimes prog or sys modules cannot be opened when double click on it
5860	Network license check out feature
5970	Export of station to STEP fails
6007	Extend file comparison function
6008	Add support for more robot file extensions
6059	Multiple exceptions when used with a VC5.61
6106	Unable to load Solid Works CAD file in 64 bit version of RobotStudio
6107	Too low resolution for quaternion when switching from Euler to Quaternion
6133	User of RobotStudio experience a bug in software when station crashes. doesn't save changes
6212	Integrated Vision Job with Insight 5705 Cognex Communication values deleted by Saving
6244	RS/Visual SafeMove (1): Not able to handle manipulator with positioner.
6259	RobotStudio: Wrong axis label for YuMi
6264	Custom Task Frame Setup

6297	ScreenMaker: Translation of message box text and Alpha Pad
6330	Libraries not unpacked, if they are available at original location
6355	Vdl NedCar BMW Fan Temperature from Job Function
6359	Incorrect RobotWare installation directory for multiple Windows users
6403	RobotStudio new keyboard commands to navigate the graphics window are not documented in online help
6410	RobotStudio AutoSave
6460	Changing color in not 'seen' as a station modification
6493	Exception due to poor design regarding user interface
6548	Integrated Vision - Erratic error "Camera job not valid"
6565	Cannot import Catia v6 files
6577	Cannot open ScreenMaker project [.view file is empty] [code review]
6626	Instance editor jumps back to top a changing a parameter
6659	Issue with Auto completion in RAPID editor
6660	Instruction Template Manager issue
6678	RobotStudio: TrueMove® Path Visualization function does not work on customized zone
6687	Operating Manual RobotStudio: incorrect description
6714	Jobs/Read File Browse button missing for folder location
6728	FTP file transfer - Exception when writing to a protected directory
6746	RS Calibration position of a positioner shown depending on axis position
6764	Find/Replace functions not OK if working in the RAPID editor on a 'standalone' backup
6765	Not ALL RAPID instructions known in the RAPID Editor
6772	Station Viewer Smart Components "Highlighter" is not shown in station Viewer
6790	Visual SafeMove - Slider control without size limit
6815	Size drop down list of paint robots library dialogs
6830	Create Pack&Go folder mismatch
6875	VDL Nedcar Controller name empty Job Function Robot Studio
6941	Loosing configuration when modifying target and "view robot at target"
6980	Industrial Networks dependency chain duplicates
6989	Station Viewer files RS 6.03 need Visual C++ update
7029	Bug in RAPID editor
7053	Exception when clicking on Toggle button
7058	Standard options should be selected in default IRB14000 station
7059	Pack and Go Unpacking issue
7064	Minor display error in FTP view
7096	Files with extension LOG cannot be viewed in RS from within Home folder
7122	SafeMove2 - French special character nor properly handled in report
7150	Adjust Case Not working
7156	Exception while downloading EPS configuration to the controller
7166	Integrated vision, Output to RAPID section of job gets erased when saving job
7189	Not possible to follow "location" from files to HOME.
7206	Overlap Window inside RS
7223	RobotStudio doesn't offer SafeMove2 documentation under -Help-
7255	RobotStudio file transfer type field - text formatting issue

7258	TASK VAR bool NOK in RobotStudio
7263	Incorrect track movement with IRB8700
7278	Problem with memory allocation if RS not closed
7281	RS Events: Pressing refresh button in event list does not clear the last display error even if the robot error log is empty.
7317	RobotStudio help about CAD converters needs to be updated
7322	Incorrect dimensions of force sensor in RobotStudio
7323	Solid works import fails in 32 bit version
7336	RobAPI Exception when setting a warm start to the controller
7337	Error Log message not shown in RobotStudio event log list
7359	Service:ABB Industrial Robot Discovery Server not started -> Fatal Error: unhandled exception
7398	Visual SafeMove for SafeMove One after comma values to long
7444	Integrated Vision - Update of Output to Rapid window with strange behavior

5 Known Limitations

Overview

This section describes known limitations in RobotStudio.

5.1 Online

Visual SafeMove windows can be re-opened from the Quick Access Toolbar menu

Any windows that are closed can be re-opened using the Quick Access Toolbar menu, as the command Default Layout does not recover these windows.

Individual RAPID tasks cannot be stopped for RobotWare 5.60 and later

When running multitasking systems, it is not possible to start and stop individual tasks with the dropdown menu of the task node in the Controller browser. This is due a restriction introduced with RobotWare 5.60 and later.

However, from RobotWare 6.03 onwards, then RAPID tasks to execute or to stop can be selected from RobotStudio RAPID tab.

Signal Analyzer Online not available for RobotWare 5.60, RobotWare 5.15.02 and earlier

The feature Signal Analyzer Online is not available for controllers running RobotWare 5.60, RobotWare 5.15.02 and earlier. The reason is a vulnerability in RobotWare that may cause interruptions in the robot operation.

Signal Analyzer Online is supported by RobotWare 5.15.03 and later, and RobotWare 5.61 and later, where the problem has been corrected.

It is not recommended to use Signal Analyzer Online of RobotStudio 5.15.01 or 5.15.02 with RobotWare versions prior to 5.15.03 or 5.61.

SafeMove Tool Zone visualization in Online Monitor for robots with external axes

Only TCP robots and track mounted robots will be visualized in the Online Monitor, no other external axes or positioners.

As a consequence, the Online Monitor may show the robot in a non-violating position, even though the safety controller has detected a safety violation and stopped the robot.

FlexPendant Viewer running with automatic reloading

When having FlexPendant Viewer running with automatic reloading of the screens and at the same time jogging the robot with the joystick the robot jogging might halt when the FlexPendant Viewer reloads.

5.1.1 Online – Paint

Backup for Paint systems does not create backup of the PIB board

The Backup function of RobotStudio does not create a backup of the PIB board of the IRC5P system.

Workaround: Create the backup of the PIB board with the FlexPaint Pendant using an USB-stick.

Go Offline does not work for Paint systems

The Go offline function will not create a working Virtual controller system for Paint system unless the Paint package I/O option is set to Simulated.

5.1.2 Online – Integrated Vision

Emulated cameras not discovered when controller in Motors On

For RobotWare 5.61 onwards, the camera discovery mechanism is disabled when the controller is in Motors On. As a consequence, the camera nodes will not appear in the controller browser.

Workaround: *Switch to Manual Reduced Speed and use the Refresh command on the Integrated Vision node in the browser to make the cameras appear.*

Information – Integrated Vision only works on 32-bit installations

It is not possible to use Integrated Vision in the 64-bit version of RobotStudio.

Information – Camera firmware version and update

The minimum firmware version to be used with Integrated Vision is 4.08. If this version is not available for a specific camera model, then the newest version available shall be used.

There are two important things to know before upgrading a sensor

- The user must make sure to first backup the files on the camera. This can be done using the Rapid snippets for camera backup/restore, or the FlexPendant Explorer.

- The latest available firmware version may vary across sensor types. However, when the firmware update utility presents the latest available version it shows the firmware with the highest version number which may not apply to the sensor to be updated. However, the appropriate firmware will be applied.

Information – The spreadsheet view

The spreadsheet view is not enabled when editing in the in the following modes "Add part location tool", "Add part inspection tool". Before entering the spreadsheet mode click for example "Setup Image" or Output to Rapid.

Information – Calibration board without fiducial

When using the calibration boards, checkerboard or board with dots, the user must select the preferred origin by clicking and accepting (press enter) three points on the board. Only after these three points have been selected is it possible to click "calibrate" to execute the calibration.

Information - Use default camera settings

If the camera is not using default communication settings the result may be that RAPID instructions return error code "Communication Error". The safest method to get default settings is to go to Connect->Add Sensor Right click and select "Show all sensors". Select the device to reset and click "Apply factory settings" in the lower right corner. The most important settings are:

Telnet port: 23

User: "admin"

Password: ""

Information – User Credentials

It is now possible to create user profiles with different access levels on the camera. For detailed information about this, please refer to the Integrated Vision User Manual.

Remaining error – Save image on camera

It is not possible to save an image on the camera using "Save Image". This is by design, but the dialog still allows the user to try to do this. The result is that the image is not saved and no error message is given.

Remaining error - Connect button greyed out for no reason

It may sometimes happen that the "Connect" button is greyed out, with the tooltip saying the camera is not on the correct subnet although the IP settings are OK.

Workaround: Restart the Integrated Vision Add-In.

Remaining error – VC started from Controller->Add controller does not detect cameras

A VC that is started from Controller->Add controller does not detect cameras on the network, even if the VC_network_definition.xml is correctly configured and the firewall is turned off. The reason is that the controller is not able to detect new cameras on the network when it is in "Motors On" state. When the VC is started stand-alone in RobotStudio it is automatically set to "Motors On" when started.

Workaround: To allow it to discover cameras, turn the control panel key to manual mode or launch the VC as part of a station.

User tip - Removing cameras from configuration

To remove a configured camera from the list of configured cameras, use the configuration editor. Enter *Configuration->Communication->Application Protocols* and remove the desired camera. Perform a warm start to complete the operation.

User tip – Viewing all cameras present on the network

Connect->Add Sensor is normally used for setting the IP addresses of sensors that are not currently on the correct subnet (192.168.125.X). Since the dialog shows all cameras "seen" by the PC, this dialog is useful when error tracing camera network problems.

If a camera does not appear on the network using the "Add sensor" dialog as suggested above, it is advisable to cycle the power of the camera. If the camera receives power from the controller, then cycle power by turning the mains switch.

User tip – Warm start the controller after changing network settings

Whenever changing the network settings of the camera, either from Connect->Add Sensor or Connect->Network settings, it is important to warm start the controller. If this is not done, RAPID instructions will give the error "Communication Error" and the FTP-mounted camera disk is not accessible. If DHCP address is used and persist, please try a static address instead.

5.2 Offline

5.2.1 General

*Some simulation models for IRB 6700 are missing in the ABB Library folder

The following robot models are missing in the ABB Library/Robots folder:

- IRB6700Inv_210_290_MH6_01.rslib
- IRB6700Inv_210_290_SW6_01.rslib
- IRB6700Inv_245_290_MH3_01.rslib
- IRB6700Inv_270_260_MH6_01.rslib
- IRB6700Inv_270_260_SW6_01.rslib
- IRB6700Inv_300_260_MH3_01.rslib
- IRB6700_150_320_MH3_04.rslib
- IRB6700_150_320__04.rslib
- IRB6700_155_285_MH3_04.rslib
- IRB6700_155_285__04.rslib
- IRB6700_175_305_MH3_04.rslib
- IRB6700_175_305__04.rslib
- IRB6700_200_260_MH3_04.rslib
- IRB6700_200_260__04.rslib
- IRB6700_205_280_MH3_04.rslib
- IRB6700_205_280__04.rslib
- IRB6700_235_265_MH3_04.rslib
- IRB6700_235_265__04.rslib

As a consequence a variant of the following message may appear when RobotStudio identifies a virtual controller with any of the robots above.
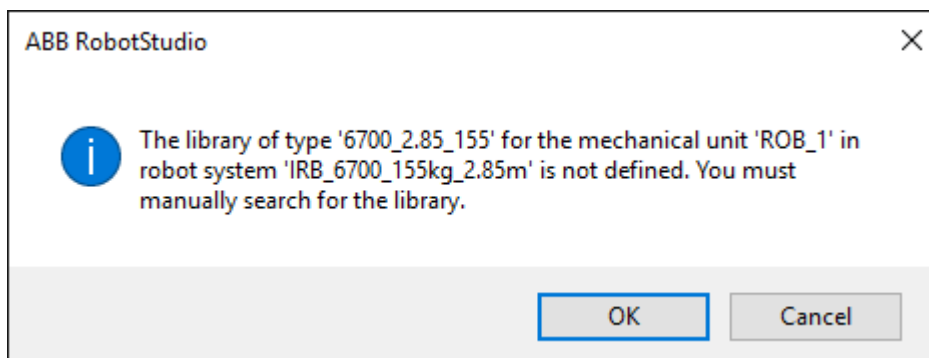
Workaround: Download the missing libraries from the following link

http://cdn.robotstudio.com/install/MissingRobotsInRobotStudio6.04.00.01.zip

Unzip the package and copy the files to the folder:

`C:\Program Files (x86)\ABB Industrial IT\Robotics IT\RobotStudio 6.04\ABB Library\Robots`

Note that the path may be different if you have customized the installation.

The robot IRB 1600ID 1.55 m / 6kg replaced by IRB 1660ID1.55 m / 6 m in RobotWare 6.04

The robot IRB 1600ID 1.55 m / 6 kg is not available in RobotWare 6.04 and later. It has been renamed to IRB 1660ID 1.55 m / 6 kg. Virtual controller systems for IRB 1600ID 1.55 m / 6 kg based on RobotWare 6.03 cannot upgraded to RobotWare 6.04 and later. This means that Pack&Go files for this robot based on RobotWare 6.03 cannot be upgraded to RobotWare 6.04 automatically

Workaround: Re-build or modify the virtual controller system to use IRB 1660ID 1.55 m / 6 kg instead when using RobotWare 6.04 or later.

FlexPendant and RAPID applications run with logged in user rights

A FlexPendant or RAPID application running on the virtual controller runs with the rights of the logged-in Windows user. RAPID applications running in a background task will start to execute when the Pack&Go file is opened and FlexPendant applications will start to execute when the user starts the Virtual FlexPendant.
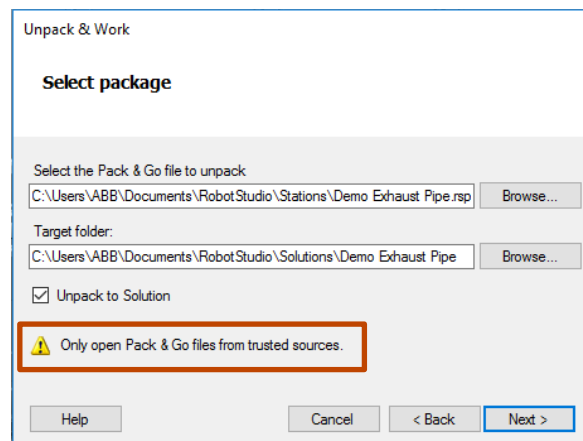
A warning message has been added to the Unpack&Work wizard to make the user aware that only Pack&Go files (.rspag) from trusted sources shall be opened.

Compatibility of RobotStudio Library and Stations with older RobotStudio versions

RobotStudio is generally **not forwards compatible**, i.e. it is not possible to load stations or libraries created in RobotStudio 6.04 into an earlier version of RobotStudio such as e.g. RobotStudio 5.x, 6.03.02 or earlier. However, RobotStudio is **backwards compatible**, which means stations and libraries created in versions 5.x, 6.03.02 or earlier can be opened in RobotStudio 6.04

TrueMove path visualization fails for customized zone data.

The TrueMove path visualization function only supports predefined zonedata. It will not work for user defined zonedata.

Backup fails for RobotStudio solutions with SafeMove or Electronic Position Switches

Backups are automatically created for virtual controller systems that are part of a RobotStudio solution when saving the station. For virtual controller systems with the RobotWare options *SafeMove* or *Electronic Positioning Switches* the backup will fail since these systems contain files that are read-only. As a result, an error message is presented in the output window: *"<System name>: Backup failed".* The station will be successfully saved but there will be no backup created.

Workaround: Ignore the error message "<System name>: Backup failed" *and create a manual backup whenever needed. The RobotStudio Option* "Enable automatic backup of controllers in solution" *that is available in"* RobotStudio Options -> Robotics -> Virtual Controller" *can be de-selected to disable the backup function.*

IRB 14000 cannot be combined with any other robot

The function system from layout fails if trying to create a MultiMove system where one robot is an IRB 14000. The reason is that the IRB 14000 cannot be combined with any other robot.

Workaround: Create a separate system for the IRB 14000.

The Work Envelope function does not support IRB 14000

The function is disabled for the IRB 14000 and cannot be activated.

The 2D work envelope fails for certain robot models

As a result, the generated work envelop may appear distorted.

Update of current selection in the 3D graphics window may be delayed

A problem related to the graphics driver has been observed on certain PCs. The problem is that the update of the current selection in the 3D graphics is delayed until the next redraw.

Workaround: Add or uncomment the following line in the file RobotStudio.exe.config

```
<add key="DoublePresentWorkaround" value="true" />
```

Failure to open Pack&Go file to same folder the second time

RobotStudio will prevent Pack&Go files to be opened to the same folder a second time if the station contains VC systems with the EPS or SafeMove option. This is by design to prevent the safety controller configuration file to be accidentally overwritten.

Workaround: Remove the write protection manually using Windows Explorer.

Updates of instruction template and code snippets

RobotStudio will not automatically update the user files for instruction templates and code snippets files in the folders:

…\My Documents\RobotStudio\Instruction Templates

…\My Documents\RobotStudio\Code snippets

Workaround: The user has to manually copy the latest files from

```
%ProgramFiles%\ABB Industrial IT\Robotics IT\RobotStudio 5.xx\Instruction Templates,
```
and
```
%ProgramFiles%\ABB Industrial IT\Robotics IT\RobotStudio 5.xx\Code Snippets
```
to the data folder.

IO signals configured with access level 'DEFAULT'

When IO signals are configured with access level 'DEFAULT', only input signals are possible to set/reset from the I/O Simulator and I/O Window. To be able to affect also output signals, set the access level to 'ALL' for them in the Configuration Editor.

VC does not start with RRI option and GSI folder structure missing.

The VC will hang when started with a system containing the RobotWare option *RRI* (Robot Reference Interface) if the GSI folder structure is missing.

Workaround: create GSI Folder before starting the VC inside the HOME directory of the system. See the Application Manual for Robot Reference interface for more information.

System in *Guard Stop* state in *Automatic* mode after run-time error

Certain run-time errors may cause the controller system to enter *Guard Stop* state in *Automatic* mode. This is the same behavior as in a physical robot controller system. This typically happens when a run-time error related to Conveyor Tracking occurs. A simulation cannot be started when the controller is in this state.

Workaround: To reset the controller state, open the Control Panel window and first switch to Manual mode, and then back to Automatic mode.

Information message starting system with IRB260/460/660/760

Starting a system with IRB260/660 gives you an error message: *'The number of joints is different between the library model and the controller configurations'*. The reason is that the IRBx60 is modeled with six joints in RobotStudio of which two are locked, but has four joints in the VC

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 jointtargets. The functions will leave the jointtargets as is. Interpolate Path gives an Unknown Error and Tool Compensation reports an error message

Event Manager: Simulation cannot be triggered by analog system signals

The event manager only supports analog station signals, not analog system signals

Conveyor Tracking

Incorrect default values for c1Position and c1Speed for RobotWare 5 with the PaintWare option

The default values for the parameters c1Position and c1Speed may become incorrect for a virtual controller system. The symptom is that its attribute values are all zero, see snapshot below.
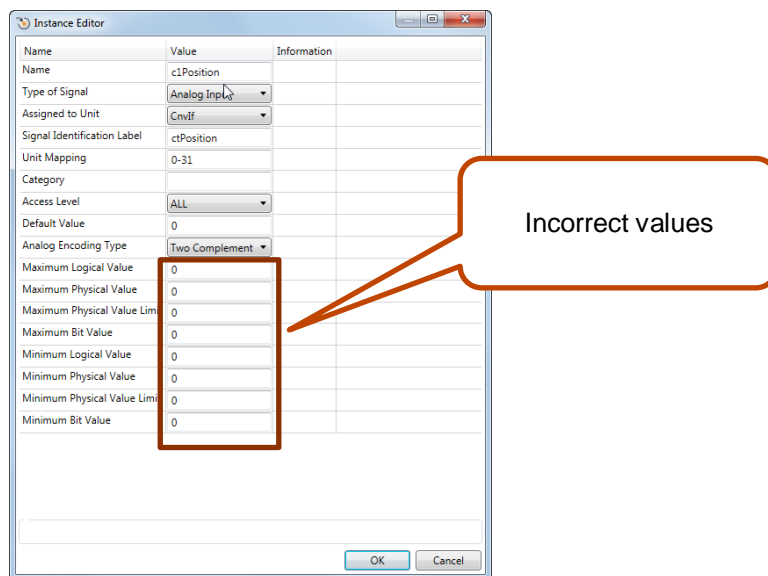
Workaround: Save the following lines to a CFG file named 'TEMP.CFG' or similar and load in the virtual controller followed by a restart.

```
EIO:CFG_1.0:5:0::
#

EIO_SIGNAL:

      -Name "c1Position" -SignalType "AI" -Unit "CnvIf"\
      -SignalLabel "ctPosition" -UnitMap "0-31" -Access "ALL"\
```

```
-MaxLog 21474.8 -MaxPhys 1 -MaxPhysLimit 1\
-MaxBitVal 2147483647 -MinLog -21474.8 -MinPhys -1 -MinPhysLimit -1\
-MinBitVal -2147483647

-Name "c1Speed" -SignalType "AI" -Unit "CnvIf" -SignalLabel "ctSpeed"\
-UnitMap "32-63" -Access "ALL"\
-MaxLog 21474.8 -MaxPhys 1 -MaxPhysLimit 1\
-MaxBitVal 2147483647 -MinLog -21474.8 -MinPhys -1 -MinPhysLimit -1\
-MinBitVal -2147483647
```

5.2.3 Station Viewer

Memory problem when doing *Save As Viewer* or *Record to Viewer* with large stations

RobotStudio may run out of memory (*OutOfMemory exception*) when doing **Save As Viewer** or **Record To Viewer** if the station is very large.

Workaround: Use the 64-bit version of RobotStudio and create a 64-bit viewer by ticking the checkbox in the Save As Viewer file dialog.

5.2.4 MultiMove

MultiMove error: *'Object reference not set to an instance of an object'*

When the Test Play button is pressed in the MultiMove tool, the following error message may be displayed: '*Object reference not set to an instance of an object*', but the robot moves and the Status '*Calculation OK'* is displayed. In addition, when *'Create Paths'* is pressed the following message is displayed: *'Can't create paths : Value cannot be null'*, and no paths are created. In the *'Create Paths Settings'*, is the WP TCP drop down empty.

Reason: Workobject is not set for the current task

5.2.5 External Axis

Error 50091: *'Restart not possible'* after warm start of a system with external axis

When restarting a system with activated mechanical units the activation state is lost. Then the program can no longer be started from the Virtual FlexPendant, the RAPID Editor or the RAPID Tasks window.

Workaround: Reset the program pointer ('Program Pointer to Main') before starting the program from the Virtual FlexPendant, the RAPID Editor or the RAPID Tasks window, or, start the program from the Simulation Play button.

5.2.6 Network Drives and UNC Paths

RobotStudio on computers with roaming user profiles

RobotStudio may fail on PC configurations with roaming user profiles, i.e. when the users' documents folder resides on a server and not on the local disk.

*Workaround: Redefine the 'User Project Folder' to a folder on the local disk (*File → Options → General → Files&Folders → User Project Folder*).*

Virtual Controller does not support UNC paths

UNC paths cannot be used to locate Virtual Controller systems. Using UNC paths for VC systems will cause the log message *'Failed to initialize FW upgrade framework'* to appear when the system starts. Subsequent attempts to work with the VC such as synchronizing RAPID data will fail.

Creating and starting systems located on a network drive

When using a network drive to store RobotStudio data such as RobotWare systems or the RobotWare mediapool, the following problems may occur

---

- Virtual controller does not start

- Not possible to open Virtual FlexPendant

Cause: *By default, the .NET Framework does **not** allow execution of code from a remote file system. This means the application may behave unexpectedly if the media used by the system or the system itself resides on a network share.*

Workaround*: To resolve this, the user must explicitly grant the required permissions:*
1. Open the file `Virtual FlexPendant.exe.config` *located in*

`C:\Program Files (x86)\ABB Industrial IT\Robotics IT\RobotStudio 5.61\Bin`

2. *Add the following lines*

```
<?xml version="1.0"?>
<configuration>
        <startup useLegacyV2RuntimeActivationPolicy="true">
        <supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.0"/></startup>
        <runtime>                                       <!-- THIS IS ONE OF THE NEW LINES!!! -->
                <loadFromRemoteSources enabled="true"/>   <!-- THIS IS ONE OF THE NEW LINES!!! -->
        </runtime>                                       <!-- THIS IS ONE OF THE NEW LINES!!! -->
</configuration>
```

The Virtual FlexPendant must be restarted for the changes to take effect.

For further information, see

http://msdn.microsoft.com/en-us/library/dd409252(v=vs.100).aspx

---

i   Note

Windows security settings may prevent the file from being directly edited in the default location. Copy the file to your local Documents folder to edit it. Upon completion, you need to manual copy the file back to its original location.

5.2.7 RAPID

Robtargets that are LOCAL to a PROCEDURE cannot be synchronized with RobotStudio

The RobotStudio synchronization engine that translates 3D data of the station to RAPID code and vice versa does not support robtargets that are declared locally to a procedure.

Workaround*: Declare the robtargets as global or local to a module instead.*

Robtarget names must be unique in RAPID even if they are LOCAL

RobotStudio requires that robtarget names are unique for the RAPID synchronization to work properly, i.e. you cannot have a global robtarget named pMyTarget1 in module A and a local robtarget with the same name in Module B.

Global robtargets cannot be made local through Synchronization to VC

Global robtargets cannot be changed to local through *Synchronization to VC*, the option is disabled (PDD 3140).

Workaround: *Change the robtargets to module local in the RAPID Editor and Synchronize to station.*

Error Message: Sync. to Station completed with errors

Error Message: Sync to Station completed with errors: New data <name> <type> has same name as existing object in same block <routine>.

When this error message appears, there is a storage type mix-up between data already stored in RS and in the VC. Because of this, and per design, the data is not considered the same data.

Workaround: 1. Ensure all data declarations have the same definition in RS as in RAPID (there is no user interface for this).

2. Sync to station should now work.

3. Sync back to controller, and remember to change the data declarations back to what you want.

5.2.8 Paint

Lack of Virtual Controller support for the Paint systems

Paint systems that are configured using the Paint package I/O option Discrete, Compact or Fieldbus, will result in a SysFail state.

Workaround: Re-create the system with the simulated I/O option.

5.2.9 Graphics and Geometry

*For SolidWorks 2015 onwards only 64-bit Operating System is supported.

The 32-bit version of RobotStudio is not supported.

Some CAD converters not available in Premium trial license

No trial license available for CAD converters for DXF/DWG, JT, NX, Parasolid, Solid Edge, and SolidWorks.

Enforce selected graphics device for PCs with multiple graphics cards

For best performance when running RobotStudio on a PC with multiple graphics cards, RobotStudio can be configured to use a specified device. By this option you can ensure maximum performance. This is useful for e.g. Lenovo W540 that has both an integrated Intel graphics device and a discrete NVIDIA card.

Open the file `RobotStudio.exe.config` that is located in the folders

`C:\Program Files (x86)\ABB Industrial IT\Robotics IT\RobotStudio 6.0\Bin64`

and

`C:\Program Files (x86)\ABB Industrial IT\Robotics IT\RobotStudio 6.0\Bin`

and uncomment the line

```
<add key="GraphicsDeviceType" value="Discrete"/>
```

Valid values are `'Discrete'`, `'Integrated'` and `'Warp'` (software renderer).

Note that there are two different files, one for the 32-bit version, and another for the 64-bit version.

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 the import of very large ACIS files or load of very large stations.

Workaround: Use the 64-bit version that can handle more memory. Ensure that you have enough memory installed on the PC, see System Requirements.

5.3 ScreenMaker Limitations

A ScreenMaker application may fail to build if the DPI setting is not set to 100%

Certain UI controls in ScreenMaker may fail to build correctly if the DPI setting is not set to 'Smaller – 100%'.

Symptom: The error message caused by this problem will read *'System.Drawing.Font' does not contain a constructor that takes 2 arguments.*

Workaround: *Set DPI to 100% on your PC.*

File changes to FlexPendant applications does not load the changes until a FlexPendant reset

With RobotWare 6.0x the controller's restart will no longer reset the FlexPendant memory. This was part of an effort to improve the restart time of the controller.

This means that after placing a new FlexPendant application file(s) on the FlexPendant unit, you need to manually reset the FlexPendant for it to reload its assets.

To manually reset the FlexPendant you need to use the reset button on the FlexPendant's backside. (See Operating Manual – IRC5 with FlexPendant, 3HAC16590)

Dynamic update of Rapid Data

The switch from Manual Mode to Auto Mode causes the RAPID boolean data bound to the enabled property of control change to value TRUE. This behavior is noticed when the mode is changed from a different screen and not on the screen where the control is bound to RAPID boolean data. An additional side effect is that the enabled property of RunRoutine button has been disabled as similar behavior was seen.

Running Routine with Movement

RunRoutine Button control does not always work correct when a routine with movements is called.

As a workaround use instructions like StopMove, StorePath, RestorePath and StartMove to control the movements of the robot.

A Trap routine could be called with a normal button control and in the Trap the above instructions can be used to control the movements of the robot.

PictureBox control as a Widget

If a Picture Box control is created as a widget from a Windows 8 operating system, the control is not shown on the FlexPendant. The behavior is fine with any other operating system like Windows 7.

6 RobotWare Compatibility

6.1 General

Supported RobotWare versions

RobotStudio 6.02.01 is distributed with RobotWare 6.02.01 and works with RobotWare 5.07 and later. Please check details below.

6.2 RobotWare 5.05 and 5.06 Compatibility

RobotWare 5.05 and 5.06 including revisions thereof are not supported by RobotStudio 5.15 and later versions. Please use the corresponding version of RobotStudio for managing robot controllers with any of these RobotWare versions.

6.3 RobotWare 5.07 Compatibility

RobotWare 5.07 and its revisions of are supported with the following limitations:

General

The location of the program pointer is not updated in the RAPID Editor during program execution.

Offline

A limitation in the versions 5.07.02, 5.07.03, and, 5.07.04 of RobotWare may cause the Virtual Controller to System Failure state during I-start on certain computers. The problem is due to the ctrl.bin-file not being correctly created.

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

> ℹ️ **Note**
>
> The problem will reappear if the system is I-started.

The virtual controller does not support RobotWare 5.07.08 and RobotWare 5.07.07.

Online

FlexPendant Viewer does not work RobotWare 5.07

6.4 RobotWare 5.08 Compatibility

RobotWare 5.08 and its revisions of are supported with the following limitations:

Offline

RobotWare 5.08 is not supported.
Workaround: Use RobotWare 5.08.01 or later.

6.5 RobotWare 5.10 Compatibility

RobotWare 5.10 and its revisions of are supported with the following limitations:

Offline

Starting a controller will generate internal UAS error in controller error log.

6.6 RobotWare 5.11 Compatibility

RobotWare 5.11 and its revisions of are supported with the following limitations:

Offline

Linear jogging of a robot across joint values that will cause a change of confdata may fail. For example, if the robot is jogged linearly when joint values is passing 90 degrees for axis 1 may cause the robot to stop or to change configuration.

6.7 RobotWare 5.12 Compatibility

RobotWare 5.12 and its revisions of are supported with the following limitations:

Paint backups from RW 5.12.01 not compatible with RW 5.12.02 or later

Restoring a paint system backup from RobotWare 5.12.01 will cause SysFail for RobotWare 5.12.02 or later

Workaround: Add the following parameters to the configuration files

`EIO.CFG:`

```
EIO_SIGNAL:

     -Name "doMainInMC" -SignalType "DO" -Unit "SysComm" -UnitMap "44"

     -Name "A1HVErrNo" -SignalType "GO" -Unit "SysComm" -UnitMap "150-151"\

     -Access "ALL"

     -Name "A1HVEn" -SignalType "DO" -Unit "SysComm" -UnitMap "155"\

     -Access "ALL"

EIO_CROSS:

     -Res "A1HVEn" -Act1 "HVEnabled"
```

`SYS.CFG:`

```
CAB_TASK_MODULES:

     -File "INTERNAL:/pntrapid/T_ROB1/cycinfo.sys" -ModName "cycinfo"\

     -Task "T_ROB1"

     -File "INTERNAL:/pntrapid/csvlkup.sys" -ModName "csvlkup" -AllTask \

     -Hidden
```

6.8 RobotWare 5.13 Compatibility

RobotWare 5.13 and its revisions of are supported with the following limitations:

Paint backups from RW 5.12.02, 5.12.03 or RW 5.13 or 5.13.01 not compatible with RW 5.13.02 or RW 5.13.03

There are several changes in the configuration database for I/O (EIO.CFG) and Controller (SYS.CFG) that will cause System Failure if an old backup is loaded. There are also changed in installed RAPID modules. To create a compatible configuration, proceed as follows:

1. Create and start a VC with a RobotWare 5.13.03 system containing the same options as your original backup, but do not load the backup.

2. Save the EIO.CFG and SYS.CFG to file.

3. Compare the saved files with the corresponding files of your backup. (You can use a text file comparison tool for simplification.)

4. Add your system-specific configuration to the general configuration files saved from the 5.13.01-system using a text editor.

5. Replace the files of the original backup with the corresponding modified configuration files.

6. Go through the RAPID modules of the backup and remove the default modules (i.e. those that are not changed by the user).

7. Load the backup and restart the system. You are done.

6.9 RobotWare 5.15 Compatibility

Signal Analyzer Online

The feature Signal Analyzer Online requires RobotWare 5.15.03 or later.

6.10 RobotWare 6 Compatibility

Overview

RobotWare 6.00 and 6.00.01 systems cannot be directly upgraded to RobotWare 6.01. To upgrade a system, you need to create backup and migrate it using the tool *'Migrate Backup or Folder'*, then recreate the system and finally, restore the backup.

For this reason, the functions *'Unpack&Work'*, *'Go Offline'* and *'New Solution with Station and Robot Controller – From backup'* are blocked to prevent upgrade from RobotWare 6.00 or 6.00.01 to RobotWare 6.01.

RobotStudio, however, is compatible with both RobotWare 6.00 / 6.00.01 and 6.01.

6.11 General Compatibility Limitations

RAPID Profiler

The profiler will be able to create a log file for the profiler automatically for RobotWare 5.14 or later. For RobotWare 5.13 or earlier, the log file must be created manually using the RAPID Spy command (SpyStart/SpyStop).

Safety Configuration

Safety configuration of a track motion IRC5 system equipped with a safety controller of type EPS or SafeMove can be done without the need to read track motion parameters manually when using RobotWare 5.11.01 or later. Encrypted parameters needed by the safety controller will be automatically read by EPS Wizard and SafeMove Configurator, respectively.

Signal Analyzer Online

Signal Analyzer Online requires RobotWare 5.15.01 or later.

Signal Analyzer.

The error message *Failed to subscribe on signal* may sometimes appear during signal recording for RobotWare 5.15 or earlier.

Workaround: *Restart the VC or upgrade to RobotWare 5.15.01 or later.*

Configurations

The feature **Configurations** for selecting the robot arm configuration (confdata) may fail, or not present all solutions, in some specific circumstances even when the target is reachable if RobotWare 5.14 or earlier is used.

Workaround: *Upgrade to RW5.14.01 or later*

6.12 ScreenMaker Compatibility

RobotWare

It is possible to use previous RobotWare versions, but with some limitations.

- ActionTrigger will work only on RobotWare 5.12.02 or later.

- The controls *Button*, *TpsLabel* and *PictureBox* controls was modified in RobotStudio 5.13. The property '*Allow MultipleStates*' of these controls can be accessed from RobotWare 5.13 and later.

- Variant Button will work only on RobotWare 5.14.01 or later

- Conditional Trigger will work only on RobotWare 5.14.01 or later

- Widgets will work only on RobotWare 5.60 or later.

FlexPendant SDK

ScreenMaker should be used with FlexPendant SDK 5.12.02 or later. ScreenMaker allows selection of FlexPendant SDK version when it is launched. If only one version of FlexPendant SDK is available in the system, it is loaded by default.

6.13 Support for future RobotWare versions

RobotStudio 6.04.00.01 supports all future minor revisions of RobotWare 6.04, but no future major releases. For example, RobotStudio 6.04.00.01 will support RobotWare 6.04.01 (if, and when available) but not RobotWare 6.05, or 6.06.