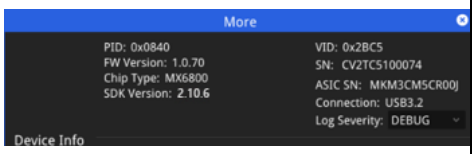
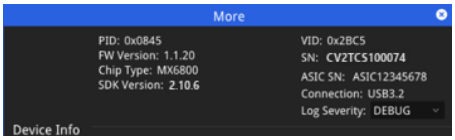
Product Change Notification

Manufacturer	Orbbec Inc.	PCN No.	PCN_20261102001
PCN Issue Date	2026-11-2	PCN Subject	Product Firmware Version Change
PCN Content	1. The factory firmware version of the Gemini 305/305g camera is upgraded from 1.0.70 to 1.1.20 2. For detailed change information, please refer to the link: Firmware changelog and the appendix below 3. This Product Change Notification (PCN) has been officially released in the Product Change Notifications section of the Orbbec official website for reference		
PCN Reason	**New features:** • Added 60fps support for Depth/IR streams at 848x530 / 424x266 resolution • Added HDR alternating frame function • Added ghost filtering support, effectively removing depth noise from weak-texture and repeated-texture areas • Added an interface for setting the sync input/output signal level of the USB Type-C port • Added Warm/Cold Biased effect presets for RGB • Supports configuring the disparity search range and offset before streaming **Optimizations:** • Optimized the white balance above 4000K and the left/right color tone consistency of RGB • Optimized the AE ROI setting logic • AE exposure priority and AE strategy can now be enabled at the same time • Optimized data stream stability • Timestamp synchronization deviation **Fixes:** • Fixed RGB AE jitter and flicker, color jumps and color cast issues • Fixed the edge flicker of color images in trigger mode • Fixed the incorrect backlight compensation value in RGB metadata For detailed changes, please refer to Appendix A		
Change Identification Method	**Version check: use the Orbbec Viewer tool to check the version. For details, please refer to the link "**OrbbecViewer user manual"		
PCN Implementation Date	2027-1-3	PCN Implementation Strategy	Natural transition[1]

Change Item	Product	Specification Before Change	Specification After Change

	Model		
Firmware version change	Gemini 305/305g		
PCN Prepared By		Song Que	Date: 2026-11-2

Affected Product List

Part No.	100100615	Product Description	[Gemini 305] Complete unit, white, color box 2C packaging V1.0
Part No.	100100614	Product Description	[Gemini 305] Complete unit, white, tray 2B packaging V1.0
Part No.	110000181	Product Description	[Gemini 305g] Complete unit, silver, color box 2C packaging V1.0
Part No.	110000343	Product Description	[Gemini 305g] Silver, standard product, Bulk Fakra V1.0
Part No.	110000182	Product Description	[Gemini 305g] Complete unit, silver, tray 2B packaging V1.0

Review and Sign-off	Product	Xi Shou	Project	Zhan Zhao
	R&D	Ding Man	Quality	Song Que

[Note] [1] Natural transition means that, during the implementation of the product change, old-version inventory is gradually consumed and production gradually switches to the new version. Customers will start to naturally receive the new version at a certain point in time, rather than all products being replaced on the specified date.

Appendix A: Product Change Details

1. New Features

No.	Content	Applicable Camera Model
1	Added 60fps support for Depth/IR streams at 848x530 / 424x266 resolution (supported by SDK version 2.8.6 and above).	Gemini 305 Gemini 305g
2	Added HDR alternating frame function at 30fps and above (supported by SDK version 2.9.3 and above).	Gemini 305 Gemini 305g
3	Added ghost filtering support, effectively removing depth noise from weak textures and repeated textures (supported by SDK version 2.10.6 and above).	Gemini 305 Gemini 305g
4	Added an interface for setting the signal level of the sync input/output of the USB Type-C port (supported by SDK version 2.9.3 and above).	Gemini 305 Gemini 305g
5	Added Warm/Cold Biased effect presets for RGB (supported by SDK version 2.9.3 and above): 1. Warm Biased of Gemini 305/305g corresponds to Warm Biased of Gemini 335Lg; 2. Cold Biased of Gemini 305/305g corresponds to default of Gemini 335Lg.	Gemini 305 Gemini 305g
6	Supports configuring the disparity search range and offset before streaming (supported by SDK version 2.9.3 and above); Supports setting the AE ROI of Depth and RGB before streaming (supported by SDK version 2.9.3 and above).	Gemini 305 Gemini 305g

2. Optimizations

No.	Content	Applicable Camera Model
1	**RGB image quality optimization:** 1. Bluish white balance above 4000K; 2. Inconsistent color tone and saturation between the left and right RGB; 3. Severe white balance color cast in scenes with large blue areas.	Gemini 305 Gemini 305g
2	**RGB function optimization:** 1. Minimum AE gain changed from 1.3X to 1X for optimization; 2. Improved the slow AE convergence at 5fps and 10fps; 3. Optimized the purple edge/flicker of color images under Depth AE.	Gemini 305 Gemini 305g
3	Optimized the AE ROI setting logic (same as the Gemini 330 series): 1. When the configured ROI is smaller than the current resolution, the ROI is kept; 2. When the configured ROI is larger than the current resolution, the ROI becomes invalid and is set to the current resolution; 3. Color ROI is configured on Color images, and Depth/IR ROI on Depth/IR images; 4. Color-based AE uses the Color ROI, and Depth-based AE uses the configured Depth/IR ROI.	Gemini 305 Gemini 305g
4	RGB maximum gain limited to 248. (In previous versions, values above 248 did not actually take effect. After this change, when a value above 248 is set through the SDK/ROS/OB Viewer/other wrappers, it takes effect as 248. Setting an out-of-range value through ROS fails directly, while through the SDK it does not fail and 248 is reported)	Gemini 305 Gemini 305g

No.	Content	Applicable Camera Model
5	Switching the sync mode after the stream starts is no longer supported, which improves stream stopping and no-stream issues.	Gemini 305 Gemini 305g
6	When the auto exposure strategy is set to Motion mode, the exposure priority function can be enabled to balance noise and motion blur in Motion mode.	Gemini 305 Gemini 305g
7	Improved the purple cast of RGB under USB 2.0.	Gemini 305 Gemini 305g
8	Optimized the timestamp deviation between Depth and RGB to within 100us in trigger mode.	Gemini 305 Gemini 305g
9	Improved data stream stability: in dual RGB mode, improved the stability when the right RGB is started first and then the left RGB; the start-up latency of the left RGB stream (from issuing the start command to the first frame) increases by an additional 100ms.	Gemini 305 Gemini 305g

3. Fixes

No.	Content	Applicable Camera Model
1	**Fixed abrupt RGB image changes:** 1. AE jitter above 4000Lux; 2. RGB color jumps around 4000K; 3. AE flicker at 5000lux and 20000lux; 4. RGB AE flicker in primary/secondary mode; 5. Edge flicker of RGB images in trigger mode, and green cast in the center.	Gemini 305 Gemini 305g
2	Fixed the non-synchronization of 3 RGB properties when switching between Default mode and dual RGB mode under the V4L2 protocol: 1. AE on/off; 2. Manual AE gain value; 3. Exposure priority on/off.	Gemini 305 Gemini 305g
3	Fixed the non-synchronization of manual AE RGB exposure and gain parameters when switching in both directions between Default mode and dual RGB mode.	Gemini 305g
4	**Data stream stability:** 1. Fixed the issue where, after setting the left/right IR or depth resolution to 1280*800|1280*720 with downsampling of 2, 3 or 4 and toggling the stream, enabling color alone always resulted in no stream; 2. Fixed the occasional ISP no-stream issue after repeatedly starting and stopping streams; 3. Fixed the no-stream issue of dual RGB at 60fps or in trigger mode with frame rate boost; however, horizontal stripes occasionally appear in dual RGB YUYV format over USB; 4. Fixed the continuous data output after wake-up in trigger mode.	Gemini 305 Gemini 305g
5	Fixed the issue where, with Depth base as the default in Default mode, the Depth base is not restored after switching to dual RGB mode and then back to Default mode.	Gemini 305 Gemini 305g
6	Unified the hardware version number in the version and extension information, fixing the inconsistency between the hardware version obtained in the ROS environment and that in Viewer.	Gemini 305 Gemini 305g
7	Fixed the abnormal Depth and RGB images in trigger mode at 20fps with frame rate boost configured.	Gemini 305 Gemini 305g
8	Fixed the incorrect backlight compensation value in RGB metadata.	Gemini 305 Gemini 305g

[PCN Receipt]

[Customer Response]:

[ ] [Accept] [ ] [Reject] [ ] [Conditionally Accept]

[ ] [More detailed information is required, as follows]:

[ ] [New samples required, quantity]:

[ ] [Test report and quality report]:

[ ] [Others (list any additional requirements or information needed here)]:

[Customer Contact Information]:

Name		Tel		E-mail Address		Date	