Release Notes for
Intel® RealSense™ Depth Camera Manager (DCM) DS4 2.1 Hot Fix 3

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1. 3D CAMERA MANAGEMENT

This release notes covers DS4 2.1 Hot Fix 3 version of Intel® RealSense™ Depth Camera Manager used with Intel RealSense 3D Camera.

The Intel RealSense Depth Camera Manager (DCM) system is intended to expose interface to streaming video from a depth camera, for both color and depth.

Please refer to the "Intel RealSense 3D Camera Software License.rtf" for license terms and conditions.

This release has a number of known issues. These issues may be addressed with software updates in the future.

Please see your Intel representative for additional support.

1.1. COMPONENTS

Intel RealSense™ Depth Camera Manager Service - The camera service is a Microsoft* Windows* based service that runs on the client machine. The camera service allows multiple Intel RealSense SDK applications and a single non SDK application to access data from the camera simultaneously, without blocking each other.

Intel RealSense™ 3D Camera Virtual Driver - The camera virtual driver is a Microsoft Windows based AVStream driver that runs on the client machine. The camera virtual driver allows non-SDK application to access camera streams as if they are connecting directly to the camera and without blocking other SDK applications.

1.2. HARDWARE REQUIREMENTS

- 6th generation (code named SKL-Y) Intel® Core™ processor
- 150 MB free hard disk space, 4GB RAM
- The Intel RealSense™ DS4 3D Camera
    - DCM version 2.1.27.2853
    - Firmware version 1.0.72.10
    - DLL version 1.16.19.3
- A free USB 3 port for the Intel RealSense™ 3D Camera, or a dedicated connection for integrated camera.
  IMPORTANT NOTE: To support the bandwidth needed by the camera, a **USB3** interface is required. This interface must be connected to a **dedicated** USB3 port within the client system (do not use a hub).

1.3. SOFTWARE REQUIREMENTS

Microsoft Windows 10 Threshold 2 build 10586 and Microsoft Windows 10 Read Stone 1 build 14393

1.4. MICROSOFT DRIVER HLK

Microsoft HLK Submission ID: 1886370

1.5. INSTALLATION

- Remove Intel® RealSense™ Depth Camera Manager DS4 from Programs and Features if it is present on the system and reboot the system

- Option one – install via a .EXE installer
    - Unzip the intel_rs_dcm_r200_2.1.27.2853 if a zip file was received
    - Run the DCM installer (intel_rs_dcm_r200_2.1.27.2853.exe) and follow the instruction on the screen

- Option two – install via a .INF installer
    - Extract all files from the package .ZIP if you received one
    - Right click on RealSenseDS4Depth.inf file and select "Install"
    - Wait until receiving a confirmation the package was installed

2. NEW FEATURES IN THIS RELEASE

Description
Platform camera support

Please note that the use of the Platform Camera with this DCM version requires the use of newer RSSDK version to be released shortly.

Attempting to use the Platform Camera sync feature with the latest publicly available RSSDK might cause some issues and will not function as expected.

3. ISSUES RESOLVED IN THIS RELEASE

Issue
Resolved an issue were the R200 camera was mistakenly identified by the Windows OS as a supported camera to be used with Windows Hello.
On OEM systems where the Intel® RealSense camera (R200) RGB endpoint is exposed, using legacy DirectShow applications can block the camera from being used by RealSense SDK applications.
In stress tests of multiple camera start and Stop scenarios a memory leak may be observed.
The following resolution combination will fail to stream: rectified BGR 320x240x30 or BGR 320 x 240 x 15 color and 320x240x90 depth
The stream is aborted after large number of Sleep/Hibernate cycles.
When using Intel® RealSense camera (R200) RGB endpoint directly & simultaneously trying to stream over SDK Application, any further attempt to stream over SDK Application will fail even after closing the application that using the camera directly.
Yellow bang on DPTF with DCM2.1HF1
Change the Platform camera image time stamps from QPC to UTC, allowing platform camera enabled devices to synchronize frames with other HW devices
Added support for Windows 10 anniversary update (Redstone 1)
Fixing potential error when querying temperature using DPTF occasionally returning 0
Uninstalling driver from Driver Manager doesn't remove DCM from Programs and Features
Added some installer security improvements

4. KNOWN LIMITATIONS

Issue	Recovery
When a number (higher than max number of supported streams) of applications are using the camera simultaneously and the camera is stopped and started in random across these application, the service may crash	Service is restarted automatically.
Frame Provider doesn't return correct error when setting property with out of range value	Check the property info range before setting it's value
All color+depth combinations are exposed by SDK (without filtering the unsupported combinations) over the frame provider.	Iterate over all combinations until the profile is working
DCM service may crash when camera is disconnected while being used by the application	Service is restarted automatically.
Available profiles are not updated	Stop the other stream before start streaming
NUI application is not preempted while a SDK application starts streaming with a profile that does not have a matching depth profile	Restart NUI application
Low FPS with multi SDK applications	If an application is not working properly, leave only the required application open.
Stream is not working after disable from device manager	Enable the device from the device manager and restart the service
Service fails to restart when device is disabled from device manager	Enable the device from the device manger and restart the service
After Init\ Close of another stream, FPS drops to ~7 for a second	Wait a few seconds for FPS to stabilize
ResetProperties() doesn't reset R200 properties	Manually call the needed API to reset individual APIs
Two adaptive applications which try to stream profiles that cannot coexist fail	Stop the second adaptive stream
MirrorMode does not work for color on platform camera	N/A
On OEM systems where the Intel® RealSense camera (R200) RGB endpoint is exposed, using	Close the legacy application, which is using the camera before opening the SDK application.

legacy DirectShow applications can block the camera from being used by RealSense SDK applications.	
In case of system shut down in the middle of DCM or INF installation (power off, user action, etc.), system may stay in inconsistent installation state. For example, Intel driver for R200 L/R node is installed but there is no R200 DCM record in Programs & Features.	Remove the driver for R200 L/R node manually in Device Manager by right-clicking R200 L/R node and selecting "Uninstall". After the driver is uninstalled, right-click on R200 L/R node again, select "Update Driver Software…" and click "Search automatically or updated driver software". Wait until driver gets installed again.

5. UNSUPPORTED FEATURES

Issue	Recovery
System WHCK test failure because of missing NV12 support	OEM should provide to Microsoft the manual Errata

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