


Options

The following table shows all options available to set and get by `camera.setOptions` and `camera.getOptions`. An option cannot be changed when its corresponding support is empty or contains only one option.

Note: The camera is responsible for updating the currently supported options whenever needed. For example, when `isoSupport` is empty (auto mode), clients cannot setOptions for iso. This can happen when `exposureProgram` is set to Shutter Priority. Clients *can not* set support options.

Name	Type	Description
<code>captureMode</code>	String	Current capture mode. Default to image .
<code>captureModeSupport</code>	String Array	<p>List of capture modes currently available. Minimum require level 1 is <code>["image"]</code>, and minimum requirement for API level 2 is <code>["image", "interval"]</code>, where <code>"interval"</code> represents capturing a series of images spaced at a certain interval. Also <code>captureInterval</code> and <code>captureIntervalSupport</code> are required. Additional modes (<code>"video"</code> and <code>"walkaround"</code>) are supported from API level 2, so the complete supported set by API level 2 is <code>["image", "interval", "video", "walkaround"]</code>, where <code>"video"</code> represents the video capture mode and <code>"walkaround"</code> represents the mode of capturing two images in sequence, the first with the user standing anywhere relative to the camera and the second with the user standing on the opposite side (relative to the first standing position). This allows the camera to remove the users from the first image by combining the two images. When <code>"walkaround"</code> is supported by the camera and set to be the current capture mode, the client should send two <code>takePicture</code> commands to the camera, where the first command (when it finishes) indicates the camera should take the second image while the second command should finish the final image when it finishes.</p> <p>To add more capture modes not supported yet, please prefix specific modes with an underscore (<code>_</code>).</p> <p>This option was modified in API level 2.</p>
<code>captureStatus</code>	String	<p>Current capture status. Default to <code>"idle"</code>. This is useful to check the camera's status when it is first connected to an app. If the camera is in the middle of shooting a video, it may need to be stopped or commanded to do other things, e.g. another video shooting.</p> <p>This option was added in API level 2.1.</p>

Name	Type	Description
captureStatusSupport	String Array	List of capture statuses currently available; By default, it sh ["idle", "shooting"] if video shooting is supported. can be provided too, e.g. "downloading". This option was added in API level 2.1.
exposureProgram	Number	Current exposure program.
exposureProgramSupport	Number Array	List of exposure programs currently available; for example, 3, 4]. Each integer represents a different exposure progr <ul style="list-style-type: none"> • 0 = Not defined • 1 = Manual • 2 = Normal program • 3 = Aperture priority • 4 = Shutter priority Select the following link to download further details about ExposureProgram (http://www.exiv2.org/Exif2-2.PDF).  Note: Use 9 for "ISO priority" if needed.
iso	Number	Current ISO speed setting.
isoSupport	Number Array	API level 1: List of ISO settings currently available; for exar 200, 400, 800, 1600] or [] when it is in auto mode. API level 2: List of ISO settings currently available; for exar 100, 200, 400, 800, 1600], where 0 represents aut This option was modified in API level 2.
shutterSpeed	Number	Current shutter speed setting.
shutterSpeedSupport	Number Array	API level 1: List of shutter speeds currently available; for e; [0.067, 0.033, 0.017, 0.008] or [] when it is in au API level 2: List of shutter speeds currently available; for e; 0.067, 0.033, 0.017, 0.008], where 0 represents a This option was modified in API level 2.
aperture	Number	Current aperture setting, in f-stops.

Name	Type	Description
apertureSupport	Number Array	<p>API level 1: List of aperture settings currently available, expressed as <code>f/number</code>; for example, <code>[1.4, 2, 2.8, 4, 5.6, 8]</code>, when it is auto mode.</p> <p>API level 2: List of aperture settings currently available, expressed as <code>f/number</code>; for example, <code>[0, 1.4, 2, 2.8, 4, 5.6]</code>, where <code>0</code> represents auto mode.</p>
whiteBalance	String	Current white balance setting; for example, daylight . Default is daylight .
whiteBalanceSupport	String Array	<p>List of white balance settings currently available, can be a predefined list: <code>["auto", "incandescent", "fluorescent", "daylight", "cloudy-daylight", "shade", "twilight"]</code>. Values for each:</p> <ul style="list-style-type: none"> • incandescent, around 3200K • fluorescent, around 4000K • daylight, around 5200K • cloudy-daylight, around 6000K • shade, around 7000K • twilight, around 12000K <p>Prefix vendor-specific setting names with an underscore; for example, <code>_vendor-setting</code>.</p>
exposureCompensation	Number	Current exposure compensation.
exposureCompensationSupport	Number Array	List of exposure compensations currently available, usually <code>-1</code> , <code>-0.67</code> , <code>-0.33</code> , <code>0</code> , <code>0.33</code> , <code>0.67</code> , <code>1</code> .

Name	Type	Description
fileFormat	Object	<p>Current file type and resolution. The format should reflect the value of <code>captureMode</code>. For example, if <code>captureMode</code> is <code>image</code>, an appropriate response could be:</p> <pre>{ "type": "jpeg", "width": 2000, "height": 1000 }</pre> <p>If <code>captureMode</code> is <code>video</code>, an appropriate response could be:</p> <pre>{ "type": "mp4", "width": 1920, "height": 1080, "framerate": 30 }</pre> <p>This option was modified in API level 2.</p>

Name	Type	Description
fileFormatSupport	Object Array	<p>List of the file formats currently available; for example:</p> <pre>[{ "type": "jpeg", "width": 2000, "height": 1000 }, { "type": "jpeg", "width": 200, "height": 100 }, { "type": "mp4", "width": 1920, "height": 1080, "framerate": 24 }, { "type": "mp4", "width": 1280, "height": 720, "framerate": 30 }, ...]</pre> <p>Select the following link for more information about all types (http://www.feedforall.com/mime-types.htm).</p> <p>This option was modified in API level 2.</p>
exposureDelay	Number	Current delay between the takePicture command and when exposure is started, in seconds.
exposureDelaySupport	Number Array	List of exposure delays currently available, in seconds; for example, 1, 2, 5, 10, 30, 60
sleepDelay	Number	Current delay before the camera goes to sleep, in seconds.
sleepDelaySupport	Number Array	List of the sleep delays currently available, in seconds; for example, 60, 120, 300, 600, 1800, 65535] , where 65535 denotes the camera doesn't sleep until powered off) and microphone is supported.

Name	Type	Description
offDelay	Number	Current delay in seconds before the camera powers off.
offDelaySupport	Number Array	List of power off delays currently available, in seconds; for [1800, 3600, 7200, 65535] , where 65535 <i>disables</i> power off mode (the camera doesn't power off until the battery is depleted or powered off manually) and must be supported.
totalSpace	Number	Read-only: Number of bytes of total storage.
remainingSpace	Number	Read-only: Number of bytes of free storage.
remainingPictures	Number	Read-only: Estimated number of remaining pictures based on capture setting.
gpsInfo	Object	<p>Current GPS information. Set using setOptions using phone location.</p> <pre>{ "lat": 23.532, "lng": -132.35 }</pre> <p>The lat and lng properties are decimal degrees, with lat in the range [-90, 90], and lng in the range [-180, 180]. When using a phone, please note that each GPS location is valid only until the next update from the phone. The phone must determine when to update the GPS location; for example, right before each takePicture call. 65535 notifies the camera that the current GPS location is invalid; the camera should ignore it and use its own GPS if it exists. To set the GPS location to invalid, call setOptions({"gpsInfo": {"lat": 65535, "lng": 65535}}); this means the GPS location is invalid.</p>
dateTimeZone	String	Current date and time information. Set by setOptions using date, time, and time zone. The format is, YYYY:MM:DD HH (-)HH:MM . Time is in 24-hour format, date and time are separated by a blank space, and time zone is an offset from UTC time; for example, 2014:05:18 01:04:29+8:00 is China Time Zone (UTC+8).
hdr	API level 1: Boolean API level 2: String	<p>API level 1: Enable/disable HDR capture mode. Value is true to enable HDR, or false to disable it. Default value is false. Setting is only when hdrSupport is also true.</p> <p>API level 2: Current HDR mode of String type. This option was modified in API level 2.</p>

Name	Type	Description
hdrSupport	API level 1: Boolean API level 2: String Array	<p>API level 1: A value of true signifies that the camera supports HDR. A value of false identifies a camera without HDR.</p> <p>API level 2: If you don't support HDR mode, it is ["off"]; if one HDR mode is supported, it is ["off", "hdr"]; if multiple HDR modes (based on different algorithms) are supported, then it is ["off", "hdr1", "hdr2", ...]</p> <p>This option was modified in API level 2.</p>
exposureBracket	Object	<p>Current exposure bracket setting. Available only when hdr is true (API level 1) or hdrSupport contains at least one HDR mode (API level 2). If the camera uses manual exposure bracketing, it contains two entries:</p> <ol style="list-style-type: none"> 1. shots, an integer containing the number of shots to be taken. 2. increment, a number containing an EV increment between shots. <p>For example:</p> <pre>{ "shots": 3, "increment": 1.33 }</pre> <p>If the camera uses auto exposure bracketing, the object contains one entry:</p> <pre>{ "autoMode": true }</pre> <p>API level 1: Default to empty {} when hdrSupport == false. Manufacturers decide default values (for example, auto exposure bracketing), when hdr is true.</p> <p>API level 2: Default to empty {} when hdrSupport contains at least one HDR mode. Otherwise, manufacturers decide default values (for example, auto exposure bracketing).</p> <p>This option was modified in API level 2.</p>

Name	Type	Description
exposureBracketSupport	Object	<p>Exposure bracket settings currently available; for example:</p> <pre>{ "autoMode": true, "shotsSupport": [1, 3, 5, 7], "incrementSupport": [0.33, 0.67, 1, 1.3] }</pre> <p>API level 1: Default to empty {} if hdrSupport == false, hdrSupport == true, but auto exposure bracketing is not supported, then autoMode will be false.</p> <p>API level 2: Default to empty {} if hdrSupport contains any HDR mode, but auto exposure bracketing is not supported, then autoMode will be false.</p> <p>This option was modified in API level 2.</p>
gyro	Boolean	Set to true to enable the camera's gyroscope module, or false to disable this feature. Default to true if the camera supports the gyroscope, otherwise false . This setting can be true only when gyroSupport is true .
gyroSupport	Boolean	If the camera has a gyroscope this value should be true , otherwise false .
gps	Boolean	Enables/disables the camera GPS module. Value must be true to enable, or false to disable. Default value is true if the camera supports GPS, otherwise false . Setting is true only when gpsSupport is true .
gpsSupport	Boolean	This value should be true if the camera has its own GPS module, otherwise false .
imageStabilization	String	Current image stabilization operation; for example, off .
imageStabilizationSupport	String Array	Image stabilization options currently available. The pre-defined strings are ["off", "on"] . If the camera doesn't support image stabilization, return ["off"] , otherwise return ["off", "on"] . Prefix specific strings with an underscore (_); for example, ["_horizontal_stabilization", "_vibration_compensation"] .

Name	Type	Description
wifiPassword	String	<p>At least 8 characters long, containing letters, numbers, symbols and spaces. It can be changed only when the camera is disconnected from the device. Once it is changed, the camera must disconnect and then reconnect using the new wifiPassword.</p> <p>The camera must provide a reset mechanism in case the password is forgotten; for example, a reset button to restore the factory password.</p>
previewFormat	Object	<p>Current live preview resolution; for example:</p> <pre>{ "width": 640, "height": 320, "framerate": 24 }</pre> <p>This option was added in API level 2.</p>
previewFormatSupport	Object Array	<p>Currently supported live preview formats; for example:</p> <pre>[{ "width": 640, "height": 320, "framerate": 24 }, ... { "width": 1280, "height": 720, "framerate": 24 }]</pre> <p>This option was added in API level 2.</p>
captureInterval	Number	<p>Current interval between capturing two consecutive images.</p> <p>This option was added in API level 2.</p>

Name	Type	Description
captureIntervalSupport	Object	<p>Minimum and maximum intervals allowed between capturing consecutive images, in seconds; for example:</p> <pre>{ "minInterval": 10, "maxInterval": 60 }</pre> <p>It might vary depending on fileFormat.</p> <p>This option was added in API level 2.</p>
captureNumber	Number	<p>Number of images to be captured for one interval capture : Default to 0, which means the capture needs to be terminated by stopCapture (https://developers.google.com/streetview/open-spherical-camera/reference/camera/stopcapture?hl=zh-cn) command; otherwise, the capture stops automatically after images of the specified number. The capture can also be interrupted when the camera is out of battery or when it is turned off.</p> <p>This option was added in API level 2.</p>
captureNumberSupport	Object	<p>Minimum and maximum number of images that can be captured in an interval capture; for example:</p> <pre>{ "minNumber": 2, "maxNumber": 50 }</pre> <p>It might change depending on remaining storage.</p> <p>This option was added in API level 2.</p>
remainingVideoSeconds	Number	<p>Estimated number of seconds for remaining video based capture setting.</p> <p>This option was added in API level 2.</p>

Name	Type	Description
pollingDelay	Number	Minimum interval in seconds between two consecutive status requests. Clients should use this field to guide their status behavior; for example, when it is stitching an image, clients poll the camera periodically to see if it finishes stitching. Different cameras have different support; for example, some cameras support status polling every one second while others support longer intervals. This option was added in API level 2.
delayProcessing	Boolean	True when processing (e.g. stitching) has a lower priority than capturing, or in other words, another capture is allowed before the previous captured image is finished. This is highly recommended for cameras that require long processing time. This option was added in API level 2.
delayProcessingSupport	Boolean Array	[true] means processing (e.g. stitching) has a lower priority than capturing, and is always delayed by default. [false] means processing happens right after capturing. [true, false] means there is a choice between these two options. This option was added in API level 2.
clientVersion	Number	The API level the client decides to use. Default to 1 if the camera supports both API level 1 and 2 so that clients written for API level 1 works with the camera without any change; default to 2 if the camera only supports API level 2, which is not recommended before migrating to API level 2. If the camera only supports API level 2, trying to set it to 1 should fail. If clientVersion is set to 1 successfully and a deprecated command from API level 1 is used, the request should fail with error code <u>unknownCommand</u> (https://developers.google.com/streetview/open-spherical-camera/guides/osc/commands/execute?hl=zh-cn#error). This option was added in API level 2.
photoStitchingSupport	String Array	List of stitching options for photos. Return [ondevice] if the camera always stitches on the camera, [none] if the camera cannot stitch photos, and [none, ondevice] if stitching is user configurable. Vendor-specific setting names with an underscore, e.g. _vendor_setting . This option was added in API level 2.1.

Name	Type	Description
photoStitching	String	Current stitching option for photos, e.g. ondevice . Default if it is supported. This option was added in API level 2.1.
videoStitchingSupport	String Array	List of stitching options for videos. Return [ondevice] if always stitched on the camera, [none] if the camera can't videos, and [none, ondevice] if stitching is user configurable vendor-specific setting names with an underscore, e.g. _vendorSetting . This option was added in API level 2.1.
videoStitching	String	Current stitching option for videos, e.g. ondevice . Default if it is supported. This option was added in API level 2.1.
videoGPSSupport	String Array	List of GPS options during video capture. Return [continuous] if camera can continuously capture GPS during video capture, the locations in the video. Return [none] if it cannot and [none, continuous] if video GPS support is user configurable vendor-specific setting names with an underscore, e.g. _vendorSetting . This option was added in API level 2.1.
videoGPS	String	Current option for GPS support during video capture, e.g. continuous . Default to continuous if it is supported. This option was added in API level 2.1.
_vendorSpecific	[type] (optional)	Vendor-specific additional camera options. Prefix vendor-specific (optional) with an underscore (_).

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