Zyla Feature Reference

Feature	Type	Description
AccumulateCount	Integer	Sets the number of images that should be summed to obtain each image in sequence.
AcquisitionStart	Command	Starts an acquisition.
AcquisitionStop	Command	Stops an acquisition.
AlternatingReadoutDirection	Boolean	Configures whether the sensor will be read out in alternating directions.
AOIBinning	Enumerated	Sets up pixel binning on the camera. Options: • **1x1** • **2x2** use AOIHBin and AOIVBin for arbitrary H and V binning • **3x3** • **4x4** • **8x8**
AOIHBin	Integer	Configures the Horizontal Binning of the sensor area of interest.
AOIHeight	Integer	Configures the Height of the sensor area of interest in super-pixels.
AOILayout	Enumerated	Options: • **Image** • **Multitrack** Multitrack mode is only for spectroscopy application, ignore it here.
AOILeft	Integer	Configures the left hand coordinate of the sensor area of interest in sensor pixels.
AOIStride	Integer	The size of one row in the image in bytes. Extra padding bytes may be added to the end of each line after pixel data to comply with line size granularity restrictions imposed by the underlying hardware interface.
AOITop	Integer	Configures the top coordinate of the sensor area of interest in sensor pixels.
AOIVBin	Integer	Configures the Vertical Binning of the sensor area of interest.
AOIWidth	Integer	Configures the Width of the sensor area of interest in super-pixels.
AuxiliaryOutSource	Enumerated	Configures which signal appears on the auxiliary output pin. Options: • **FireRow1** • **FireRowN** • **FireAll** • **FireAny**
AuxOutSourceTwo	Enumerated	AuxOutSourceTwo is a configurable output available to the user on the D-type. Options: • **ExternalShutterControl** • **FrameClock** • **RowClock** • **ExposedRowClock**
Baseline =100 for Andor ZL41WAve 5.5	Integer	Returns the baseline level of the image with current settings.
BitDepth	Enumerated	Returns the number bits used to store information about each pixel of the image. Supported Bit Depth will be dependent on the camera. Options: • ~~**11 Bit or**~~ **12 Bit** • **16 Bit**
BufferOverflowEvent	Integer	When enabled this will notify the user that the image buffer on the camera has been exceeded, causing the current acquisition to stop.
BytesPerPixel	Floating Point	Returns the calculated bytes per pixel. [Read Only].
CameraAcquiring	Boolean	Returns whether or not an acquisition is currently acquiring.
CameraModel	String	Returns the camera model.
CameraName	String	Returns the name of the camera.
CameraPresent	Boolean	Returns whether the camera is connected to the system. Register a callback to this feature to be notified if the camera is disconnected.
ControllerID	String	Returns a unique identifier for the camera controller device. i.e. Frame grabber over Cameralink.
CoolerPower	Float	Percentage of maximum power being used by the cooler. This parameter doesn't seem to exist in ZL41 Wave 5.5.

CycleMode	Enumerated	Configures whether the camera will acquire a fixed length sequence or a continuous sequence. In Fixed mode the camera will acquire 'FrameCount' number of images and then stop automatically. In Continuous mode the camera will continue to acquire images indefinitely until the 'AcquisitionStop' command is issued. Options: • **Fixed** • **Continuous**
DeviceCount	Integer	Returns the number of cameras detected.
DeviceVideoIndex	Integer	Returns the /dev/videoN number in Linux only.
ElectronicShutteringMode	Enumerated	Configures which on-sensor electronic shuttering mode is used. For pulsed or fast moving images Global shuttering is recommended. For the highest frame rates and best noise performance Rolling is recommended. Options: • **Rolling** • **Global**
EventEnable	Boolean	Enable or Disable the acquisition event selected via the EventSelector feature.
EventSelector	Enumerated	Selects the acquisition events you wish to enable or disable using the EventEnable feature. Options: • **ExposureEndEvent** • **ExposureStartEvent** • **RowNExposureEndEvent** • **RowNExposureStartEvent** • **EventsMissedEvent** • **BufferOverflowEvent**
EventsMissedEvent	Integer	When enabled this will notify the user that an acquisition event, which the user registered a callback for, has been missed.
ExposedPixelHeight	Integer	Configures the exposure window in pixels. # of pixels are exposed at the same time in rolling shutter mode, = ExposureTime/RowReadTime
ExposureEndEvent	Integer	When enabled this will notify the user on the Negative edge of the FIRE in Global Shutter and FIRE of Row 1 in Rolling Shutter.
ExposureStartEvent	Integer	When enabled this will notify the user on the Positive edge of the FIRE in Global Shutter and FIRE of Row 1 in Rolling Shutter.
ExposureTime	Floating Point	The requested exposure time in seconds. Note: In some modes the exposure time can also be modified while the acquisition is running.
ExternalTriggerDelay	Floating Point	Sets the delay time between the camera receiving an external trigger and the acquisition start.
FanSpeed	Enumerated	Configures the speed of the fan in the camera. Options: • **Off** • **On**
FastAOIFrameRateEnable	Boolean	Enables faster framerates at small AOIs.
FirmwareVersion	String	Returns the camera firmware version.
FrameCount	Integer	Configures the number of images to acquire in the sequence while CycleMode is Fixed. The value of FrameCount must be any value which is a multiple of AccumulateCount. This ensures the accumulation contains the correct number of frames. When this feature is unavailable then the camera does not currently support fixed length series, therefore you must explicitly abort the acquisition once you have acquired the amount of frames required.
FrameRate	Floating Point	Configures the frame rate in Hz at which each image is acquired during any acquisition sequence. This is the rate at which frames are acquired by the camera which may be different from the rate at which frames are delivered to the user. For example when AccumulateCount has a value other than 1, the apparent frame rate will decrease proportionally.
FullAOIControl	Boolean	Indicates whether or not the camera supports arbitrary AOI selection. Yes we have full AOI control in ZL41 WAVE 9.9
ImageSizeBytes	Integer	Returns the buffer size in bytes required to store the data for one frame. This will be affected by the Area of Interest size, binning and whether metadata is appended to the data stream.
InterfaceType	String	Returns the camera interface type. Current types are: USB3, CL 3 Tap, CL 2x5 Tap, CL 10 Tap.
IOInvert	Boolean	Indicates whether or not the operation of the IO Pin selected through the IO Selector Feature is inverted.
IOSelector	Enumerated	Selects the IO Pin that you subsequently wish to configure using the IO Invert Feature.

		Options: • **Fire 1** • **Fire N** • **Aux Out 1** • **Arm** • **External Trigger** • **Fire N and 1 (deprecated)**
LineScanSpeed	Floating Point	Configures the number of rows read per second.
LogLevel	Enumerated	Sets the level of logging used. The log level is set independently for each device library using the system handle. Changing the LogLevel changes the verbosity of output. The log file can be found in the temporary folder of the operating system. The default level can also be changed by setting an environment variable named after the library, e.g. atdevregcamloglevel, to one of the options. The default loglevel is INFO. Options: • **NONE** • **FATAL** • **ERROR** • **WARN** • **INFO** • **DEBUG** • **VERB**
LongExposureTransition	Floating Point	Returns the exposure time when camera switches to long exposure.
MaxInterfaceTransferRate	Float	Returns the maximum sustainable transfer rate in frames per second of the interface for the current shutter mode and AOI.
MetadataEnable	Boolean	Enable metadata. This is a global flag which will enable inclusion of metadata in the data stream. When this flag is enabled the data stream will always contain the MetadataFrame information. This will override the subsequent metadata settings when disabled. For example: If this feature is disabled and MetadataTimestamp is enabled, then metadata will not be included in the data stream. For example: If this feature is enabled and MetadataTimestamp is disabled, then metadata will be included in the data stream, but without timestamp information.
MetadataFrame	Boolean	Indicates whether the MetadataFrame information is included in the data stream. This is read only and is automatically sent if metadata is enabled.
MetadataTimestamp	Boolean	Enables inclusion of timestamp information in the metadata stream. The timestamp indicates the time at which the exposure for the frame started.
MultitrackBinned	Boolean	Configures whether the currently selected multitrack will be binned or not. Default state is set to true.
MultitrackCount	Integer	It is in the range 1-256. When set to 0, multitrack is disabled.
MultitrackEnd	Integer	Configures the row at which the currently selected multitrack ends.
MultitrackSelector	Integer	Selects multitrack index. It is in the range 0-255.
MultitrackStart	Integer	Configures the row at which the currently selected multitrack begins.
Overlap	Boolean	Enables overlap readout mode.
PixelEncoding	Enumerated	Configures the format of data stream. Options: • **Mono12** • **Mono12Packed** • **Mono16** • **Mono32**
PixelHeight	Floating Point	Returns the height of each pixel in micrometers.
PixelReadoutRate	Enumerated	Configures the rate of pixel readout from the sensor. Options: • **280 MHz** • **100 MHz**
PixelWidth	Floating Point	Returns the width of each pixel in micrometers.
ReadoutTime	Floating Point	This feature will return the time in seconds to readout data from a sensor.
RollingShutterGlobalClear	Boolean	Enables Rolling Shutter Global Clear readout mode.
RowNExposureEndEvent	Integer	When enabled this will notify the user on the Negative edge of the FIRE of ROW N in Rolling Shutter.
RowNExposureStartEvent	Integer	When enabled this will notify the user on the Positive edge of the FIRE of ROW N in Rolling Shutter.
RowReadTime	Floating Point	Configures the time in seconds to read a single row.

ScanSpeedControlEnable	Boolean	Configures whether the LineReadSpeed and RowReadTime can be altered.
SensorCooling	Boolean	Configures the state of the sensor cooling. Cooling is disabled by default at power up and must be enabled for the camera to achieve its target temperature. The actual target temperature can be set with the TemperatureControl feature where available.
SensorHeight	Integer	Returns the height of the sensor in pixels.
SensorReadoutMode This parameter doesn't seem to exist in ZL41 Wave 5.5	Enumerated	Configures the direction in which the sensor will be read out. Options: • **Bottom Up Sequential** • **Bottom Up Simultaneous** • **Centre Out Simultaneous** • **Outside In Simultaneous** • **Top Down Sequential** • **Top Down Simultaneous**
SensorTemperature	Floating Point	Read the current temperature of the sensor.
SensorWidth	Integer	Returns the width of the sensor in pixels.
SerialNumber	String	Returns the camera serial number.
ShutterMode	Enumerated	Controls the behavior of the shutter. Options: • **Open** • **Closed** • **Auto**
ShutterOutputMode	Enumerated	Controls the mode the external trigger will run in. External Shutter signal can either be set to high (open) or low (closed). ShutterOutput can be triggered by setting AuxOutSourceTwo to ExternalShutterControl. Options: • **Open** • **Closed**
ShutterTransferTime	Floating Point	Sets the time at which the shutter will be opened before an exposure starts. Only available whenever the ShutterMode is set to 'Auto'.
SimplePreAmpGainControl	Enumerated	Wrapper Feature to simplify selection of the sensitivity and dynamic range options. This feature should be used as a replacement for the PreAmpGainControl feature as some of the options in the PreAmpGainControl feature are not supported on all cameras. Supported Bit Depth will be dependent on the camera. Options: • ~~**11-bit (high well capacity) or**~~ **12-bit (high well capacity)** • ~~**11-bit (low noise) or**~~ **12-bit (low noise)** • **16-bit (low noise & high well capacity)**
SoftwareTrigger	Command	Generates a software trigger in the camera. Used to generate each frame on the camera whenever the trigger mode is set to Software.
SoftwareVersion	String	Returns the version of the SDK.
SpuriousNoiseFilter	Boolean	Enables or Disables the Spurious Noise Filter.
StaticBlemishCorrection	Boolean	Enables or Disables Static Blemish Correction.
TemperatureControl	Enumerated	Allows the user to set the target temperature of the sensor based on a list of valid temperatures. Options: Target temperature is fixed at 0 C for ZL41 Wave 5.5 fan cooling, and -10 C for water cooling.
TemperatureStatus	Enumerated	Reports the current state of cooling towards the Target Sensor Temperature. [Read Only]. Options: • **Cooler Off** • **Stabilised** • **Cooling** • **Drift** • **Not Stabilised** • **Fault**
TimestampClock	Integer	Reports the current value of the camera's internal timestamp clock. This same clock is used to timestamp images as they are acquired when the MetadataTimestamp feature is enabled. The clock is reset to zero when the camera is powered on and then runs continuously at the frequency indicated by the TimestampClockFrequency feature. The clock is 64-bits wide.
TimestampClockFrequency	Integer	Reports the frequency of the camera's internal timestamp clock in Hz.
TimestampClockReset	Command	Resets the camera's internal timestamp clock to zero. As soon as the reset is

		complete the clock will begin incrementing from zero at the rate given by the TimestampClockFrequency feature.
TriggerMode	Enumerated	Allows the user to configure the camera trigger mode at a high level. If the trigger mode is set to Advanced then the Trigger Selector and Trigger Source feature must also be set. Options: • **Internal** • **Software** • **External** • **External Start** • **External Exposure**
VerticallyCentreAOI	Boolean	Vertically centres the AOI in the frame. With this enabled, AOITop will be disabled.