

Release Notes

Intel® RealSense™ SDK for Windows* Release

F200 Gold
SR300 Gold

SDK version 11.0.27.1384

These release notes covers Intel® RealSense™ SDK for use with Intel® RealSense™ Camera, model SR300. Please review the “**Intel RealSense SDK License.rtf**” for licensing terms. Please refer to attributions.rtf for third party attributions and third_party_programs.txt for third party licenses.

IMPORTANT! PLEASE READ!

- This release supports 2 cameras:
 - The **Intel® RealSense™ Developer Kit (F200)**
 - The **Intel® RealSense™ Developer Kit Camera (SR300)**, which can be ordered on the Intel RealSense Website (<https://software.intel.com/en-us/realsense/devkit>)
- This package is the Software Development Kit.
- This package does not include the driver/service (DCM) for the camera. Camera Driver / DCM Package is hosted on Windows Update. It is automatically installed when you connect your camera to the system. If not automatically installed, please download the Camera Driver / DCM Package from the Intel RealSense downloads website.
 - F200 Camera: DCM version 1.4.27.41944 or later
 - SR300 Camera: DCM version 3.2.26.6137 or later
- If installer requests that you reboot, **please reboot**, or your system will not install correctly.
- F200 Camera OS:
 - Microsoft* **Windows* 8.1 x64 August Update required.**
 - **Microsoft* Windows* 10**
- SR300 Camera OS:
 - **Microsoft* Windows* 10**

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SDK Features

Based on developer community feedback, the Intel RealSense SDK will refocus on specific capabilities. Please use this table to determine which version to use for application development.

Capability	Camera		
	SR300	F200	R200
Cursor Mode	2016 R3	NA	NA
User Background Segmentation		2016 R3	2016 R2
3D Scan			
Face Tracking & Recognition			
Hand Tracking	NA	NA	2016 R2
Scene Perception			
Depth Enabled Photo & Video			
Person Tracking			
Object Recognition	NA	2016 R2	NA
Object Tracking			
Blob Tracking	2016 R2		
Speech	2016 R2		
Touchless Controller			
RealSense Web Runtime			
Java Support			

Please note that SDK features are at various levels of maturity in this release as follows:

Maturity	F200 Feature	SR300 Feature
Gold	<ul style="list-style-type: none"> • SDK essential interfaces and color/depth/IR data streaming 	<ul style="list-style-type: none"> • SDK essential interfaces and color/depth/IR data streaming
Beta		<ul style="list-style-type: none"> • SDK UWP Support
Removed	<ul style="list-style-type: none"> • F200 Object Tracking • R200 Camera Support & Features • Speech Recognition & Synthesis • RealSense Web Support • Java Support • Touchless Controller • Blob Tracking 	

Hardware Requirements

- 4th Generation Intel® Core™ Processor (code name Haswell), or later. Core i5/i7 recommended.
- 8 GB free hard disk space
- The Intel RealSense Camera
 - F200 PRQ Camera
 - SR300 Camera
- The Intel RealSense Camera may have known defects and errata which will be provided with the product.
- A USB 3 port for the Intel RealSense Camera.

IMPORTANT NOTE: To support the bandwidth needed by the camera, a **USB3** interface is required.

Software Requirements

- One of the following operating systems:
 - F200 Camera OS:
 - Microsoft* Windows* 8.1 x64 August Update required
 - Microsoft* Windows* 10
 - SR300 Camera OS:
 - Microsoft* Windows* 10
- Microsoft Visual Studio* 2012-2015 with the latest service pack or update
- Microsoft Visual Studio* 2015 with the latest update and "Universal Windows App development tools"->"Tools and Windows 10 SDK (10.0.10586)" feature for UWP development
- Microsoft .NET* 4.0 Framework for C# development
- Unity 5.2.3.p3 or later for Unity game development
- Intel® Iris™ and HD Graphics Driver for Windows* 10/8.1 64-bit
 - Please install the latest drivers appropriate for your system

Installation steps for SDK

This is for developer systems ONLY

- Run the SDK offline installer.

SDK Interface Changes

- SDK 2016 R3:
 - New C++ Interface
 - The new interfaces are defined in header files under folder include/RealSense or include/RealSense/<Module>/ folders.
 - Legacy C++ interface, defined in header files with prefix "pxc", is also supported.
 - New C# interface
 - The new C# interface is similar to the new C++ interface. Compared with the legacy C# interface in R2- releases, the major changes include
 1. replace Set/Query methods with C# property
 2. replace Subscribe/Unsubscribe methods (with handler object) with C# events.
 - Binaries for legacy C# interface are provided, as well as the source code.
 - Java interface and Web service are not supported in R3 release.
 - Utility interface of PointerConverter, Smoother and Rotation are included along with core API. Thus the utility DLL binary is packaged with core runtime.
 - Unity
 - unitypackages provided under \$RSDK_DIR/framework/Unity for easy integration of algorithm modules. For more info, ReadMe provided in the same directory.
 - Automated copying of runtime contents in application data directory while building Unity standalone executable. No manual steps required for deploying.
 - Fixed Unity Editor hang issue when subscribing to events.

F200 Release Notes

The following items apply to the F200 camera.

F200 SDK Features

Gold Features

- SDK essential interfaces
 - Session management
 - SenseManager pipeline programming
 - File recording and playback
- Color and Depth Streaming
 - Read color, depth and IR samples from the camera.
 - Map coordinates among color, depth coordinates, and world coordinates.
 - Recording/playing back device property changes.

F200 Known Issues and Limitations

SDK Core/SDK Framework

Issue	Recovery/Workaround
No source code is released for compiling the cpp2c, c#, or unity wrappers.	Pre-compiled .dlls are provided in the \$RSSDK_DIR\bin folder. Will be fixed in future release.
High CPU use / low FPS seen in various scenarios, particularly when running multiple applications simultaneously	Will be addressed in future releases.
CameraViewer.cpp sample may hang in recording mode when path to clip, specified in command line, doesn't exist.	Specify the existing path in command line ("-file EXISTING_PATH\filename").
CameraViewer.cpp sample may crash when waking up the system from sleep mode with active streaming from camera	Restart the sample after it crashes.

Unity Toolkit

Issue	Recovery/Workaround
Unity Toolkit is not supported in R3	Use 2016 R2

Frameworks Support (C#, Unity, Web support, Java and Processing)

Issue	Recovery/Workaround
Java interface is not supported in R3	Use 2016 R2
Web service and JavaScript web apps are not supported in R3	Use 2016 R2
Processing framework is not supported in R3	Use 2016 R2

SR300 Release Notes

SR300 SDK Features

Gold Features

- SDK essential interfaces
 - Session management

- SenseManager pipeline programming
- File recording and playback
- C# and Unity* C#.

Beta Features

- Core SDK API
 - SDK UWP Support
- Depth Streaming
 - SDK UWP Support

SR300 Known Issues and Limitations

SDK Core/SDK Framework

Issue	Recovery/Workaround
No source code is released for compiling the cpp2c, c#, or unity wrappers.	Pre-compiled .dlls are provided in the \$RSSDK_DIR\bin folder. Will be fixed in future release.
SampleDirectX project (Sample.DX_vs2015.vcxproj) does not compilation in "Debug" mode.	Change project setting by adding linkage to d3d9.lib and mfplat.lib.
No source code is released for compiling the cpp2c, c#, or unity wrappers.	Pre-compiled .dlls are provided in the \$RSSDK_DIR\bin folder. Will be fixed in future release.
CameraViewer.cpp sample may hang in recording mode when path to clip, specified in command line, doesn't exist.	Specify the existing path in command line (" -file EXISTING_PATH\filename").
CameraViewer.cpp sample may crash when waking up the system from sleep mode with active steaming from camera	Restart the sample after it crashes.
RawStreams.cpp sample doesn't resume streaming after replugging the camera into different USB port	Restart the sample.
RawStreams.cpp sample doesn't refresh device list when plugging/unplugging cameras	Restart the sample after plugging/unplugging cameras.
CameraExplorer tool does not allow to choose the camera if multiple cameras or the same type are connected to the system. It just uses first enumerated camera.	Disconnect all cameras except the one, which you want to explore using CameraExplorer tool.
"Import from image list" feature inside ClipEditor tool does not support import of Depth and IR streams	Use "Import from image list" only for Color image lists

Frameworks Support (C#, Unity)

Issue	Recovery/Workaround
UnityToolkit is not supported in R3.	Use 2016 R2

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