Hamamatsu Video Capture Library for LabVIEW
Release Notes

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 FRAME INTERVAL
- IMAGE WIDTH
- IMAGE HEIGHT
- IMAGE ROWBYTES
- IMAGE FRAMEBYTES

- Added new sample VI
  - tm485_lightsheet_LTN12.vi

4.0.5 - 4/11/17
- 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
  o 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
  o 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
  o 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
  o tm_setinputtriggermode
  o tm_setoutputtriggermode
• Added new camera parameters
  o Output Trigger Kind
  o 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
  o tm_getcaptureinfo
• Added new camera parameters
  o Line Bundle Height
  o Trigger Connector
  o 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_opendcimgfile
  - tm_closedcimgfile
  - 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_acquirereplay
  - 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 rescan 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 funtions.
- 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