

Hamamatsu Video Capture Library for LabVIEW  
Release Notes

4.4.28 - 5/24/22

- Fixed invalid handle error when opening second camera first.

4.4.27 - 3/16/22

- Added parameters
  - TEST PATTERN KIND
  - TEST PATTERN OPTION

4.4.25 - 3/2/22

- Added parameters
  - OUTPUT INTENSITY

4.4.24 - 6/1/21

- Added parameters
  - CONFOCAL\_SCANMODE:
  - CONFOCAL\_SCANLINES:
  - CONFOCAL\_ZOOM:
  - SUBUNIT\_IMAGEWIDTH:
  - NUMBEROF\_SUBUNIT:
  - SUBUNIT\_CONTROL:
  - SUBUNIT\_LASERPOWER:
  - SUBUNIT\_PMTGAIN:
  - SUBUNIT\_PINHOLESIZE:
  - SUBUNIT\_WAVELENGTH:
  - SUBUNIT\_TOPOFFSETBYTES:

4.4.23 - 12/16/20

- Added parameters
  - TAPCALIB GAIN
  - TAP GAIN CALIB METHOD
  - TAP CALIB BASE DATA MEMORY
  - STORE TAP CALIB DATA TO MEMORY
  - TAP CALIB DATA MEMORY
- Fixed issue where known error codes would be reported as unknown error codes
- Extended the size of the error message buffer to prevent crash with error handler
- Fixed typo in TMCC\_WAITNEXTFRAME\_40 with TMLOG
- Fixed sample VI tm430\_functions\_41.vi so the numeric slider bar displays correct scale
- Fixed issue where TM\_OPENCAMERA would fail in 32-bit LabVIEW

4.4.22 - 6/8/20

- Added parameters
  - TAPCALIB GAIN

- TAP GAIN CALIB METHOD
- TAP CALIB BASE DATA MEMORY
- STORE TAP CALIB DATA TO MEMORY
- TAP CALIB DATA MEMORY
- Fixed issue where known error codes would be reported as unknown error codes
- Extended the size of the error message buffer to prevent crash with error handler
- Fixed typo in TMCC\_WAITNEXTFRAME\_40 with TMLOG
- Fixed sample VI tm430\_functions\_41.vi so the numeric slider bar displays correct scale

#### 4.4.21 - 7/30/19

- Added parameters
  - REALTIME GAIN CORRECT MODE
  - REALTIME GAIN CORRECT LEVEL
  - REALTIME GAIN CORRECT INTERVAL
  - NUMBER OF REALTIME GAIN CORRECT REGION

#### 4.4.19 - 2/5/19

- Added destructor code to handle unexpected VI exit due to ALT+F4 or CTRL+Q

#### 4.4.18 - 7/20/18

- Added timeout input to TM\_STOREBACKGROUND and TM\_STORESHADINGCORRECTION

#### 4.4.17 - 7/16/18

- Fixed a crash error when calling TM\_STOPCAPTURE when no cameras are available.
- Added registry override method for calibration timeout

#### 4.3.16 - 6/7/18

- Fixed Call Library function node in TM\_MASTERPULSE. The node was calling the incorrect function.
- Fixed error 1097 in Call Library function node in TM\_OPENCAMERA. The node was calling the incorrect function.

#### 4.3.15 - 4/27/18

- Fixed error in TM\_REPORTERROR that would crash LabVIEW.
- Updated error codes with current DCAMSDK

#### 4.3.14 - 4/18/18

- Fixed an internal error when compiling a release build of the driver.

#### 4.2.12 - 1/4/18

- Fixed error with DSP functions not working with newer cameras.

#### 4.2.11 – 11/6/17

- Fixed error with TM\_SETLUT. Now points to correct DLL.
- Fixed error with TM431\_REGIONOFINTEREST.VI. Invalid ROI values are now coerced to correct values.

#### 4.2.10 - 11/1/17

- Added VIEW option to TM\_GETFRAME and TM\_GETDCIMGFRAME to get different views of the frame data
- Fixed error when second view of split view is completely black

#### 4.2.9 - 7/24/17

- Added parameters
  - BITS PER CHANNEL

#### 4.2.8 - 7/19/17

- Added new VI
  - tm\_inputtriggersource\_40
  - tm\_inputtriggeractive\_40
  - tm\_inputtriggeradvance\_40
  - tm\_getvaluetext\_40
- Added new sample VI
  - tm488\_attachbufferseq\_wVision.vi
  - tm488\_attachbuffersnap\_wVision.vi
- Updated sample VI
  - tm422\_timelapse.vi
  - tm423\_dualcamerasync.vi
  - tm483\_masterpulse.vi

#### 4.1.7 - 6/29/17

- Added new VI
  - tm\_getcamerastatus\_40

#### 4.1.6 - 6/27/17

- Added new VI
  - tm\_prepare\_attach\_40

#### 4.0.5b - 5/2/17

- Added parameters
  - TIMING READOUT TIME
  - INTERNAL FRAMERATE
  - INTERNAL FRAMEINTERVAL
  - IMAGE WIDTH
  - IMAGE HEIGHT
  - IMAGE ROWBYTES
  - IMAGE FRAMEBYTES
- Added new sample VI

- tm485\_lightsheet\_LTN12.vi

#### 4.0.5 - 4/11/17

- Using new headers: dcamapi.h Nov 7, 2016 / dcimgapi.h Nov 7, 2016
- This fixes a problem in 32-bit DCIMGAPI.DLL that prevented users from opening DCIMG files.
- Fixed error when subarray limits would display incorrectly at 2x2 and 4x4 binnings.

#### 4.0.4 - 2/15/17

- Added new VIs
  - tm\_sensorcooler\_40
  - tm\_setmultiregion\_40
  - tm\_setlut\_40
- Added new sample VIs
  - tm484\_highcontrastmode.vi
  - tm486\_dataextraction.vi
  - tm486\_dataextraction\_toDCIMG.vi
  - tm487\_lut.vi
- Updated existing VIs
  - tm\_getparameterlimits\_41
    - Output pins are different. All output pins are not grouped into one cluster output pin.
    - Added number of views to the output.
  - tm\_getdcimgframedata\_40
    - Includes Options input. Options include “no option” and “high contrast mode”.
- Fixed error when tm\_initialize\_40 would execute with no cameras connected and tm\_uninitialize\_40 would not properly uninitialize.
- Fixed internal error with gettransferinfo.

#### 4.0.3 - 9/8/16

- Fixed tm\_setmasterpulse\_40 when using BURST mode.
- Countermeasure for C12902D-40 with tm\_setinputtrigger\_40 when setting trigger polarity.

#### 4.0.2 – 8/15/16

- Updated tm\_setparameter\_40 to update the values and limits of the parameters that were affected by the changed parameter.

#### 4.0.1 – 7/25/16

- Exposed deprecated folder to viewable palette set. This is to counter a “feature” in LabVIEW 2015 that would replace missing VIs in a program with the closest match in the viewable palette set.
- Added PANORAMIC START V to the list of supported properties.

- Updated tm\_getframe16\_40 to include Options input. Options include “no option” and “high contrast mode”.

#### 4.0.0 – 4/12/16

- All current VI names now end in \_40 to signify that they are updated for v4.0
- Added HVC Debug Log option to tm\_initialize
- All v4.0 functions are now included in Debug Log output
- Added dynamic parameter system.
- Updated tm\_setparameter, tm\_getparameter, and tm\_getparameterlimits for dynamic parameter system.
- Updated tm\_getparameterlist to output all members of array parameters
- Updated all sample VIs for new 4.0 functions
- Older 3.x functions moved to deprecated folder to maintain backward compatibility

#### 3.4.14 – 12/16/15

- Added new VIs
  - tm\_writemetadata
  - tm\_readmetadata
  - tm\_getframe\_wview
  - tm\_setarea\_wview
  - tm\_masterpulse
- Added new sample VIs
  - tm3samp\_07a\_dcimgrecorder\_wmetadata.vi
  - tm3samp\_07b\_dcimgrecorder\_wVision.vi
  - tm3samp\_09\_wview.vi
  - tm3samp\_09\_wview\_wVision.vi
  - tm3samp\_09\_masterpulse\_sequence.vi
- Updated tm\_startrecorder to add “.dcimg” to the path if the user does not include the file extension.

#### 3.3.13 – 10/13/14

- Updated tm\_setparameter, tm\_getparameter, and tm\_getrange to accept IDs for all available functions for the camera.
- Updated tm\_getfunctionlist to output the function name and IDs of all available functions for the camera.
- Updated tm\_initialize to output the capture library version, the DCAM version, and the camera information for available cameras.
- Updated tm\_opencamera to output the information of the selected camera.
- Added new sample VI
  - tm3samp\_09\_lightsheet.vi

#### 3.2.12 – 7/14/14

- Fixed an issue with tm\_waitnextframe when setting an exposure greater than 5 seconds.

### 3.2.11 – 6/6/14

- Fixed an issue with tm\_waitnextframe when setting a timeout value of -1.
- Fixed an issue with tm\_opencamera accessing some cameras using DCAM driver version 14.6.

### 3.2.10 - 4/23/14

- Added new camera parameter
  - Channel Sync

### 3.2.9 – 11/7/13

- Fixed an error with Frame Bundle Mode where the wrong image dimensions were being set.
- Added a new sample VI
  - tm3samp\_02a\_framebundle.vi

### 3.2.8 – 5/9/13

- Fixed an issue with the error reporting that would cause LabVIEW to crash after an error in the library occurred.

### 3.2.7 – 4/19/13

- Added new Vis to basic camera functions
  - tm\_setinputtriggermode
  - tm\_setoutputtriggermode
- Added new camera parameters
  - Output Trigger Kind
  - Readout Direction
- Modified TM\_GETFRAME\_A.VI to include Electron Info output

### 3.1.6 – 12/13/12

- Added new Vis to basic camera functions
  - tm\_getcaptureinfo
- Added new camera parameters
  - Line Bundle Height
  - Trigger Connector
  - Image Pixel Type
- Modified TM\_PREPARECAPTURE.VI output buffer type
- Modified TM\_GETFRAME\_A.VI input buffer type
- Modified TM\_GETFRAME\_A.VI to include 16-bit and 8-bit outputs

### 3.0.1 – 4/17/12

- Fixed tm\_preparecapture for cameras that do not support readout time.

### 3.0.0 – 3/17/12

- ▲ Updated for LabVIEW 2011
- ▲ Add new VIs to basic camera functions
  - tm\_preparecapture
  - tm\_unpreparecapture
  - tm\_waitnextframe
  - tm\_getframe
- Added DCIMG subcategory and included new VIs to DCIMG subcategory.
  - tm\_startrecorder
  - tm\_stoprecorder
  - tm\_getrecorderstatus
  - tm\_opendcingfile
  - tm\_closedcingfile
  - tm\_getdcimgframe
- Removed previous sample VIs.
- Added new sample VIs.
  - tm3samp\_sequence
  - tm3samp\_sequence\_wVision
  - tm3samp\_sequence\_wDSP
  - tm3samp\_functions
  - tm3samp\_framerate
  - tm3samp\_framerate\_wVision
  - tm3samp\_acquire replay
  - tm3samp\_dcimgrecorder
  - tm3samp\_dcimgreader

#### 2.0.1 – 6/30/10

- Added View input to TM\_SETPARAMETER.VI and TM\_GETPARAMETER.VI to give more control for cameras with multiple views
- Fixed TM\_GETRANGE.VI to rescanner function capabilities when called.
- Fixed TM\_STARTCAPTURE\_A.VI to output correct Image Type value
- Updated TM\_GETNEXTFRAME.VI to use unsigned 16-bit data.

#### 2.0.0 – 4/30/10

- Updated for LabVIEW 2009.
- Modified TM\_SETPARAMETER.VI, TM\_GETPARAMETER.VI, and TM\_GETRANGE.VI with new values for parameter menu ring.
- Added TM\_GETFUNCTIONLIST.VI.
- Added support for 64-bit versions of LabVIEW.

#### 1.7.0 - 8/10/08

- Added TM\_GETPROPERTYLIST.VI advanced function.
- TM\_GETRANGE.VI moved to deprecated functions.
- Added TM\_GETRANGE\_A.VI to replace TM\_GETRANGE.VI.
- Added support for line binning.

#### 1.6.0 – 3/17/08

- Added TM\_GETPROPERTYLIST.VI advanced function.
- Added PROPERTYCHECK.VI sample code.

### 1.5.3 – 2/22/07

- Added TM\_SETPROPERTYVALUE.VI and TM\_GETPROPERTYVALUE.VI advanced functions.

### 1.5.2 – 1/2/07

- Fix crash problem when using multiple cameras
- Included descriptions of error codes to the manual

### 1.5.0 – 10/6/06

- Added CCD Mode and Photon Imaging Mode to TM\_SETPARAMETER.VI and TM\_GETPARAMETER.VI
- Added TM\_RECURSIVEFILTER.VI, TM\_SETBACKGROUNDFRAME.VI, TM\_SETSHADINGFRAME.VI, TM\_STOREBACKGROUNDFRAME.VI, and TM\_STORESHADINGFRAME.VI to handle DSP functions
- Created new sample code to demonstrate how to use the new functions.

### 1.4.0 – 7/7/06

- Replaced TM\_GETFRAME.VI and TM\_WAIT.VI with TM\_GETNEXTFRAME.VI
- TM\_GETFRAME.VI and TM\_WAIT.VI now in deprecated folder
- Updated all sample code to reflect changes

### 1.3.3 – 5/22/06

- Corrected wait function in worker DLL to prevent race issue when snapping a large number of images.

### 1.3.2 – 4/12/06

- Corrected labeling problem in worker DLL where some functions in TM\_SETPARAMETER.VI would not correspond to functions the same functions in TM\_GETPARAMETER.VI.

### 1.3.1 – 2/8/06

- Corrected sub-array function in worker DLL that would cause errors in TM\_SETAREA.VI

### 1.3.0 – 1/31/06

- Added TM\_GETRANGE.VI to get the minimum, maximum, and stepping values of camera features

### 1.2.0 – 12/7/05

- Added TM\_SETCOOLING.VI to control the cooling fan
- Added X-Binning and Y-Binning to TM\_SETPARAMETER.VI and TM\_GETPARAMETER.VI

### 1.1.2 – 11/29/05



- Added support for independent binning modes to the TM\_SETPARAMETER.VI
- Added TM\_SETSCANMODE.VI to have an easier way to support the adjustment of scan speeds

#### 1.1.1 - 3/1/04

- Fixed all functions that would crash LabVIEW when error occurred in lower level driver

#### 1.1.0 - 12/17/04

- Added SIMPLESEQUENCE\_NOIMAQVISION.VI and SIMPLESNAP\_NOIMAQVISION.VI to sample code
- Added TM\_GETFRAME\_A.VI to support image acquisition without the need for IMAQ Vision

#### 1.0.0 - 6/23/04

- Initial release