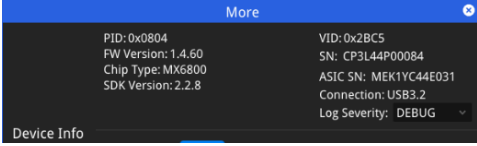
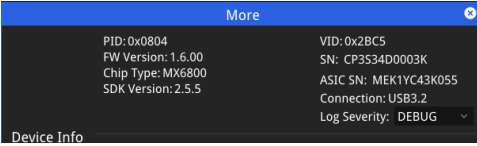
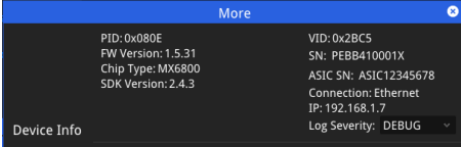
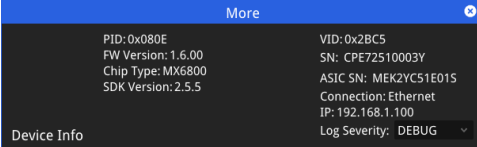


Product Change Notification

Manufactory	Orbbec Inc.	PCN No.	PCN_20251013001
Release date of PCN	2025.10.13	Subject of PCN	Update Factory Firmware Version
PCN Contents	- Gemini 335/336/330/335L/336L/330L/335Lg updates factory firmware version from V1.4.60 to V1.6.00 - Gemini 335Le updates factory firmware version from V1.5.31 to V1.6.00 - For detailed changelog, please refer to the link: Firmware_changelog - This Product Change Notification (PCN) has been officially published on Orbbec's website under the Product Change Notifications section for public reference.		
Reasons for PCN	New Features: - Add configurable exposure alignment in both software and hardware triggering modes. - Add adjustable color backlight compensation. - Add adjustable color denoising levels. - Support standard network camera features, including PTP V2 time synchronization, FORCEIP_CMD, and cross-subnet device discovery. - Support Depth HDR in both software and hardware triggering modes. - If the camera fails to obtain an IP address automatically in DHCP mode, it will switch to static IP mode after 45 seconds. - For Gemini 335/336/330, a disparity search range of 256 pixels is now supported under specific depth presets Improvement: - Enhance firmware security mechanisms. - Improve the overall operational stability. - Optimize laser protection mechanisms. - Improve stream start/stop stability. - Optimize depth performance for short exposures (typical <100 μs). Fixed Issues: - Fix occasional depth stream failures under certain conditions. - Fix occasional IR streaming failure caused by external interference when switching synchronization modes. - Suppress noise signals received on the sync-in port. - Fix the purple color issue for single color image captures under triggering modes. - Fix intermittent IR flickering at very close distances. - Fix the issue where the device occasionally encountered static IP abnormalities after disabling DHCP. Please refer to Appendix A for detailed descriptions.		
Product Identification Methods	Version Check: Use the OrbbecViewer tool, detailed information is in the link " OrbbecViewer user manual "		

Implementation Time of PCN	2025/10/30	PCN Implement Strategy	Running Change ^[1]
Product Model	Production Specifications before Change	Production Specifications after Change	
Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg			
Gemini 335Le			
Author of PCN	Qingchen Meng	Date: 2025-10-13	

Affected Product List				
Part No.	100100476	Product Description	[Gemini 335] 3D camera box packing V1.0	
Part No.	100100473	Product Description	[Gemini 335] 3D camera bulk packing V1.0	
Part No.	100100500	Product Description	[Gemini 336] 3D camera box packing V1.0	
Part No.	100100506	Product Description	[Gemini 336] 3D camera bulk packing V1.0	
Part No.	100100478	Product Description	[Gemini 335L] 3D camera box packing V1.0	
Part No.	100100477	Product Description	[Gemini 335L] 3D camera bulk packing V1.0	
Part No.	100100501	Product Description	[Gemini 336L] 3D camera box packing V1.0	
Part No.	100100505	Product Description	[Gemini 336L] 3D camera bulk packing V1.0	
Part No.	100100487	Product Description	[Gemini 335Lg] 3D camera box packing V1.0	
Part No.	100100504	Product Description	[Gemini 335Lg] 3D camera bulk packing V1.0	
Part No.	100100522	Product Description	[Gemini 335Le] 3D camera box packing V1.0	
Part No.	100100553	Product Description	[Gemini 335Le] 3D camera bulk packing V1.0	
Part No.	100100489	Product Description	[Gemini 330] 3D camera bulk packing V1.0	
Part No.	100100498	Product Description	[Gemini 330L] 3D camera bulk packing V1.0	
Reviewing/Approval Departments	PD	Approve: Bolin Wang	PM	Approve: Aiwen Li
	R&D	Approve: Qinghong Liu	Quality	Approve: Qingchen Meng
Remark: [1] Running change refers to the process during product change implementation where the old version's inventory is gradually consumed and production gradually switches to the new version. Customers will naturally begin receiving the new version at a certain point in time, rather than all products being replaced on a specified date.				

Appendix A: Product Changelog Detailed Information

1. New feature

No.	Content	Camera Involved
1	Add configurable exposure alignment in both software and hardware triggering modes to enable precise synchronization between the camera and external devices.	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
2	Add color backlight compensation feature with adjustable intensity levels from 0 to 6. The default level is 3; higher levels result in brighter images.	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
3	Add support for adjustable color denoising levels. The default setting is Auto mode, with manual configuration available from level 1 to 8. When set to a fixed level, the camera applies denoising according to the selected level; higher levels provide stronger noise reduction but may slightly reduce image sharpness.	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
4	Add support for PTP (Precision Time Protocol) V2 time synchronization to enable high-precision clock synchronization between the camera and external devices.	Gemini 335Le
5	Add support for the FORCEIP_CMD feature. This allows users to temporarily assign an IP address for short-term access and configuration of the camera. After power-off or reboot, the device automatically reverts to its original IP configuration, ensuring that temporary changes do not affect the camera's long-term network settings.	Gemini 335Le
6	Add support for device discovery from different hosts or subnets, thereby improving flexibility in device management and access.	Gemini 335Le
7	When the camera is operating in DHCP mode and fails to obtain an IP address within 45 seconds, it will automatically switch to the previously configured static IP mode to ensure stable device connection and accessibility.	Gemini 335Le
8	Add support for embedding metadata in the first frame of the image, with the feature disabled by default. Enabling this feature allows the host platform to access metadata that would otherwise be unavailable.	Gemini 335Lg
9	Add support for depth HDR in both software and hardware triggering modes.	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
10	Add support for an expanded disparity search range of 256 pixels. This feature is enabled only for specific depth presets. Please find detailed information on the depth preset release website.	Gemini 335/336/330

2. Improvement

No.	Content	Camera Involved
1	Enhance the firmware security mechanism of the Gemini 330 series to prevent the camera from being affected by incorrectly flashed firmware versions.	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
2	Improve the synchronization accuracy of the device timestamps across multiple cameras.	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
3	Improve depth performance for high ambient temperatures. The overall laser energy is reduced by 50% at 70 °C before completely shutting down the laser, to prevent from potential overheating of the laser device while still maintaining adequate laser performance for most use cases.	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
4	Enhance the exception handling while starting / stopping data streams	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
5	Optimize imaging quality for short exposures (typically < 100us).	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
6	Improve the overall operational stability, including stability during power cycling and stream on/off operations.	Gemini 335Le

3. Fixed Issues

No.	Content	Camera Involved
1	Fix the issue of frame drops occurring when the device is connected to an external network through a switch and affected by network interference.	Gemini 335Le
2	Fix the issue of abnormal depth images in secondary-synced mode at 60 fps.	Gemini 335Lg
3	Fix the purple color issue for single color image captures under triggering modes	Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
4	Fix the issue of IR camera AE flickering caused by the object being too close.	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
5	Fix the intermittent issue where the depth stream fails to start due to specific timing configurations.	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
6	Fix the issue where IR streaming occasionally failed when switching the synchronization mode during active streaming.	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
7	Fix the issue of occasional frame drops while operating with the Factory preset.	Gemini 335/336/330 Gemini 335L/336L/330L
8	Enable the full performance of DHCP.	Gemini 335Le
9	Fix the issue of very occasional failures while starting depth / IR streams in the secondary-synced mode.	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
10	Fix the issue of abnormal color images while starting the color stream.	Gemini 335/336/330 Gemini 335L/336L/330L Gemini 335Lg Gemini 335Le
11	Fix the issue where the device occasionally encountered static IP abnormalities after disabling DHCP.	Gemini 335Le

[Receipt of PCN]

【The response from customer is as follows】：

☐ 【Acceptance】 ☐ 【Not Acceptable】 ☐ 【Conditional Acceptance】

☐ 【Need detailed information, as follows】：

☐ 【Require new samples, quantity: [Specify the desired quantity here] 】

☐ 【Test report and quality report: [Please provide or request these reports accordingly]]

☐ 【Others: List any additional requirements or information needed here】

【Information of the Respondent from customer】

Name		Phone		E-mail		Date	
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