

## List of supported camera features

This camera model supports the following GenICam standard features. More information on these features can be found in the GenICam™ Standard Features Naming Convention under <http://www.emva.org/standards-technology/genicam/genicam-downloads/>.

### DeviceControl

Name	Description	Values
Device Reset	Resets the device to its power up state. After reset, the device must be rediscovered.	
Device Vendor Name	Name of the manufacturer of the device.	
Device Model Name	Model of the device.	
Device Family Name	Identifier of the product family of the device.	
Device Manufacturer Info	Manufacturer information about the device.	
Device Firmware Version	Version of the firmware in the device.	
Device User ID	User-programmable device identifier.	
Device Character Set	Character set used by the strings of the device's bootstrap registers.	UTF 8 ASCII
Device Stream Channel Endianness	Endianness of multi-byte pixel data for this stream.	Big Little
Device Stream Channel Packet Size	Specifies the stream packet size, in bytes, to send on the selected channel for a Transmitter or specifies the maximum packet size supported by a receiver.	
Device Link Heartbeat Mode	Activate or deactivate the Link's heartbeat.	On Off
Device Link Heartbeat Timeout	Controls the current heartbeat timeout of the specific Link.	
Device Link Command Timeout	Indicates the command timeout of the specified Link. This corresponds to the maximum response time of the device for a command sent on that link.	
Device Temperature Selector	Selects the location within the device, where the temperature will be measured.	Mainboard
Device Temperature	Device temperature in degrees Celsius (C). It is measured at the location selected by DeviceTemperatureSelector.	
Device Link Throughput Limit	Limits the maximum bandwidth of the data that will be streamed out by the device on the selected Link. If necessary, delays will be uniformly inserted between transport layer packets in order to control the peak bandwidth.	

### TransportLayerControl

Name	Description	Values
Payload Size	Provides the number of bytes transferred for each image or chunk on the stream channel. This includes any end-of-line, end-of-frame statistics or other stamp data. This is the total size of data payload for a data block.	

### AcquisitionControl

Name	Description	Values
Acquisition Mode	Sets the acquisition mode of the device. It defines mainly the number of frames to capture during an acquisition and the way the acquisition stops.	Single Frame Multi Frame Continuous
Acquisition Frame Count	Number of frames to acquire in MultiFrame Acquisition mode.	
Exposure Auto	Sets the automatic exposure mode when ExposureMode is Timed. The exact algorithm used to implement this control is device-specific.	Off Once Continuous
Acquisition Start	Starts the Acquisition of the device. The number of frames captured is specified by AcquisitionMode.	
Acquisition Stop	Stops the Acquisition of the device at the end of the current Frame. It is mainly used when AcquisitionMode is Continuous but can be used in any acquisition mode.	
Exposure Mode	Sets the operation mode of the Exposure.	Timed
Exposure Time	Sets the Exposure time when ExposureMode is Timed and ExposureAuto is Off. This controls the duration where the photosensitive cells are exposed to light.	
Acquisition Frame Rate	Controls the acquisition rate (in Hertz) at which the frames are captured.	
Trigger Selector	Selects the type of trigger to configure.	Exposure Start
Trigger Mode	Controls if the selected trigger is active.	Off On
Trigger Source	Specifies the internal signal or physical input Line to use as the trigger source. The selected trigger must have its TriggerMode set to On.	Software Line 0 Line 2 Line 3 User Output 0 User Output 1 User Output 2 User Output 3
Trigger Activation	Specifies the activation mode of the trigger.	Rising Edge Falling Edge Any Edge

### AnalogControl

Name	Description	Values
Gamma	Controls the gamma correction of pixel intensity. Gamma correction is disabled when the LUTEnable is True. Gamma > 1 increases image brightness. Gamma < 1 decreases image brightness.	
Gain Auto	Sets the automatic gain control (AGC) mode. The exact algorithm used to implement AGC is device-specific.	Off Once Continuous
Gain Selector	Selects which Gain is controlled by the various Gain features.	Analog All Digital All
Gain	Controls the selected gain as an absolute physical value. This is an amplification factor applied to the video signal.	

### LUTControl

Name	Description	Values
LUT Selector	Selects which LUT to control.	Raw
LUT Enable	Activates the selected LUT. True: Activates the selected LUT. False: Deactivates the selected LUT. If a LUT is active, gamma correction is disabled. When disabling LUT, the previous gamma correction is restored.	
LUT Index	Selects an index to access the corresponding entry in the LUT selected by LUTSelector. The LUT has 64 intervals with a control point at the beginning of each interval. The 64 intervals are uniformly distributed in the 12-bit range. The control points are: 0, 64, 128 ... 4032	
LUT Value	Controls the i'th value of the LUT selected by LUTSelector, at the position i defined by LUTIndex. Values in 12 bit.	
LUT Preset Selector	Selects a LUT preset.	Identity Inverse Binarize DigitalGain2 EnhancedContrast
LUT Preset Load	Loads a LUT preset selected by LUTPresetSelector and applies it to the LUT selected by LUTSelector.	

### TestControl

Name	Description	Values
Test Pending Ack	Tests the device's pending acknowledge feature. When this feature is written, the device waits a time period corresponding to the value of TestPendingAck before acknowledging the write.	
Test Event Generate	Generates a Test Event.	

## TransferControl

Name	Description	Values
Transfer Queue Current Block Count	Returns the number of Block(s) currently in the transfer queue.	
Transfer Queue Max Block Count	Controls the maximum number of data blocks that can be stored in the block queue of the selected stream.	
Transfer Control Mode	Selects the control method for the transfers.	Automatic

**ImageFormatControl**

Name	Description	Values
Decimation Horizontal	Horizontal sub-sampling of the image. This reduces the horizontal resolution (width) of the image by the specified horizontal decimation factor.	
Decimation Vertical	Vertical sub-sampling of the image. This reduces the vertical resolution (height) of the image by the specified vertical decimation factor.	
Sensor Width	Effective width of the sensor in pixels.	
Sensor Height	Effective height of the sensor in pixels.	
Width Max	Maximum width of the image (in pixels). The dimension is calculated after horizontal binning, decimation or any other function changing the horizontal dimension of the image.	
Height Max	Maximum height of the image (in pixels). This dimension is calculated after vertical binning, decimation or any other function changing the vertical dimension of the image.	
Width	Width of the image provided by the device (in pixels).	
Height	Height of the image provided by the device (in pixels).	
Offset X	Horizontal offset from the origin to the region of interest (in pixels).	
Offset Y	Vertical offset from the origin to the region of interest (in pixels).	
Binning Selector	Selects which binning engine is controlled by the BinningHorizontal and BinningVertical features.	Sensor
Binning Horizontal	Number of horizontal photo-sensitive cells to combine together. This reduces the horizontal resolution (width) of the image.	
Binning Vertical	Number of vertical photo-sensitive cells to combine together. This reduces the vertical resolution (height) of the image.	
Pixel Color Filter	Type of color filter that is applied to the image.	None BayerRG BayerGB BayerGR BayerBG
Pixel Format	Format of the pixels provided by the device. It represents all the information provided by PixelSize, PixelColorFilter combined in a single feature.	Mono8 Mono10p Mono10
Pixel Size	Total size in bits of a pixel of the image.	Bpp1 Bpp2 Bpp4 Bpp8 Bpp10 Bpp12 Bpp14 Bpp16 Bpp24 Bpp30 Bpp32 Bpp36 Bpp48 Bpp64

**GigEVision**

Name	Description	Values
Gev MAC Address	MAC address of the logical link.	
Gev Current IP Configuration Persistent IP	Controls whether the PersistentIP configuration scheme is activated on the given logical link.	
Gev Current IP Configuration LLA	Controls whether the Link Local Address IP configuration scheme is activated on the given logical link.	
Gev Current IP Configuration DHCP	Controls whether the DHCP IP configuration scheme is activated on the given logical link.	
Gev Current IP Address	Reports the IP address for the given logical link.	
Gev Current Subnet Mask	Reports the subnet mask of the given logical link.	
Gev Current Default Gateway	Reports the default gateway IP address to be used on the given logical link.	
Gev Persistent IP Address	Controls the Persistent IP address for this logical link. It is only used when the device boots with the Persistent IP configuration scheme.	
Gev Persistent Subnet Mask	Controls the Persistent subnet mask associated with the Persistent IP address on this logical link. It is only used when the device boots with the Persistent IP configuration scheme.	
Gev Persistent Default Gateway	Controls the persistent default gateway for this logical link. It is only used when the device boots with the Persistent IP configuration scheme.	
Gev MCDA	Controls the destination IP address for the message channel.	
Gev MCTT	Provides the transmission timeout value in milliseconds.	
Gev MCRC	Controls the number of retransmissions allowed when a message channel message times out.	
Gev MCSP	This feature indicates the source port for the message channel.	
Gev SCDA	Controls the destination IP address of the selected stream channel to which a GVSP transmitter must send data stream or the destination IP address from which a GVSP receiver may receive data stream.	
Gev GVCP Pending Ack	Enables the generation of PENDING_ACK.	
Gev CCP	Controls the device access privilege of an application.	Open Access Exclusive Access Control Access
Gev SCP Host Port	Controls the port of the selected channel to which a GVSP transmitter must send data stream or the port from which a GVSP receiver may receive data stream. Setting this value to 0 closes the stream channel.	

**BrightnessAutoControl**

Name	Description	Values
Brightness Auto Exposure Time Limit Mode	Controls if the limits BrightnessAutoExposureTimeMin and BrightnessAutoExposureTimeMax are active. When disabled, the range of ExposureTime is only limited by sensor properties and AcquisitionFrameRate. When enabled, the range of ExposureTime is limited additionally by BrightnessAutoExposureTimeMin and BrightnessAutoExposureTimeMax. When a brightness auto features is active, the ExposureTime can vary within this range.	Off On
Brightness Auto Exposure Time Min	Minimum limit of ExposureTime when ExposureAuto is enabled.	
Brightness Auto Exposure Time Max	Maximum limit of ExposureTime when ExposureAuto is enabled. When brightness auto features are active, the upper range of ExposureTime will be limited by BrightnessAutoExposureTimeMax, even if the frame rate would allow for longer exposure.	
Brightness Auto Gain Limit Mode	Controls if the limits BrightnessAutoGainMin and BrightnessAutoGainMax are active. When disabled, the range of Gain is only limited by sensor properties. When enabled, the range of Gain is limited additionally by BrightnessAutoGainMin and BrightnessAutoGainMax. When a brightness auto features is active, the Gain can vary within this range.	Off On
Brightness Auto Gain Min	Minimum limit of Gain when GainAuto is enabled.	
Brightness Auto Gain Max	Maximum limit of Gain when GainAuto is enabled.	
Brightness Auto Percentile	Defines the percentage of pixels that must be brighter than BrightnessAutoTarget. BrightnessAutoPercentile is a parameter for brightness auto features like ExposureAuto and GainAuto.	
Brightness Auto Target	Sets the target value for brightness auto features like ExposureAuto and GainAuto. The percentage of pixels, that must be brighter than BrightnessAutoTarget, is defined in BrightnessAutoPercentile. The value of BrightnessAutoTarget relates to the current PixelFormat.	
Brightness Auto Target Tolerance	Tolerance for BrightnessAutoTarget (in 8 bit). Defines an acceptance interval that surrounds BrightnessAutoTarget. If the brightness auto algorithm reaches a value within this acceptance interval, the algorithm has converged.	

**DigitalIOControl**

Name	Description	Values
Line Selector	Selects the physical line (or pin) of the external device connector or the virtual line of the Transport Layer to configure.	Line 0 Line 1 Line 2 Line 3
Line Mode	Controls if the physical Line is used to Input or Output a signal.	Input Output
Line Inverter	Controls the inversion of the signal of the selected input or output Line.	
Line Status	Returns the current status of the selected input or output Line.	
Line Status All	Returns the current status of all available Line signals at time of polling in a single bitfield.	
Line Source	Selects which internal acquisition or I/O source signal to output on the selected Line. LineMode must be Output.	Off User Output 0 User Output 1 User Output 2 User Output 3 Exposure Active
User Output Selector	Selects which bit of the User Output register will be set by UserOutputValue.	User Output 0 User Output 1 User Output 2 User Output 3
User Output Value	Sets the value of the bit selected by UserOutputSelector.	
User Output Value All	Sets the value of all the bits of the User Output register. It is subject to the UserOutputValueAllMask.	