Firmware Changelog for Gemini 330 series

The latest firmware version	The previous release version	Changelog	Supported Product	SDK Version	Release Date
V1.4.60	V1.4.00	New feature: add support for the backup firmware. If the camera firmware becomes corrupted due to unexpected interruptions while being updated, the backup firmware will maintain the camera still operational. However, a retry of the firmware update is indispensable for the optimal camera performance.	Gemini 335/335L Gemini 336/336L Gemini 330/330L Gemini 335Lg	V2.2.8	2/17/2025
		New feature: add support for optional depth presets which are complementary to the built-in depth presets in the camera firmware and can be configured by users. Users can obtain new depth presets as single files from the Gemini 330 series documentation page and download them as optional depth presets from the host to the camera. Maximal three depth presets can be downloaded to the camera. No reboot of the camera is required to enable the downloaded new depth presets.	Gemini 335/335L Gemini 336/336L Gemini 330/330L Gemini 335Lg		
		New feature: add support for the on-chip hardware noise removal filter, which is alternative to the software noise removal filter in SDK and thus reduces the host CPU load. This hardware noise removal filter is disabled by default.	Gemini 335/335L Gemini 336/336L Gemini 330/330L Gemini 335Lg		
		New feature: add support for the disparity search range offset, which can be used to shift the depth operating range. Larger offset value leads to decreased min-Z depth value and also decreased max-Z depth value. This feature is supported only for the depth resolutions of 1280x800 & 1280x720 & 640x400 & 424x266. The depth stream must be started before configuring this value.	Gemini 335/335L Gemini 336/336L Gemini 330/330L Gemini 335Lg		
		New features: add new function for Gemini 335Lg. 1. Add depth/IR AE support for alternating depth/IR imaging configurations. 2. Add laser on/off status sync option. 3. Add exposure priority option to depth AE and this option is disabled by default. 4. add a new resolution of 424 x 266 to depth and IR.	Gemini 335Lg		
		Improvement: reduce peak power consumptions without any performance degradation. Comparisons between typical values before and after optimization: - Gemini 335Lg: 8.4W -> 7.5W	Gemini 335Lg		
		Fixed issue: fix the issue of abnormal depth during the switch of depth configuration parameter.	Gemini 335/335L Gemini 336/336L Gemini 330/330L Gemini 335Lg		
		Fixed issue: fix the issue of data stream loss during stream-off process.			
		Fixed issue: .fix the issue of wrong timestamp while the frame rate changed and the data is streamed via V4L2.	Gemini 335/336		
		Fixed issue: fix the issue of RGB exposure value in metadata and the invalidation of exposure priority.	Gemini 335Lg		

Firmware Changelog for Gemini 330 series

The latest firmware version	The previous release version	Changelog	Supported Product	SDK Version	Release Date
V1.4.00	V1.3.70	New feature: add depth/IR AE support for alternating depth/IR imaging configurations. Typically used for simultaneously acquiring depth images with laser on and speckle-free IR images with laser off, as well as for acquiring HDR depth images.	Gemini 335/335L Gemini 336/336L Gemini 330/330L	V2.1.1	12/24/2024
		New feature: add laser on/off status sync option. Typically used for synchronization of the laser status among multiple Gemini 330 series cameras, while these cameras operating in the laser on-off or off-on mode with alternating laser status.			
		New feature: add exposure priority option to depth AE and this option is disabled by default. With this option enabled depth AE can increase the exposure to an extreme large value for the optimal imaging quality on dark objects, which however may lead to decreased depth frame rate.			
		New feature: add a new resolution of 424 x 266 to depth and IR. This resolution is with the same depth performance as 1280 x 800 and 640 x 400, but with less data volume for reduced bandwidth and CPU load.			
		New feature: add depth preset "High Accuracy" to Gemini 336/336L. This preset is with less dense depth information in comparison to "Default", but with higher accuracy and being more reliable against false positives/ghost depth.	Genini 336/336L		
		Improvement: optimize the software timestamp reset function. The delay between receiving the reset command from the host and the reset operation has been decreased from approximately 22ms to nearly 0ms.	Gemini 335/335L Gemini 336/336L Gemini 330/330L		
		Improvement: reduce peak power consumptions without any performance degradation.			
		Fixed issue: fix the issue of RGB Gain leading to inconsistent brightness.			
		Fixed issue: fix the issue of RGB metadata while repeatedly switching RGB AE on and off.			
		Fixed issue: fix the issue of flickering depth/IR images after timestamp reset or timestamp synchronization.			
V1.3.70	V1.3.25	New feature: add support for Gemini 335Lg	Gemini 335Lg	2.0.18	10/29/2024
		New feature: add support for streaming low resolution RGB images at 90fps - 640x480/640x400/640x360/480x270/424x240	Gemini 335L/336L		
		New feature: add support for streaming low resolution Depth images at 90fps - 640x480/640x360/480x270/424x240	Gemini 335/336 Gemini 335L/336L		
		Fixed issue: fixed the abnormal format issue of RGB images streaming at 60fps and in MJPEG format.			
		Fixed issue: fixed the non-functioning issue of the 8-pin syncport Pin_2 GPIO_OUT.			
		Fixed issue: fixed the issue while switching Preset mode from any other to factory would not produce an IR stream after enabling depth.			
		Fixed issue: fixed depth ROI setting a point that causes AE to fail			

Firmware Changelog for Gemini 330 series

The latest firmware version	The previous release version	Changelog	Supported Product	SDK Version	Release Date
V1.3.25	V1.3.00	New feature: add RGB resolution by 10fps.	Gemini 335/336 Gemini 330	1.10.12	8/7/2024
		New feature: add frame rates of 6, 10, 15 for Depth 640x360 resolution under USB2.0.			
		New feature: add frame rates of 5, 10, 15 for Depth 640x360 resolution under USB2.0.	Gemini 335L/336L Gemini 330L		
		New feature: add 90fps for RGB resolutions of 640x480 and below.			
		New feature: add 10fps for all Depth/IR resolutions.	Gemini 335/335L Gemini 336/336L Gemini 330/330L		
		New feature: add hardware D2C functionality			
V1.3.25	V1.3.00	New feature: add disparity search ranges of 256 and 64. For resolutions 1280x800, 1280x720, and 640x400, the default disparity search range is 256 and also supports configurations of 256, 128, and 64. For other resolutions, only 128 is supported. For resolutions 1280x800, 1280x720, and 640x400, when the disparity search range is 256, Min-Z (minimum depth distance) is 0.25m. When the disparity search range is 128, Min-Z is 0.5m. Using a disparity search range of 256 increases power consumption	Gemini 335L/336L Gemini 330L	1.10.12	8/7/2024
		Fixed issue: fixed synchronization issues on Gemini 335/336 devices after power-on or resolution switch.	Gemini 335/335L Gemini 336/336L Gemini 330/330L		
		Fixed issue: fixed inaccurate timing issues during stream shutdown.			
V1.3.00	V1.2.81	Add low power mode at the standby	Gemini 335/335L Gemini 336/336L Gemini 330/330L	1.10.8	6/20/2024
		Add interface to set maximum exposure for RGB/IR AE.			
		Add RGB YUYV 1280x800/1280x720 at 30fps.			
		Update ISP firmware to fix the synchronous issue at the 5fps of the Gemini 335L			
		Fixed depth unit errors when switching Preset mode(non-factory calib preset => factory calib preset => non-factory calib preset)			
		Fixed abnormal temperature readings from the IMU at negative Celsius temperatures.			
V1.2.81	-	First release for Gemini 335/335L,Gemini 336/336L and Gemini 330/330L	Gemini 335/335L Gemini 336/336L Gemini 330/330L	1.10.5	5/30/2024