Flags for video I/O

Video I/O

Enumerations

enum **cv::VideoCaptureAPIs** {
cv::CAP_ANY = 0,
cv::CAP_VFW = 200,
cv::CAP_V4L = 200,
cv::CAP_V4L2 = CAP_V4L,
cv::CAP_FIREWIRE = 300,
cv::CAP_FIREWARE = CAP_FIREWIRE,
cv::CAP_IEEE1394 = CAP_FIREWIRE,
cv::CAP_DC1394 = CAP_FIREWIRE,
cv::CAP_CMU1394 = CAP_FIREWIRE,
cv::CAP_QT = 500,
cv::CAP_UNICAP = 600,
cv::CAP_DSHOW = 700,
cv::CAP_PVAPI = 800,
cv::CAP_OPENNI = 900,
cv::CAP_OPENNI_ASUS = 910,
cv::CAP_ANDROID = 1000,
cv::CAP_XIAPI = 1100,
cv::CAP_AVFOUNDATION = 1200,
cv::CAP_GIGANETIX = 1300,
cv::CAP_MSMF = 1400,
cv::CAP_WINRT = 1410,
cv::CAP_INTELPERC = 1500,
cv::CAP_OPENNI2 = 1600,
cv::CAP_OPENNI2_ASUS = 1610,
cv::CAP_GPHOTO2 = 1700,
cv::CAP_GSTREAMER = 1800,
cv::CAP_FFMPEG = 1900,
cv::CAP_IMAGES = 2000,
cv::CAP_ARAVIS = 2100,
cv::CAP_OPENCV_MJPEG = 2200,
cv::CAP_INTEL_MFX = 2300,
cv::CAP_XINE = 2400
}
VideoCapture API backends identifier. More...

enum **cv::VideoCaptureProperties** {
cv::CAP_PROP_POS_MSEC =0,
cv::CAP_PROP_POS_FRAMES =1,
cv::CAP_PROP_POS_AVI_RATIO =2,
cv::CAP_PROP_FRAME_WIDTH =3,
cv::CAP_PROP_FRAME_HEIGHT =4,
cv::CAP_PROP_FPS =5,
cv::CAP_PROP_FOURCC =6,
cv::CAP_PROP_FRAME_COUNT =7,
cv::CAP_PROP_FORMAT =8,
cv::CAP_PROP_MODE =9,
cv::CAP_PROP_BRIGHTNESS =10,
cv::CAP_PROP_CONTRAST =11,
cv::CAP_PROP_SATURATION =12,
cv::CAP_PROP_HUE =13,
cv::CAP_PROP_GAIN =14,
cv::CAP_PROP_EXPOSURE =15,
cv::CAP_PROP_CONVERT_RGB =16,
cv::CAP_PROP_WHITE_BALANCE_BLUE_U =17,
cv::CAP_PROP_RECTIFICATION =18,
cv::CAP_PROP_MONOCHROME =19,
cv::CAP_PROP_SHARPNESS =20,
cv::CAP_PROP_AUTO_EXPOSURE =21,
cv::CAP_PROP_GAMMA =22,

cv::CAP_PROP_TEMPERATURE =23,
cv::CAP_PROP_TRIGGER =24,
cv::CAP_PROP_TRIGGER_DELAY =25,
cv::CAP_PROP_WHITE_BALANCE_RED_V =26,
cv::CAP_PROP_ZOOM =27,
cv::CAP_PROP_FOCUS =28,
cv::CAP_PROP_GUID =29,
cv::CAP_PROP_ISO_SPEED =30,
cv::CAP_PROP_BACKLIGHT =32,
cv::CAP_PROP_PAN =33,
cv::CAP_PROP_TILT =34,
cv::CAP_PROP_ROLL =35,
cv::CAP_PROP_IRIS =36,
cv::CAP_PROP_SETTINGS =37,
cv::CAP_PROP_BUFFERSIZE =38,
cv::CAP_PROP_AUTOFOCUS =39,
cv::CAP_PROP_SAR_NUM =40,
cv::CAP_PROP_SAR_DEN =41,
cv::CAP_PROP_BACKEND =42,
cv::CAP_PROP_CHANNEL =43,
cv::CAP_PROP_AUTO_WB =44,
cv::CAP_PROP_WB_TEMPERATURE =45
}
VideoCapture generic properties identifier. More...

enum cv::VideoWriterProperties {
cv::VIDEOWRITER_PROP_QUALITY = 1,
cv::VIDEOWRITER_PROP_FRAMEBYTES = 2,
cv::VIDEOWRITER_PROP_NSTRIPES = 3
}
VideoWriter generic properties identifier. More...

Detailed Description

Enumeration Type Documentation

§ VideoCaptureAPIs

enum **cv::VideoCaptureAPIs**

VideoCapture API backends identifier.

Select preferred API for a capture object. To be used in the **VideoCapture::VideoCapture()** constructor or **VideoCapture::open()**

Note

Backends are available only if they have been built with your OpenCV binaries. See **Video I/O with OpenCV Overview** for more information.

Enumerator	
CAP_ANY Python: cv.CAP_ANY	Auto detect == 0.
CAP_VFW Python: cv.CAP_VFW	Video For Windows (obsolete, removed)
CAP_V4L Python: cv.CAP_V4L	V4L/V4L2 capturing support.
CAP_V4L2 Python: cv.CAP_V4L2	Same as CAP_V4L.
CAP_FIREWIRE Python: cv.CAP_FIREWIRE	IEEE 1394 drivers.
CAP_FIREWARE Python: cv.CAP_FIREWARE	Same value as CAP_FIREWIRE.
CAP_IEEE1394 Python: cv.CAP_IEEE1394	Same value as CAP_FIREWIRE.
CAP_DC1394 Python: cv.CAP_DC1394	Same value as CAP_FIREWIRE.
CAP_CMU1394 Python: cv.CAP_CMU1394	Same value as CAP_FIREWIRE.
CAP_QT Python: cv.CAP_QT	QuickTime (obsolete, removed)
CAP_UNICAP Python: cv.CAP_UNICAP	Unicap drivers (obsolete, removed)
CAP_DSHOW Python: cv.CAP_DSHOW	DirectShow (via videoInput)
CAP_PVAPI Python: cv.CAP_PVAPI	PvAPI, Prosilica GigE SDK.
CAP_OPENNI Python: cv.CAP_OPENNI	OpenNI (for Kinect)
CAP_OPENNI_ASUS Python: cv.CAP_OPENNI_ASUS	OpenNI (for Asus Xtion)
CAP_ANDROID Python: cv.CAP_ANDROID	Android - not used.
CAP_XIAPI Python: cv.CAP_XIAPI	XIMEA Camera API.
CAP_AVFOUNDATION Python: cv.CAP_AVFOUNDATION	AVFoundation framework for iOS (OS X Lion will have the same API)
CAP_GIGANETIX Python: cv.CAP_GIGANETIX	Smartek Giganetix GigEVisionSDK.
CAP_MSMF Python: cv.CAP_MSMF	Microsoft Media Foundation (via videoInput)
CAP_WINRT Python: cv.CAP_WINRT	Microsoft Windows Runtime using Media Foundation.
CAP_INTELPERC Python: cv.CAP_INTELPERC	Intel Perceptual Computing SDK.
CAP_OPENNI2 Python: cv.CAP_OPENNI2	OpenNI2 (for Kinect)
CAP_OPENNI2_ASUS Python: cv.CAP_OPENNI2_ASUS	OpenNI2 (for Asus Xtion and Occipital Structure sensors)
CAP_GPHOTO2 Python: cv.CAP_GPHOTO2	gPhoto2 connection

CAP_GSTREAMER Python: cv.CAP_GSTREAMER	GStreamer.
CAP_FFMPEG Python: cv.CAP_FFMPEG	Open and record video file or stream using the FFMPEG library.
CAP_IMAGES Python: cv.CAP_IMAGES	OpenCV Image Sequence (e.g. img_%02d.jpg)
CAP_ARAVIS Python: cv.CAP_ARAVIS	Aravis SDK.
CAP_OPENCV_MJPEG Python: cv.CAP_OPENCV_MJPEG	Built-in OpenCV MotionJPEG codec.
CAP_INTEL_MFX Python: cv.CAP_INTEL_MFX	Intel MediaSDK.
CAP_XINE Python: cv.CAP_XINE	XINE engine (Linux)

§ VideoCaptureProperties

enum **cv::VideoCaptureProperties**

VideoCapture generic properties identifier.

Reading / writing properties involves many layers. Some unexpected result might happens along this chain. Effective behaviour depends from device hardware, driver and API Backend.

See also

Additional flags for video I/O API backends, **VideoCapture::get()**, **VideoCapture::set()**

Enumerator	
CAP_PROP_POS_MSEC Python: cv.CAP_PROP_POS_MSEC	Current position of the video file in milliseconds.
CAP_PROP_POS_FRAMES Python: cv.CAP_PROP_POS_FRAMES	0-based index of the frame to be decoded/captured next.
CAP_PROP_POS_AVI_RATIO Python: cv.CAP_PROP_POS_AVI_RATIO	Relative position of the video file: 0=start of the film, 1=end of the film.
CAP_PROP_FRAME_WIDTH Python: cv.CAP_PROP_FRAME_WIDTH	Width of the frames in the video stream.
CAP_PROP_FRAME_HEIGHT Python: cv.CAP_PROP_FRAME_HEIGHT	Height of the frames in the video stream.
CAP_PROP_FPS Python: cv.CAP_PROP_FPS	Frame rate.
CAP_PROP_FOURCC Python: cv.CAP_PROP_FOURCC	4-character code of codec. see **VideoWriter::fourcc** .
CAP_PROP_FRAME_COUNT Python: cv.CAP_PROP_FRAME_COUNT	Number of frames in the video file.
CAP_PROP_FORMAT Python: cv.CAP_PROP_FORMAT	Format of the Mat objects returned by **VideoCapture::retrieve()**.
CAP_PROP_MODE Python: cv.CAP_PROP_MODE	Backend-specific value indicating the current capture mode.
CAP_PROP_BRIGHTNESS Python: cv.CAP_PROP_BRIGHTNESS	Brightness of the image (only for those cameras that support).
CAP_PROP_CONTRAST Python: cv.CAP_PROP_CONTRAST	Contrast of the image (only for cameras).
CAP_PROP_SATURATION Python: cv.CAP_PROP_SATURATION	Saturation of the image (only for cameras).
CAP_PROP_HUE Python: cv.CAP_PROP_HUE	Hue of the image (only for cameras).
CAP_PROP_GAIN Python: cv.CAP_PROP_GAIN	Gain of the image (only for those cameras that support).
CAP_PROP_EXPOSURE Python: cv.CAP_PROP_EXPOSURE	Exposure (only for those cameras that support).
CAP_PROP_CONVERT_RGB Python: cv.CAP_PROP_CONVERT_RGB	Boolean flags indicating whether images should be converted to RGB.
CAP_PROP_WHITE_BALANCE_BLUE_U Python: cv.CAP_PROP_WHITE_BALANCE_BLUE_U	Currently unsupported.
CAP_PROP_RECTIFICATION Python: cv.CAP_PROP_RECTIFICATION	Rectification flag for stereo cameras (note: only supported by DC1394 v 2.x backend currently).
CAP_PROP_MONOCHROME Python: cv.CAP_PROP_MONOCHROME	
CAP_PROP_SHARPNESS Python: cv.CAP_PROP_SHARPNESS	
CAP_PROP_AUTO_EXPOSURE Python: cv.CAP_PROP_AUTO_EXPOSURE	DC1394: exposure control done by camera, user can adjust reference level using this feature.
CAP_PROP_GAMMA Python: cv.CAP_PROP_GAMMA	
CAP_PROP_TEMPERATURE Python: cv.CAP_PROP_TEMPERATURE	
CAP_PROP_TRIGGER	

Python: cv.CAP_PROP_TRIGGER	
CAP_PROP_TRIGGER_DELAY Python: cv.CAP_PROP_TRIGGER_DELAY	
CAP_PROP_WHITE_BALANCE_RED_V Python: cv.CAP_PROP_WHITE_BALANCE_RED_V	
CAP_PROP_ZOOM Python: cv.CAP_PROP_ZOOM	
CAP_PROP_FOCUS Python: cv.CAP_PROP_FOCUS	
CAP_PROP_GUID Python: cv.CAP_PROP_GUID	
CAP_PROP_ISO_SPEED Python: cv.CAP_PROP_ISO_SPEED	
CAP_PROP_BACKLIGHT Python: cv.CAP_PROP_BACKLIGHT	
CAP_PROP_PAN Python: cv.CAP_PROP_PAN	
CAP_PROP_TILT Python: cv.CAP_PROP_TILT	
CAP_PROP_ROLL Python: cv.CAP_PROP_ROLL	
CAP_PROP_IRIS Python: cv.CAP_PROP_IRIS	
CAP_PROP_SETTINGS Python: cv.CAP_PROP_SETTINGS	Pop up video/camera filter dialog (note: only supported by DSHOW backend currently. The property value is ignored)
CAP_PROP_BUFFERSIZE Python: cv.CAP_PROP_BUFFERSIZE	
CAP_PROP_AUTOFOCUS Python: cv.CAP_PROP_AUTOFOCUS	
CAP_PROP_SAR_NUM Python: cv.CAP_PROP_SAR_NUM	Sample aspect ratio: num/den (num)
CAP_PROP_SAR_DEN Python: cv.CAP_PROP_SAR_DEN	Sample aspect ratio: num/den (den)
CAP_PROP_BACKEND Python: cv.CAP_PROP_BACKEND	Current backend (enum VideoCaptureAPIs). Read-only property.
CAP_PROP_CHANNEL Python: cv.CAP_PROP_CHANNEL	Video input or Channel Number (only for those cameras that support)
CAP_PROP_AUTO_WB Python: cv.CAP_PROP_AUTO_WB	enable/ disable auto white-balance
CAP_PROP_WB_TEMPERATURE Python: cv.CAP_PROP_WB_TEMPERATURE	white-balance color temperature

§ VideoWriterProperties

enum **cv::VideoWriterProperties**

VideoWriter generic properties identifier.

See also

VideoWriter::get(), **VideoWriter::set()**

Enumerator	
VIDEOWRITER_PROP_QUALITY Python: cv.VIDEOWRITER_PROP_QUALITY	Current quality (0..100%) of the encoded videostream. Can be adjusted dynamically in some codecs.
VIDEOWRITER_PROP_FRAMEBYTES Python: cv.VIDEOWRITER_PROP_FRAMEBYTES	(Read-only): Size of just encoded video frame. Note that the encoding order may be different from representation order.
VIDEOWRITER_PROP_NSTRIPES Python: cv.VIDEOWRITER_PROP_NSTRIPES	Number of stripes for parallel encoding. -1 for auto detection.