

Getting Started with iCentral



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Perfect

Purpose of This Guide

This guide describes the function of the iCentral and how to use it and gives a detailed description of each tool. Please read this guide before use.

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Disclaimer

The information and specifications described in this guide are subject to change without notice.

Latest Version

For the latest version of this guide, see the Download Center on our web site at: www.visiondatum.com

Technical Support

For technical support, e-mail: support@visiondatum.com

Do not remove the camera's serial number label

If the label is removed and the serial number can't be read from the camera's registers, the warranty is void.

Do not open the camera housing

Do not open the housing. Touching internal components may damage them.

Prevent ingress or insertion of foreign substances into the camera housing

Prevent liquid, flammable, or metallic substances from entering the camera housing. If operated with any foreign substances inside, the camera may fail or cause a fire.

Avoid electromagnetic fields

Do not operate the camera in the vicinity of strong electromagnetic fields. Avoid electrostatic charging.

Clean with care

Avoid cleaning the sensor if possible.

Handle this camera with care.

Do not abuse the camera. Avoid striking, shaking, etc. The camera could be damaged by improper handling.

Read the manual

Read the manual carefully before using the camera.

Installation

System Requirements

The iCentral for windows requires that one of the following operating systems is installed on your computer:

- Windows XP (32 bit)
- Windows 7 (32 bit or 64 bit)
- Windows 10 (32 bit or 64 bit)
- Linux 32-bit/64-bit: Ubuntu 14.04 (32/64), Ubuntu 16.04 (32/64), x86 platform (32/64),
 - a. glibc 2.12 version and above
 - b. Linux kernel version number from 2.6.32 (inclusive) to 5.11.0 (inclusive)
- ARM: NVIDIA TX1/TX2, 64-bit ARM development board, Jetson_Xavier Arm development board (L4T version [32.2], kernel version [4.9.140])

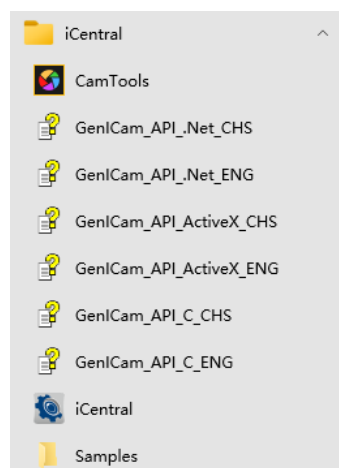
Installation Steps

1. Download the iCentral (Ver.2.x.xxxxxx.rar) from the Vision Datum website:
<http://www.visiondatum.com/en/service/005001.html>
2. Launch the downloaded installer.
3. Follow the instructions on the screen. The installer will guide you through the installation process.

During installation, you can choose whether to install USB3 Vision Driver or GigE Vision Driver for use with a GigE camera or a USB 3.0 camera.



After the installation process completed, Users could find the SDK (API for C/.Net and samples) in a file folder named iCentral under the Start Menu.



Installation Steps


4. Run iCentral app.

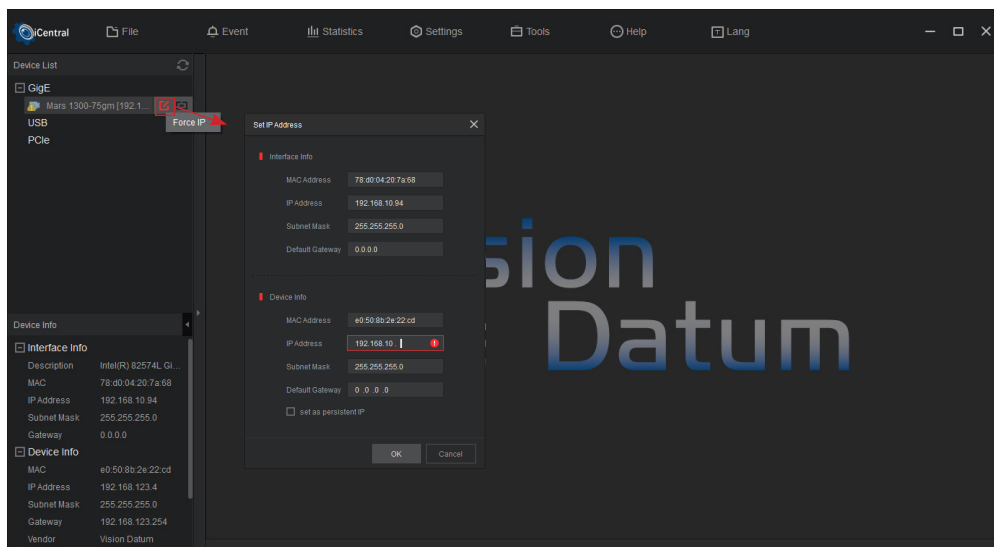
To begin, launch the software by simply double clicking the desktop icon, or clicking the icon in the iCentral folder in the Start Menu. Once the software is open, it will automatically detect all the device that is connected.

As shown below. Users can also click refresh button to scan all the connected devices.




5. Change IP. (For camera with Gigabit Ethernet interface)

Click  to change the IP address. Please make sure the camera IP address is in the same subnet as the network adapter.

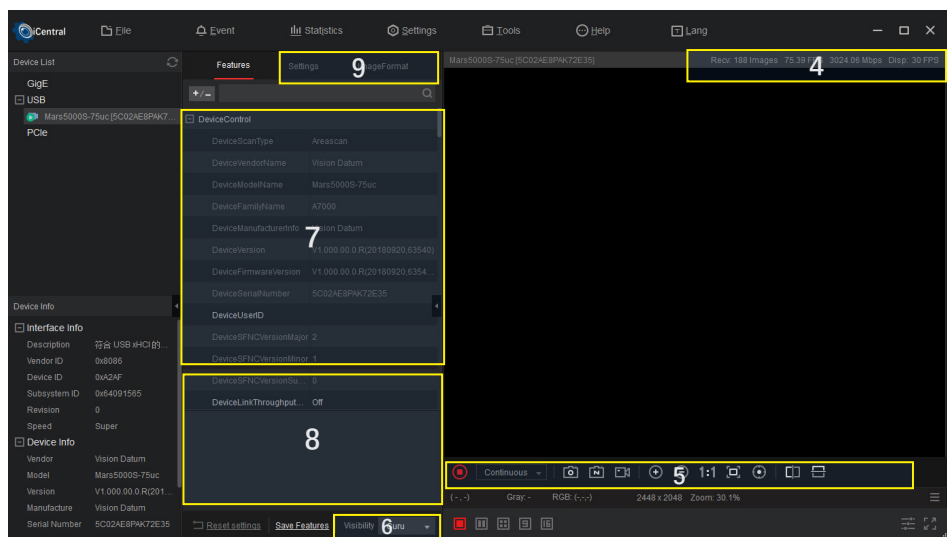
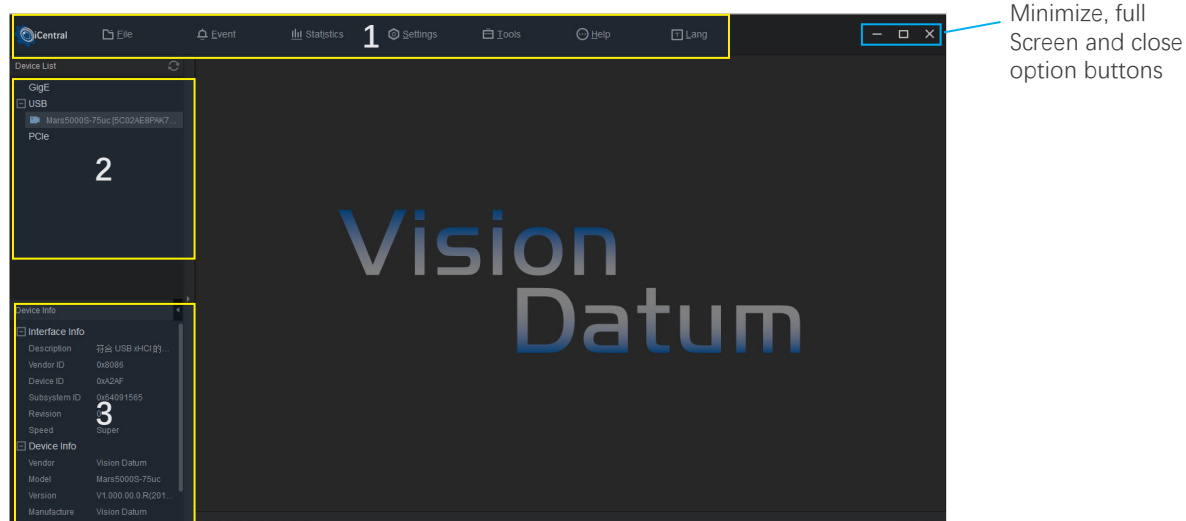


6. Device Connection

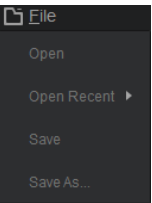
Click  button to connect the device.

Main Interface

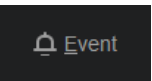
The main interface of iCentral is showed as following. Each section of the software will be explained briefly in the following pages.



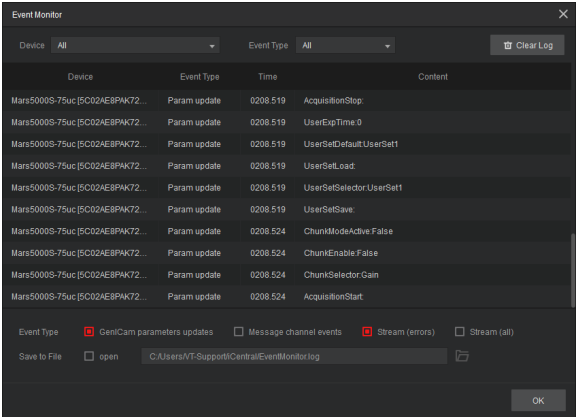
1. Menu Bar



- File**
- Open: Opens a new *.mvcfg format file.
 - Open Recent: List 10 latest opened files in iCentral.
 - Save: Save the changes to the current file.
 - Save as: Save the current file to another location.

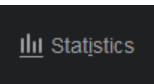


- Event**
- Event Monitor: Including Genlcam paramters updates, messaging channel events and PvStream buffers.



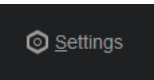
Main Interface

1. Menu Bar



Statistics

- Image stream information



Setting

General Settings

- Modify the Visibility
- Set the refresh device list method:
Automatic/Manual
- Client settings restore default parameters

Image Save

- Related settings for saving image files

Record Video

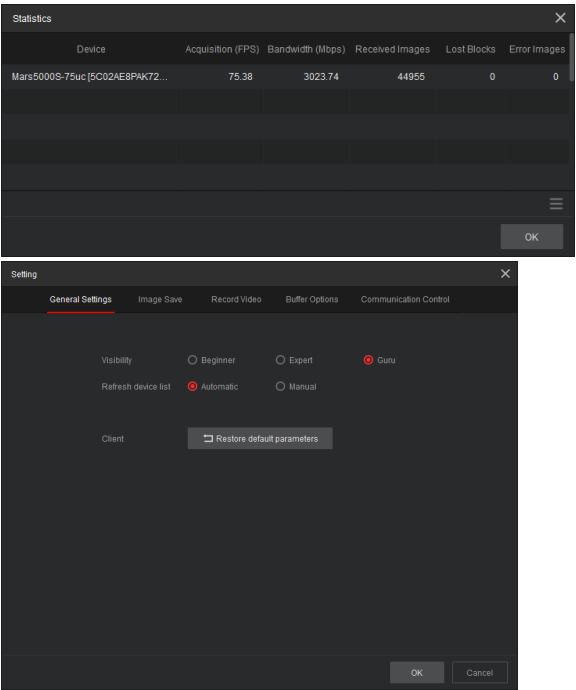
- Relevant settings for saving video files

Buffer Options

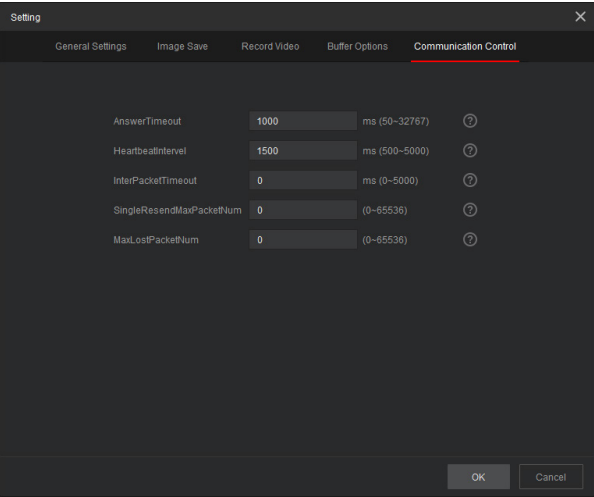
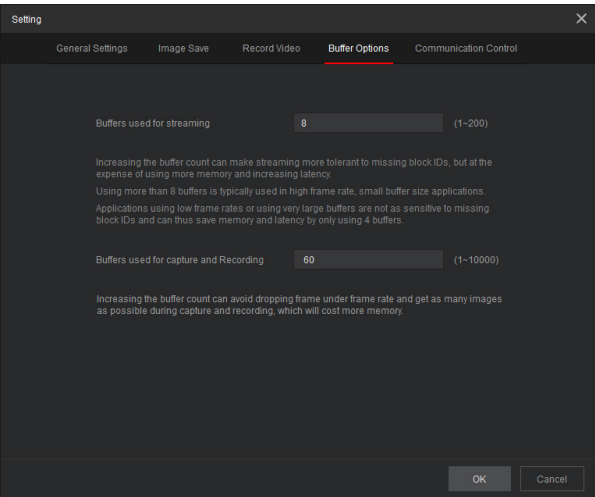
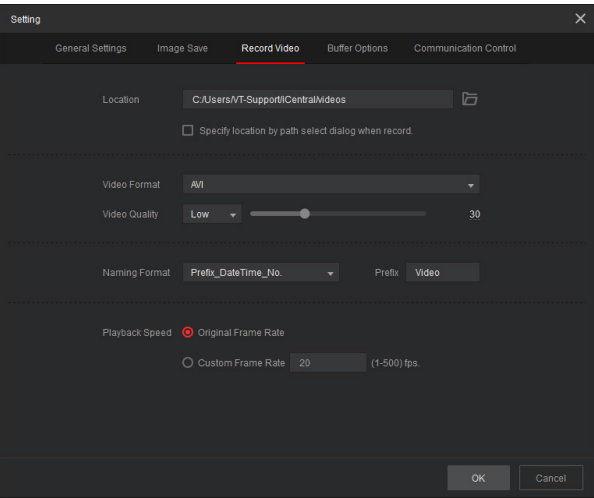
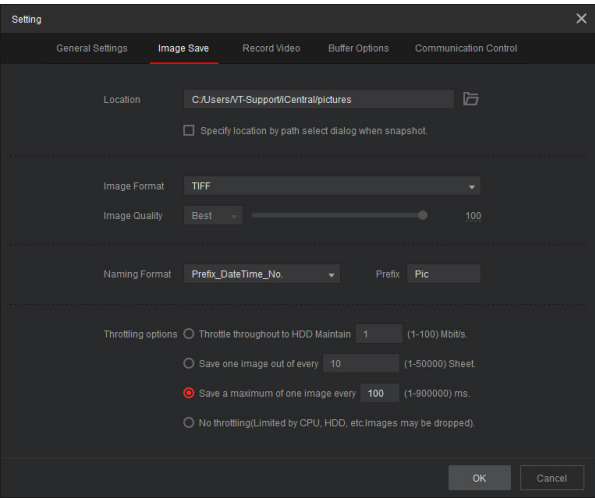
- Set the number of buffers for the data stream

Communication Control

- Save the related settings of timeout packet loss

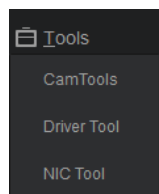


As shown below:



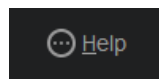
Main Interface

1. Menu Bar



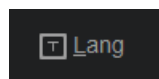
Tools

- CamTools: commonly used for firmware upgrade, dead pixel correction and sensor correction
- Driver Tool: Check the driver installation status, you can directly click the specific driver to install/uninstall
- NIC Tool: view/set network card configuration



Help

- About: Display the current version



Language

- English/Chineses(simplified.)

Interface Description













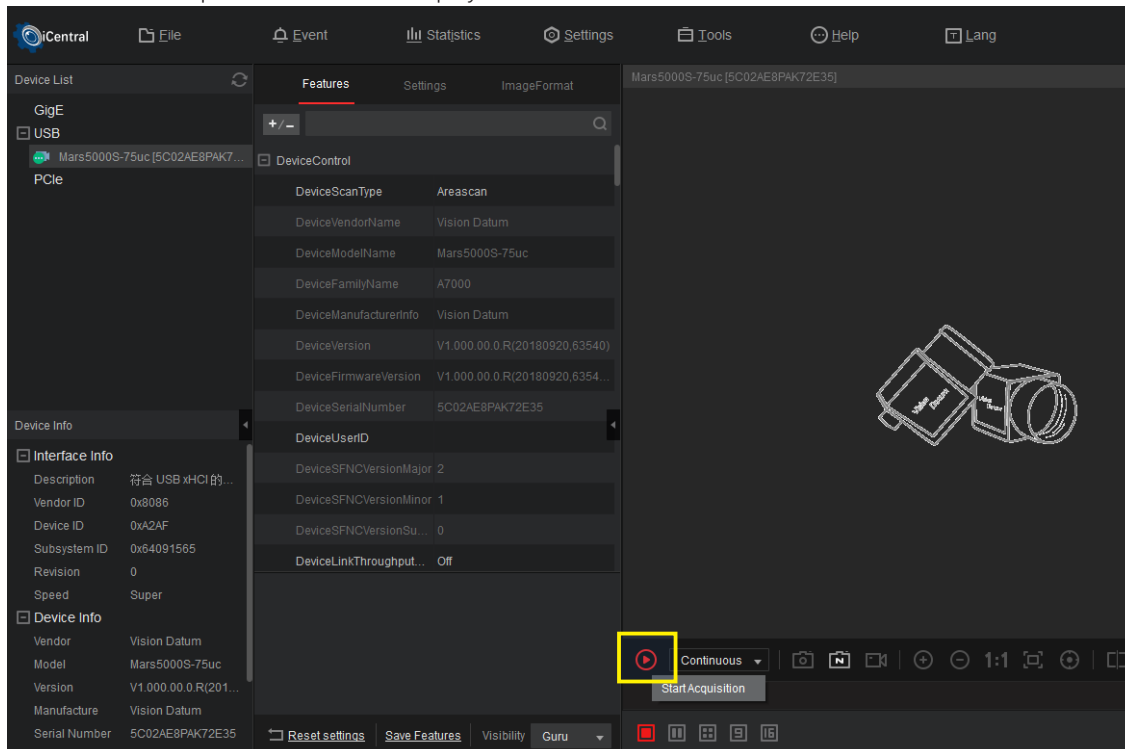
No.	
1	Menu Bar
2	Device list  Refresh to see all the connected devices.  Indicates that the device can be connected.The iCentral can connect with or operate one camera once.  Indicates that the device can not be connected.
3	Device info.: Includes the interface info that the device is connected and the camera info.
4	Status bar: Includes stream, frame rate, bandwidth, display frame rate, errors, image resolution and so on.
5	Tool bar for display panel:  Acquisition button. There are three mode of acquiring images: Continous, Single frame, multiple frames.  Stop acquiring images.  Save the last frame of the stream data as an image file.  Zoom in the diplayed image.  Zoom out the displayed image.  Display the image in 100%.  Display the image according to the display panel size.  Vertical mirror image.  Horizontal mirror image.
6	Visibility: Beginner, Expert, Guru. Each state can see different parameters in the property panels.
7	Property panels allows viewing or changing all acquisition parameters supported by the acquisition device. Parameters in gray are read only, either always or due to another feature being disabled. Parameters in black are user set in iCentral or programmable via an imaging application.
8	Annotation: shows the description of selected parameter.
9	Settings: frame rate, exposure, white balance, RGB gain and other settings ImageFormat: Image format, resolution, ROI and other settings

Image Acquisition and Settings

1. Connect the camera

If it is needed to acquire video stream

Select 'Continue' in the drop-down box and click 'play'.



2. Video stream displays in display zone. Frame rate, bit rate and other data displays in status bar.

3. If it is required to acquire single frame

- Select 'SingleFrame' in the drop-down box and click 'play'.

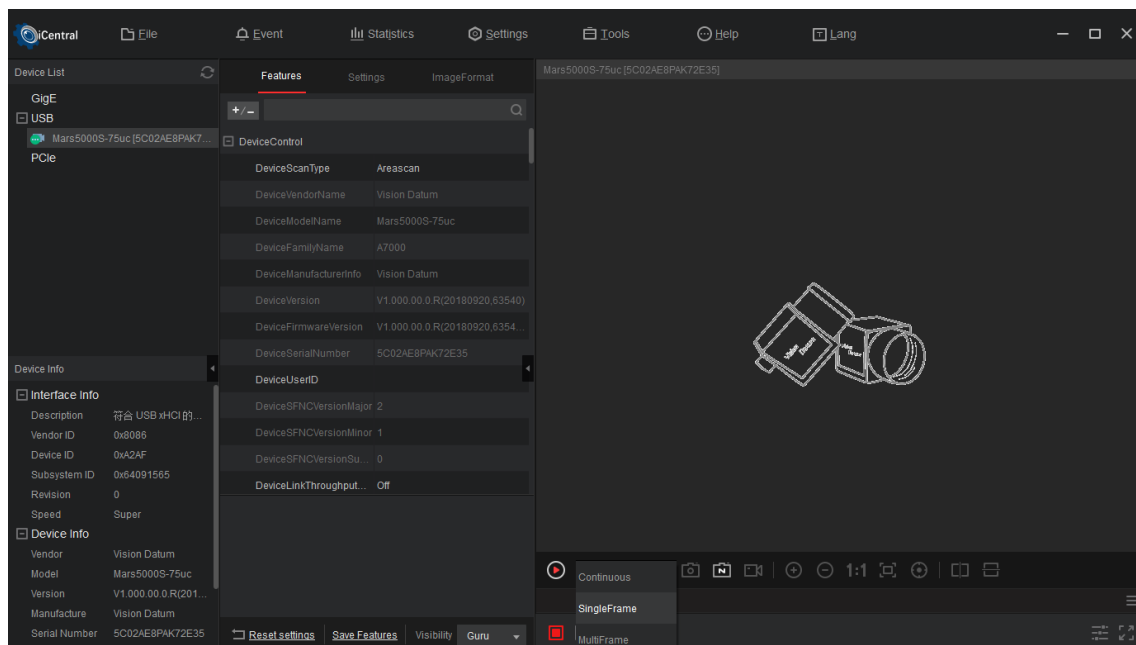
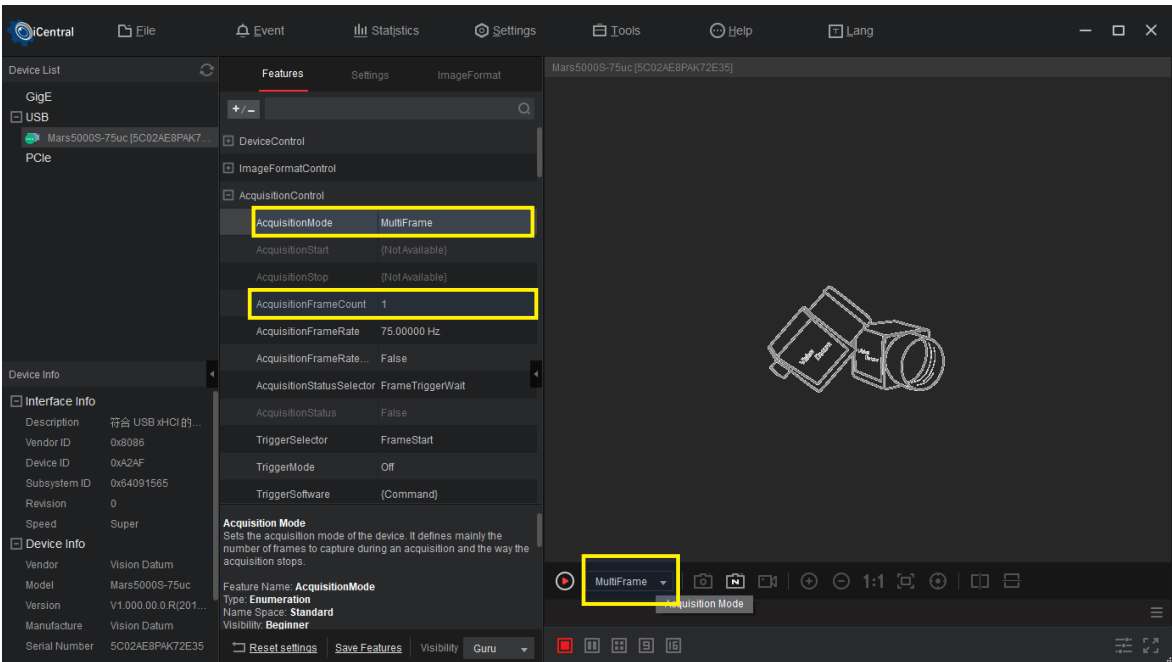


Image Acquisition and Settings

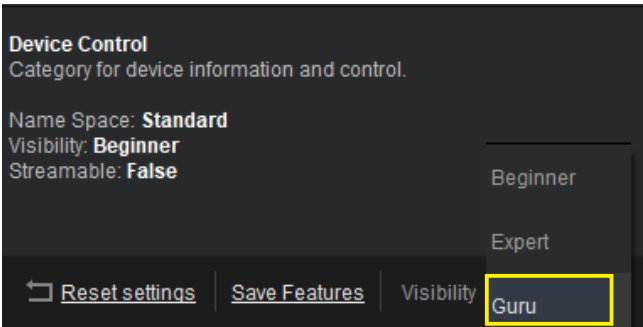
4.If it is required to acquire multiple frame

- In 'Params', set the value of 'AcquisitionFrameCount' under 'AcquisitionControl' and define the number of frame you prefer in each play.
- Select 'MultiFrame' in the drop-down box and click 'play'.



5.If it is required to acquire stream using trigger mode

- Switch visibility permission to "Guru"



- In 'Params', select 'FrameStart' in 'TriggerSelector' under 'AcquisitionControl' and select 'ON' in 'TriggerMode'.
- It is advised to configure the value of "TriggerDelay" in order to define the latency of trigger signal and the unit is 'us';
- 'TriggerMultiplier' is used to set the pulse width of trigger signal. 'TriggerSource' is used to set software trigger or line trigger then click 'play'.

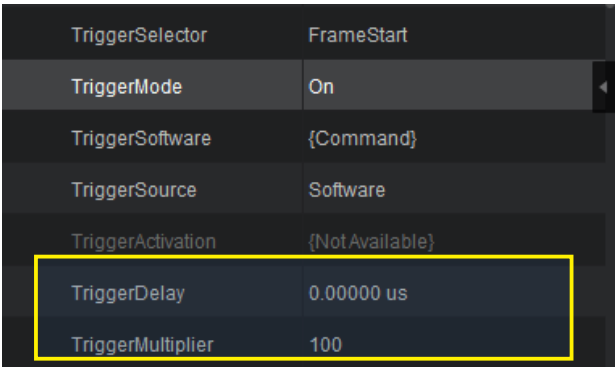
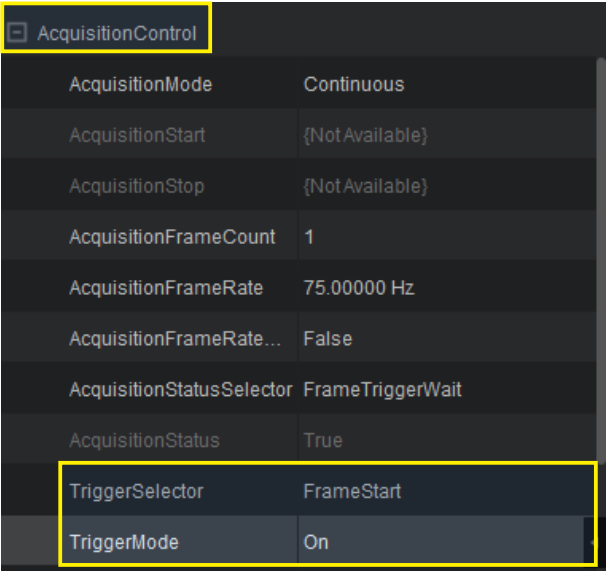
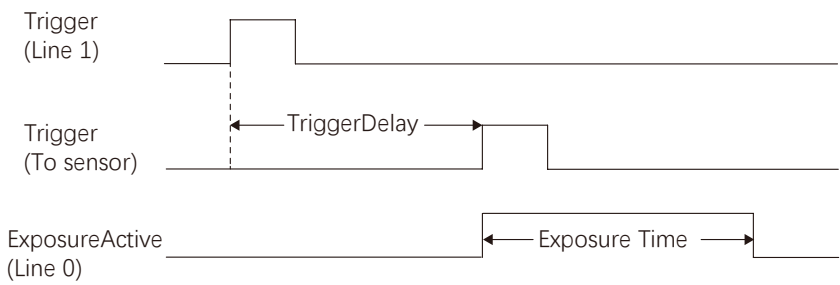
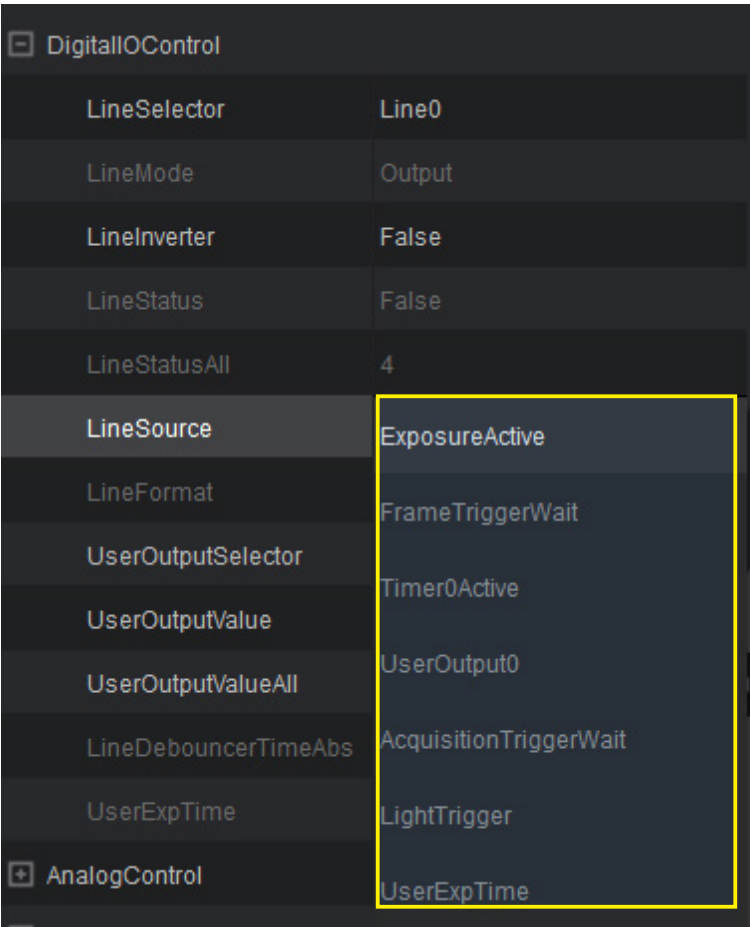


Image Acquisition and Settings

● Trigger status is indicated according to the specific output line of the 6-pin port; Meanwhile, in 'Params', select 'Line0' in 'LineSelector' under 'DigitalIOControl'. There are multiple choices in 'LineSource' and one of them called 'ExposureActive' indicates that Line0 output high level during sensor exposures.



6.If it is not needed to acquire video stream
Select 'Stop' in the drop-down box and click 'play'.
* When the video stream acquisition mode is "single frame" and "multi-frame", after acquiring the corresponding number of frames, it will automatically stop acquiring the video stream,

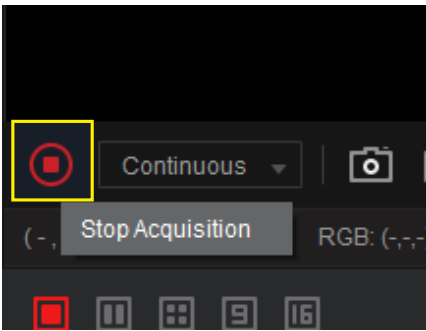


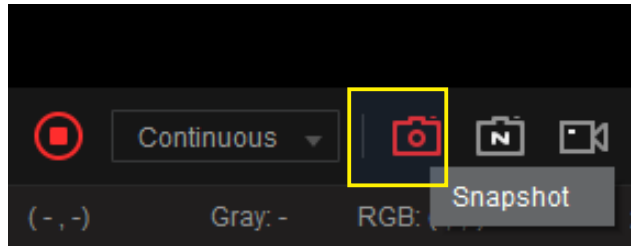
Image Acquisition and Settings

7. If it is needed to save the video stream data as a picture

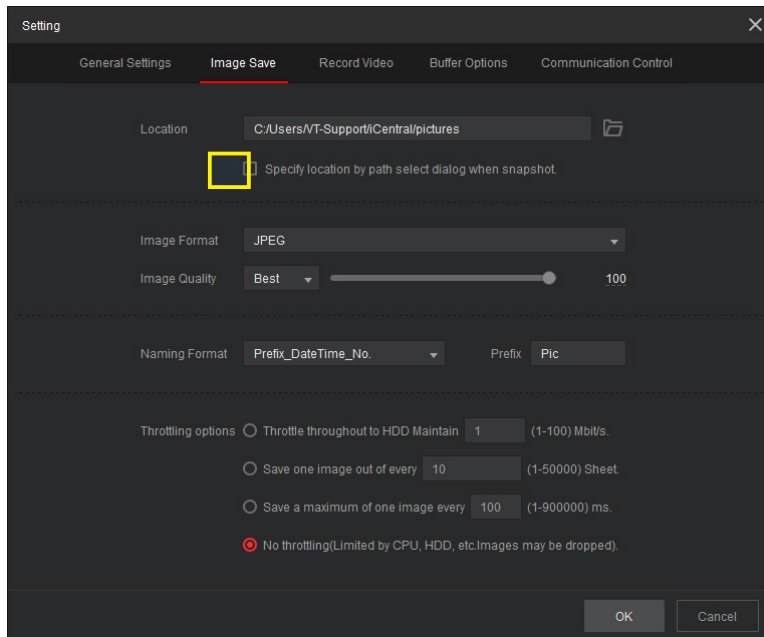
iCentral supports saving video stream data as picture files in raw and bmp formats.

- Save pictures continuously.

_Click the "Save" / "Single Save" button



_Displayed on the picture save setting interface. Check "Specify location by...", set the image saving path, saving format and throttling options, and click the "OK" button.



_Click the "Play" button. After the camera video stream data is obtained, the video stream data will be saved as a picture file.

- How to save a single picture

_On the picture save setting interface, remove the check box of "Enable Specify location by..." and click the "OK" button.

*At this time, after obtaining the video stream data, it will not be automatically saved as a picture. However, the settings of the image save path and save format are still valid.

Image Acquisition and Settings

8. How to set image flip

- Open iCentral, find the camera in the device list, and connect it.
- After the device is connected, in "Property", select "Guru" for the "Visibility".
- Configure the following properties of ImageFormatControl:
 - _ReverseX: After set to True, the image is reversed horizontally
 - _ReverseY: When set to True, the image is reversed vertically

ImageFormatControl	
SensorWidth	2,448
SensorHeight	2,048
WidthMax	2,448
HeightMax	2,048
Width	2,448
Height	2,048
OffsetX	0
OffsetY	0
ReverseX	False
ReverseY	False
PixelFormat	BayerRG8
PixelSize	Bpp8
PixelColorFilter	BayerRG

Device Control	
Category for device information and control.	
Name Space: Standard	
Visibility: Beginner	Beginner
Streamable: False	Expert
Reset settings	Save Features
Visibility	Guru

9. How to set the exposure time

- Open iCentral, find the camera in the device list, and connect it.
- After the device is connected, jump to the "Property" page.
- Set the following properties of AcquisitionControl:
 - _ExposureTime: Exposure time. The unit is microseconds.

10. How to set the gain

- Open iCentral, find the camera in the device list, and connect it.
- After the device is connected, in "Property".
- Set the following properties of AnalogControl:
 - _GainRaw: gain value

LightTriggerDelay	0.00000 us
ExposureMode	Timed
ExposureTargetBrightn...	50
ExposureAuto	Off
ExposureTime	10,000.00000 us
ResultingFrameRateAbs	75.52090 Hz
DigitalIOControl	
AnalogControl	
GainSelector	All
GainRaw	1.00000
BlackLevelAuto	Continuous
BlackLevelSelector	All
BlackLevel	60
BalanceWhiteAuto	Off

11. How to save the configuration

- Open iCentral, find the camera in the device list, and connect it.
- After the device is connected, jump to the "Property" page.
- In UserSetSelector of UserSetControl, select the location to save the configuration.
 - _The camera supports 3 storage locations: Default, UserSet1, UserSet2



- Click the User Set Save button to save the current camera configuration to the selected save location.



12. How to load the configuration

- Open iCentral, find the camera in the device list, and connect it.
- After the device is connected, jump to the "Property" page.
- In UserSetSelector of UserSetControl, select the configuration to be loaded.
 - The camera supports 3 storage locations: Default, UserSet1, UserSet2
- Click the User Set Load button to load the selected configuration.

Parameter List

1. The parameter pane allows to view or change all the acquisition parameters supported by the acquisition device. The grayed-out parameters are always read-only, or are read-only because other functions are disabled. The black parameter is set by the user in iCentral or programmed through the imaging application.

2. DeviceControl//No need to change any data in this section.

DeviceControl	
DeviceScanType	Areascan
DeviceVendorName	Vision Datum
DeviceModelName	Mars5000S-75uc
DeviceFamilyName	A7000
DeviceManufacturerInfo	Vision Datum
DeviceVersion	V1.000.00.0.R(20180920,63540)
DeviceFirmwareVersion	V1.000.00.0.R(20180920,6354...
DeviceSerialNumber	5C02AE8PAK72E35
DeviceUserID	
DeviceSFNCVersionMajor	2
DeviceSFNCVersionMinor	1
DeviceSFNCVersionSu...	0
DeviceLinkThroughput...	Off
DeviceLinkThroughput...	400,000,000
DeviceReset	{Command}
DeviceTemperatureSel...	Sensor
DeviceTemperature	55.56250 C
DeviceUSBMode	USB 3.0-Only
DeviceUSBError	INVALID
DeviceChipVersion	Aug 3 2018

Parameter List

3. Image Format Control

ImageFormatControl			
SensorWidth	2,448		
SensorHeight	2,048		
WidthMax	2,448		
HeightMax	2,048		
Width	2,448	PixelFormat	BayerRG8
Height	2,048	PixelSize	Bpp8
OffsetX	0	PixelColorFilter	BayerRG
OffsetY	0	PixelDynamicRangeMin	0
ReverseX	False	PixelDynamicRangeMax	255
ReverseY	False	TestImageSelector	Off

Parameter	Description
SensorWidth	Effective width of the sensor in pixels.
SensorHeight	Effective width of the sensor in pixels.
WidthMax	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.
HeightMax	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 HeightMax does not take into account the current Region of interest (Height or OffsetY). Its value must be greater than 0 and less than or equal to SensorHeight (unless an oversampling feature is present).
Width	Width of the image provided by the device (in pixels). //Like 4096 cameras, the width could only set from 32 to 4096.
Height	Height of the image provided by the device (in pixels).
OffsetX	Horizontal offset from the origin to the region of interest (in pixels).
OffsetY	Vertical offset from the origin to the region of interest (in pixels).
ReverseX	(False/True) Flip horizontally the image sent by the device. The Region of interest is applied after the flipping.
PixelFormat	(Mono8/Mono10/Mono10Packed/Mono12/Mono12Packed) Format of the pixels provided by the device. It represents all the information provided by PixelCoding, PixelSize, PixelColorFilter combined in a single feature.
PixelSize	Total size in bits of a pixel of the image.
PixelColorFilter	Type of color filter that is applied to the image. No filter applied on the sensor.
PixelDynamic Range Min	Minimum value that can be returned during the digitization process. This corresponds to the darkest value of the camera. For color camera, this returns the smallest value that each color component can take.
PixelDynamic Range Max	Minimum value that can be returned during the digitization process. This corresponds to the darkest value of the camera. For color camera, this returns the smallest value that each color component can take.
TestImageSelector	Selects the type of test pattern that is generated by the device as image source.

Parameter List

4. AcquisitionControl

AcquisitionControl	
AcquisitionMode	Continuous
AcquisitionStart	{Not Available}
AcquisitionStop	{Not Available}
AcquisitionFrameCount	1
AcquisitionFrameRate	75.00000 Hz
AcquisitionFrameRate...	False
AcquisitionStatusSelector	FrameTriggerWait
AcquisitionStatus	False
TriggerSelector	FrameStart
TriggerMode	Off
TriggerSoftware	{Command}

TriggerSource	Software
TriggerActivation	{Not Available}
TriggerDelay	0.00000 us
TriggerMultiplier	100
LightTriggerDelay	0.00000 us
ExposureMode	Timed
ExposureTargetBrightn...	50
ExposureAuto	Off
ExposureTime	10,000.00000 us
ResultingFrameRateAbs	75.52090 Hz

Parameter	Description
AcquisitionMode	<p>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.</p> <ul style="list-style-type: none"> ● Continuous: Frames are captured continuously with AcquisitionStart until stopped with the AcquisitionStop command. ● Singleframe: One frame is captured for each AcquisitionStart Command. An AcquisitionStop occurs at the end of the Active Frame. ● MultiFrame: A sequence of frames is captured for each AcquisitionStart Command. The number of frames is specified by AcquisitionFrameCount feature. An AcquisitionStop occurs at the end of the Active Frame(s)
AcquisitionStart	<p>Starts the Acquisition of the device. The number of frames captured is specified by AcquisitionMode.</p>
AcquisitionStop	<p>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.</p>
AcquisitionFrameCount	<p>(Min: 1 Max: 255) MultiFrames acquisition mode. Sets the number of frames to acquire when a valid trigger is received.</p>
AcquisitionFrame/LineRate	Controls the acquisition rate (in Hertz) at which the frames are captured.
AcquisitionFrame/LineRateEnable	(False/True) Enables setting the camera's acquisition frame rate to a specified value.
AcquisitionStatusSelector	<p>Selects the internal acquisition signal to read using AcquisitionStatus. AcquisitionTriggerWait: Device is currently waiting for a trigger to capture one or more frames. FrameTriggerWait: Device is currently waiting for a frame trigger.</p>
AcquisitionStatus	(False/True) Reads the state of the internal acquisition signal selected using AcquisitionStatusSelector.
TriggerSelector	(Acquisition Start/Frame Start/ Line Start) Selects which type of trigger to configure .
TriggerMode	(Off / On) Controls the enable state of the selected trigger.
TriggerSoftware	<p>Generates an internal trigger. This feature is available when TriggerMode is set to ON and TriggerSource is set to Software.</p>
TriggerSource	<p>Specifies the internal signal or physical input line to use as the trigger source. The selected trigger must have its TriggerMode set to ON.</p>
TriggerActivation	<p>Select the activation mode for the selected Input Line trigger source.</p> <ul style="list-style-type: none"> ● RisingEdge: The trigger is considered valid on the rising edge of the line source signal ● FallingEdge: The trigger is considered valid on the falling edge
TriggerDelay	Specifies the delay in microseconds (us) to apply after the trigger reception before activating it.

Parameter List

Parameter	Description
TriggerMultiplier	Specifies a multiplication factor for the incoming trigger pulses.
LightTriggerDelay	Set the delay time (unit: us) from when the camera receives the trigger signal to when the Lightrigger signal starts to output.
ExposureMode	Sets the operation mode for the camera's exposure. <ul style="list-style-type: none"> ● Timed: The exposure duration time is set using the ExposureTime feature. ● Trigger Width: Uses the width of the trigger signal pulse to control the exposure duration.
ExposureTargetBrightness	Sets the target brightness for the auto exposure function.
ExposureAuto	Set the auto exposure mode when ExposureMode is Timed.
ExposureTime	Sets the Exposure time when ExposureMode is Timed and ExposureAuto is Off. This controls the duration where the photosensitive cells are exposed to light. <ul style="list-style-type: none"> ● AcquisitionTriggerWait: Device is currently waiting for a trigger to capture one or more frames. ● FrameTriggerWait: Device is currently waiting for a frame trigger.
ResultingLineRateAbs	Indicates the 'absolute' value of the maximum allowed acquisition frame rate. The 'absolute' value is a float value that indicates the maximum allowed acquisition frame rate in frames per second given the current settings for the area of interest, exposure time, and bandwidth. For example, if the ExposureTime value is 120 (the default unit is us), then the theoretical display value of this item is 8333 (related to transmission delay). <ul style="list-style-type: none"> ● Frame trigger: <ol style="list-style-type: none"> 1. Select TriggerSelector as Frame Start 2. Select TriggerMode as ON 3. TriggerSource is selected as the corresponding trigger input Line1/2/3. Refer to Trigger Source for signal connection mode. Click the preview button at this time, and the incoming external trigger source signal should be displayed normally. ● Line trigger: <ol style="list-style-type: none"> 1. TriggerSelector is selected as LineStart 2. Select TriggerMode as ON 3. TriggerSource is selected as the corresponding trigger input Line1/2/3. Refer to TriggerSource for signal connection mode. Click the preview button at this time, and the incoming external trigger source signal should be displayed normally.

Parameter List

5. DigitalIOControl

DigitalIOControl	
LineSelector	Line0
LineMode	Output
LineInverter	False
LineStatus	False
LineStatusAll	4
LineSource	ExposureActive
LineFormat	OptoCoupled
UserOutputSelector	UserOutput0
UserOutputValue	False
UserOutputValueAll	0
LineDebouncerTimeAbs	{Not Available}
UserExpTime	0

Parameter	Description
LineSelector	Selects the physical line (or pin) of the external device connector to configure.
LineMode	Selects the physical line (or pin) of the external device connector to configure.
LineInverter	(False/True) Controls the inversion of the signal of the selected input or output Line.
LineStatus	Returns the current status of the selected input or output Line.
LineStatus All	Returns the current status of all available Line signals at time of polling in a single bitfield.
LineSource	Selects which internal acquisition or I/O source signal to output on the selected Line.
LineFormat	(SingleEnded/RS422) Controls the current electrical format of the selected physical input or output Line.
UserOutput Selector	Selects which bit of the User Output register will be set by UserOutputValue.
UserOutputValue	(False/True) Sets the value of the bit selected by UserOutputSelector.
UserOutputValueAll	Sets the value of all the bits of the User Output register.
LineDebouncerTimeAbs	Set the deburring time of the selected line (in microseconds)
UserExpTime	User-defined exposure time

Parameter List

6. AnalogControl

AnalogControl	
GainSelector	All
GainRaw	1.00000
BlackLevelAuto	Continuous
BlackLevelSelector	All
BlackLevel	60
BalanceWhiteAuto	Off
BalanceRatioSelector	Red
BalanceRatio	1.62094
Gamma	1.00000

Parameter	Description
GainSelector	Selects which Gain is controlled by the various Gain features.
GainRaw	(Min: 0 / Max: 6) Controls the selected gain as an absolute physical value. This is an amplification factor applied to the video signal.
BlackLevelAuto	Controls the mode of automatic black level adjustment.
BlackLevelSelector	Selects which tap is controlled by the Black Level feature.
BlackLevel	(Min: 0 / Max: 255) Controls the analog black level as an absolute physical value. This represents a DC offset applied to the video signal.
BalanceWhiteAuto	Controls the mode for automatic white balancing between the color channels. The white balancing ratios are automatically adjusted.
BalanceRatioSelector	Selects which Balance ratio to control.
BalanceRatio	Controls ratio of the selected color component to a reference color component. It is used for white balancing.
Gamma	(Min: 0 / Max: 3.99998) Controls the gamma correction of pixel intensity. This is typically used to compensate for non-linearity of the display system (such as CRT).

Parameter List

7. LUTControl

LUTControl	
LUTSelector	Luminance
LUTEnable	False
LUTIndex	0
LUTValue	0
LUTValueAll	{Register}

Parameter	Description
LUTSelector	(Luminance) Selects which LUT to control.
LUTEnable	(False/True) Activates the selected LUT.
LUTIndex	(Min: 0 / Max: 4095) Control the index (offset) of the coefficient to access in the selected LUT.
LUTValue	(Min: 0 / Max: 4095) Returns the Value at entry LUTIndex of the LUT selected by LUTSelector.
LUTValueAll	Accesses all the LUT coefficients in a single access without using individual LUTIndex.

Parameter List

8. TransportLayerControl

TransportLayerControl	
PayloadSize	5,013,504
GevTimestampTickFre...	100,000,000
U3vCurrentSpeed	SuperSpeed
FrameTriggerCount	0
FrameTriggerLostCount	0
FrameTriggerCountReset	{NotAvailable}
SensorTriggerCount	0
SensorFrameCount	351,539
SensorCountReset	{Command}

Parameter	Description
PayloadSize	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.
GEVTimestampTickFrequency	Indicates the number of timestamp ticks in 1 second (frequency in Hz). If IEEE 1588 is used, this feature must return 1,000,000,000 (1 GHz).
U3VCurrentSpeed	Reports the current speed of the device.
FrameTriggerCount	return frame trigger count which is user send to device
FrameTriggerLostCount	return frame trigger lost which is trigger is invalid
FrameTriggerCountReset	reset frame trigger count,and count number is reset to zero
SensorTriggerCount	return sensor trigger count which is sensor recive trigger number
SensorFrameCount	return Sensor Frame Count which is sensor send frame number
SensorCountReset	return Sensor Count Reset and sensor static number reset to zero

Parameter List

9. UserSetControl

UserSetControl	
UserSetSelector	UserSet1
UserSetLoad	{Command}
UserSetSave	{Command}
UserSetDefault	UserSet1
UserSetLoadLastUserSet	UserSet1
UserSetLoadStatus	Success

Parameter	Description
UserSetSelector	Selects the feature User Set to load, save or configure.
UserSetLoad	Loads the User Set specified by UserSetSelector to the device and makes it active.
UserSetSave	Save the User Set specified by UserSetSelector to the non-volatile memory of the device
UserSetDefault	Selects the feature User Set to load and make active by default when the device is reset.
UserSetLoadLastUserSet	Reports the last user set executed by the device from a user set load command, or as a result of a device reset.
UserSetLoadStatus	(InProgress / Failure / Success) Reports the last user set executed by the device from a user set load command, or as a result of a device reset.

Parameter List

10. ChunkDataControl

ChunkDataControl	
ChunkModeActive	False
ChunkSelector	Gain
ChunkEnable	False
ChunkTimestamp	{Not Available}
ChunkLineStatusAll	{Not Available}
ChunkCounterValue	{Not Available}
ChunkExposureTime	{Not Available}
ChunkGainValue	{Not Available}

Parameter	Description
ChunkModeActive	Activates the inclusion of Chunk data in the payload of the image.
ChunkSelector	Selects which Chunk to enable or control.
ChunkEnable	This boolean value enables the inclusion of the selected chunk in the payload data.
ChunkTimestamp	Returns the Time stamp of the image included in the payload at the time of the FrameStart internal event.
ChunkLineStatusAll	Returns the status of all the I/O lines at the time of the FrameStart internal event.
ChunkCounterValue	Returns the value of the selected Chunk counter at the time of the FrameStart internal event.
ChunkExposureTime	return the Exposure time (in microseconds) when ExposureMode is Timed.
ChunkGainValue	return chunk gain value.

Parameter List

11. CounterAndTimerControl

CounterAndTimerControl	
CounterSelector	Counter0
CounterResetSource	Off
CounterEventSource	FrameTrigger
CounterReset	{Not Available}
TimerSelector	Timer0
TimerTriggerSource	ExposureStart
TimerTriggerActivation	RisingEdge
TimerDelay	1,024
TimerDuration	4,096

Parameter	Description
CounterSelector	Selects which Counter to configure.
CounterResetSource	Selects the signals that will be the source to reset the Counter.
CounterEventSource	Select the events that will be the source to increment the Counter.
CounterReset	Does a software reset of the selected Counter and starts it.
TimerSelector	Selects which Timer to configure.
TimerTriggerSource	Selects the source of the trigger to start the Timer.
TimerTriggerActivation	(RisingEdge/FallingEdge/AnyEdge) Selects the activation mode of the trigger to start the Timer.
TimerDelay	(Min: 1/Max: 65535) It sets the duration in device-specific unit of the delay to apply after the reception of a trigger before to start the Timer.
TimerDuration	It sets the duration in device-specific unit of the Timer pulse. high pluse = duration/32552(s)

Parameter List

11. ISPControl

ISPControl	
SharpnessEnabled	Off
Sharpness	{Not Available}
DenoisingEnabled	Off
Denoising	{Not Available}
DigitalShift	0
Brightness	50

Parameter	Description
SharpnessEnabled	Sharpness enabled.
Sharpness	Sharpness setting.
DenoisingEnabled	Denoising enabled.
Denoising	Denoising setting.
DigitalShift	Set the value of the selected digital shift control //0-4.
Brightness	Brightness setting.
Contrast	Contrast setting.
ContrastMode	Set the operation mode of contrast threshold division.
ContrastThreshold	Set the threshold of contrast.

■ The camera device could not be discovered by the iCentral.

Possible Reasons:

1. Camera did not start normally.
2. USB cable or GigE cable did not connected with camera and PC correctly.
3. The camera is not in the same LAN with the application. (For GigE cameras)

Solutions:

1. Restart the camera, check the cable connection and the status of the LED indicator. Make sure that the USB cable do plug in the USB3.0 interface. (For USB3 Cameras)
2. Restart the camera, check the network connection and the status of the LED indicator. Make sure that the camera is in the same LAN with the application. (For GigE Cameras)

■ The camera device could be discovered, but can not be connected by the application.

Possible Reasons:

1. Camera did not start normally.
2. The camera device is already connected with another application.
3. The camera is not in the same network segment with the application. (For GigE cameras)
4. USB3 driver did not install. (For USB3.0 cameras)

Solutions:

1. Restart the camera and reinstall the USB3.0 driver; disconnect the other connected application. (For USB3.0 cameras)
2. Restart the camera, change the IP in order to make the camera in the same network segment as the application; or disconnecting other connected application. (For GigE cameras)

■ The preview is black in the application.

Possible Reasons:

1. The aperture of the lens is not open.
2. Camera did not work normally.

Solutions:

Open the lens aperture; restart the camera device.

■ The external trigger could not be enable.

Possible Reasons:

- The external trigger connection is wrong.
- Did not set the TriggerMode in the iCentral as ON.

Solutions:

Select the correct trigger mode and ensure that the external connection is correct.

■ The image is reversed in the iCentral.

Possible Reasons:

When the device is installed, the direction is incorrect.

Solutions:

You can do the image correction in the iCentral: "Params> ImageFormatControl > ReverseX or ReverseY".

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Getting Start Guide with iCentral

