Intera 5.3 Software Release Notes

August 2018- Rev 2

Please be sure to read the release notes thoroughly and review the Intera 5.3 User Guide to understand how to use this new and powerful software.

When performing software upgrades it is recommended to:

- Always export copies of the tasks before upgrading software
- Perform the upgrade when there is ample downtime to upgrade and fully test the new version of software and rollback if necessary. Planning a full shift of downtime is recommended.
- After upgrading, fully test all branches of the task, including ones that may not normally execute such as ones that perform error handling.

Contents

What's New in Intera 5.3

- EtherNet/IP™
  - Synchronization with EtherNet/IP Scanners. Multiple assemblies are available.
  - EDS file available on the Online User Guide and in the Device Editor Panel of the Intera Software
  - Passed EtherNet/IP Conformance Composite Test revision CT15 by ODVA
- PROFINET®
  - Synchronization with IO Controllers. Multiple modules are available.
  - GSDML file available on the Online User Guide and in the Device Editor Panel of the Intera Software
  - Tested and certified to comply to the Test Specifications for PROFINET, Version 2.34 from Feb. 2017 by PROFI Interface Center
- Inside Ethernet Port is now enabled
  - Used for connecting to Studio or connecting to a Modbus TCP, TCP/IP, EtherNet/IP, or PROFINET device.
- Motion Controls Improvements
  - In most cases, the overall cycle time of a task will be improved when using Intera 5.3 over Intera 5.2. Please read the "Upgrade Instructions" below for some considerations.
- FSM
  - During boot up, the Field Service Menu (FSM) can now be accessed typing the letter "F" on a keyboard plugged into the controller, though "CTRL+F" still works.
- Bug Fixes:

  - In some cases, a ClickSmart gripper may disconnect while performing a task and may require a reboot. The fix allows for the gripper to quickly reconnect and will no longer require a reboot to continue working.

Known Issues

1. General
   a) In rare cases, web browsers may not correctly render items on the screen. This includes the behavior tree, node inspectors, notices, infinity sign, and the 3D view. If it is suspected that items haven't been rendered properly, refreshing the browser will fix the issue.
   b) Robot Display Screen Refresh - In the rare case where the robot display screen user interface looks like it has become frozen, press and hold the X and Square buttons on the on arm Navigator to perform a screen refresh.
2. Devices
   a) In most error cases where a device shows an unknown status, a likely cause is that the network settings have been incorrectly configured. Please ensure that all network settings are correct as a first debugging step.
   b) If a TCP socket is closed during device configuration, the 'max bytes' and 'timeout' toggles will reset and cause the device to be impossible to edit. To work around this:
      i) change the port, or
      ii) be connected to a device, or

      iii) be completely disconnected

c) If a robot's PROFINET name is set externally (such as from Siemens TIA Portal) the Sawyer About screen will not update immediately with the new name. A reboot is required for the robot to update the name.

d) If the network configuration is manually set on the robot and there is an error, the network configuration values may reset to 0.0.0.0 after reboot. This only applies when the robot is set to work on a PROFINET network.

e) Entering values with more than 5 consecutive zeros following the decimal point will get rounded to 0 (i.e. 2.0000001 -> 2.0) in the Signal Gallery and Signal Editor.

f) The inside port has two peculiarities:

    i) It cannot support link-local auto configuration. In other words, the IP address cannot be left blank when connecting a computer directly to the inside port. An error claiming that the inside port cable is unplugged will be thrown.

    ii) Assigning a static IP address in the 169.254.x.y range to the inside port is not recommended and will not work.

g) The only supported way to use the inside port is one of the following:

    i) Statically assign an IP address in the private range that does not overlap with the outside port IP address. Acceptable Private Ranges:

      (1) 10.0.0.0 - 10.255.255.255 (10/8 prefix)

      (2) 172.16.0.0 - 172.31.255.255 (172.16/12 prefix)

      (3) 192.168.0.0 - 192.168.255.255 (192.168/16 prefix)

    ii) For PROFINET DCP dynamic assignment, leave the IP address blank or all-zeroes, and connect the inside port to your industrial network containing the PROFINET PLC.

3. Vision

a) External Camera TCP/IP Vision Detections - A "Time"-based criteria option was added to to the Vision Locator Node. The "# of images" criteria option now only checks for a detection if the signals *selected in the snapshot* change value. If existing TCP/IP Socket External Cameras have very stable position and rotation signals that do not change values on subsequent detections, the Vision Node should be switched to a Time-based criteria.

Upgrade Instructions

Whenever upgrading software on production equipment, proper change control procedures should be followed to ensure there is no impact to planned production. Upgrading from any prior version of Intera 5 to Intera 5.3 is supported, however, it is possible that the task may require some modification after upgrade due to improvements made in Intera 5.3. This includes and is not limited to: robot motion planning, trajectories, speed, and/or acceleration and is highly dependent on how the task was originally trained. Refer to the "What's New" section for possible changes. Do not upgrade until you have a planned break in production so you can evaluate the new software. If for some reason the new software doesn't meet your task needs, you can always downgrade to a previous version of Intera.

1. Always export copies of the robot tasks before upgrading. This is critical so that the software can be downgraded, if necessary, in order to back out the change. To export a task, connect to the robot with Intera Studio, click the Studio menu and choose "Export Tasks".
2. Download the Intera 5.3 (5.3.1.192) update files and store them on a FAT32 formatted USB drive.
3. Upgrade from a prior version of Intera 5. If you are not running Intera 5, please contact customer support (support@rethinkrobotics.com).

Important Notes:

- If possible, test Intera 5.3 well ahead of a planned production upgrade to work through any issues.
- Perform the upgrade when there is ample downtime to upgrade and fully test the new version of software and revert to an earlier version if necessary. Planning a full shift of downtime is recommended.
- Motion Controls Improvements - In most cases, the overall cycle time of a task will be improved when using Intera 5.3 over Intera 5.2 after the upgrade. While an improvement in motion control and cycle time is desired in most deployment cases, we recognize that it may not be desirable in others. If you are currently satisfied with the task performance of the robot in production and you do not require any of the new features in Intera 5.3, it is recommended to not upgrade the robot and continue production. If the robot is upgraded, the task settings may be edited to achieve an equivalent level of performance as with the prior Intera release.
- After upgrading, fully test all branches of the task, including ones that may not normally execute such as ones that perform error handling. Let the task run through in its entirety. For example, if it is loading a 10 by 10 tray, allow it to run for 100 cycles, so that it places in each of the 100 different locations.
- If there is a problem at any point during testing or after production startup that cannot be resolved in a timely manner, revert back to the latest version where your task reliably worked so that production is not affected. The process to downgrade to a prior version of Intera on a robot with 5.3 is the same as upgrading to 5.3 with the following exceptions.
    o If using a ClickSmart gripper and downgrading to Intera 5.1, prior to downgrading, record the gripper configuration, and perform a factory reset. It will not work on prior versions of Intera 5.2 otherwise. Open the tooling gallery from Intera Studio, and take screenshots of all of the configurable settings. Then click on the pencil icon next to the name of the gripper, and click the icon in the top right to perform the factory reset. Hold the cursor over the icons for a description of what they do. Make sure to select "factory reset", and not "reset". After attaching in a prior version of Intera 5, the gripper will need to be reconfigured with Intera Studio.
    o After downgrading, import the task that was exported prior to the upgrade to 5.3. Export any tasks that you want to keep.

Links to Other Important Documentation

- [Intera 5.3 Upgrade Files (5.3.1.192)](#)
- [Intera 5.3 User Guides](#)
- [Intera 5 Guides for Success - Vision, RPS, and Contact](#)
- [Characterization Docs - Task Repeatability, Performance Specs, Safety Overview, and Force Features](#)
- [Intera 5 Online User Guide - Your "go to" resource for all things Intera 5](#)
    - [Fieldbus Devices Online User Guide Page](#)
- [Intera 5 Users Forum](#)