Update Description

NovaCLB-Screen

1 Roadmap

V5. 1

V5. 0

V4. 0

V3. 4

V3. 3

V3. 2

V3. 1. 2

V3. 1. 1

V3. 1

V2. 0

V1. 8
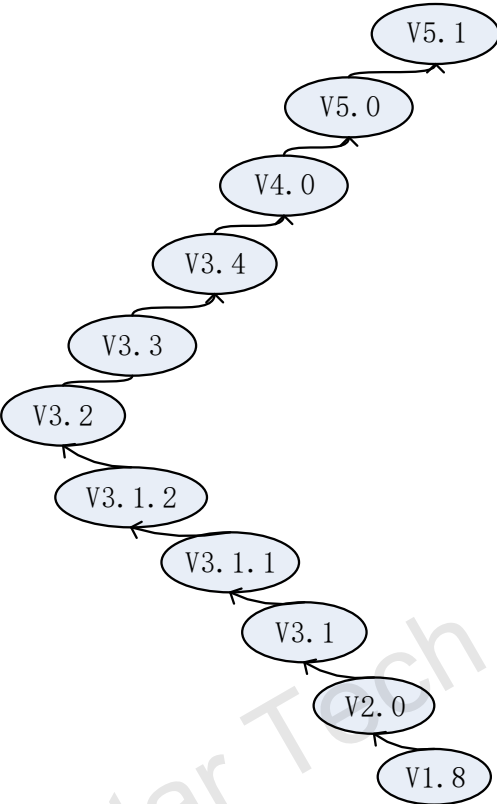
2 Main updates of every version (relative to the previous version)

Version & Release Date	V5.1 2018-03-09	
Updates	New Features	1. Supports calibration of the screen loaded by cascaded sending cards.
		2. Supports online calibration with the 80D digital camera.
		3. Supports calibration of irregular (non-rectangular) screens.
		4. Cabinet position can be freely changed after the full-screen calibration is done.
		5. The adjustable range of color temperature was changed to 1700–25000.
		6. The positioning box for ambient light elimination can be moved with the keyboard.

		7. The calibration priority of partitions was added to reduce their difference after calibration.
		8. The saturation adjustment function was improved.
		9. The Caliris preview function was improved. For example, the preview image can be zoomed in with one click and can be dragged with the mouse.
	Bug Fixes	
Writer	Huahua Hui	
Version & Release Date:	V5.0 2017-11-07	
Updates:	New Features	1. Supports bigger resolution module calibration, maximum to 384 * 256.
		2. Simplified interface process, make the operation more simple.
		3. Simplified the manual intervention point positioning process.
		4. Supports calibration with scientific professional camera HS1000.
		5. Supports evaluate the uniformity before and after calibration.
		6. Screen to Cabinet Tool add multiple numbering type.
		7. Screen Update Targets Tool add modify module information function.
		8. Screen Data Merging Tool add detecting bright dark block function, Optimization algorithm, to better solve the split screen and boundary between the split screen.
	Bug Fixes	
Writer:	Ruitao Zheng	
Version & Release Date:	V4.0.1 2015-12-10	
Updates:	New Features	1. Integrated "Cabinet To Screen" tool.
		2. Modify the judgment target method.
		3. Modify "Auto Partition" to "Recommend".
	Bug Fixes	1. Relocate abnormal when manual location.
		2. Eliminate the boundary abnormal when use large partition sometimes.
		3. Show number abnormal when trim coefficients in the process modify the dark or bright lines.
Writer:	Ruitao Zheng	

Version & Release Date:	V4.0 2015-09-15	
Updates:	New Features	1. Supports smart partitioning, and set borders before correction.
		2. Supports high-precision color correction.
		3. Supports a correction for 2K area.
		4. Supports change the target to regenerate correction coefficients.
		5. Supports enlarge part of the area image when enabled background off.
		6. Supports check the hardware can achieve proportional.
		7. Supports use your camera to eliminate splicing of light and dark lines.
		8. Supports select the path of the collection images.
		9. Supports continue correction when the correct process was forced to interrupt (Low battery, etc.).
	Bug Fixes	
Writer:	Ruitao Zheng	
Version & Release Date:	V3.4 2015-05-10	
Updates:	New Features	1. Supports NovaPro online calibration.
		2. Supports Russian.
	Bug Fixes	1. Individual camera connection exception;
		2. Cannot modify the terminated row or column number when there is just one partition.
		3. If the whole left subarea modify the start column, hemp dots may appear on the left bottom of the screen after partition boundary elimination.
Writer:	Ruitao Zheng	
Version & Release Date:	V3.3 2014-12-08	
Updates:	New Features	1. Added the menu bar.
		2. Added authorization documents manage, authorization document can be added when software opening, if there exists no authorization document or the match authorization dog, and it is unable to connect with LCT.

		3. Added database backup, which can effectively prevent file damage caused by software suddenly shut down. 4. Used sqlite instead of access, in order to improve the write/read speed. 5. Supports the calibration of the display has one or two LEDs. 6. Adjusted the targets advanced page, allow users input targets manually, and support three common temperature point. 7. Added ISO adjustment, limit the LED imaging area, to reduce the probability of Moore grain appear after calibration. 8. Adopted processing image while collecting, to improve efficiency. 9. Supports eliminate the boundaries even though all the partitions are not be calibrated. 11. Added the tool which can update targets and recalculate the coefficients. 12. Users can pause the calibration when large partition. 13. Users can modify the allowed dead ratio when calibration.
	Bug Fixes	1. Fixed the problem that if LCT disconnect when saving to database in eliminate the boundaries, reconnect to LCT and save again, the database cannot be loaded to LCT or other relevant software.
Writer:	Ruitao Zheng	
Version & Release Date:	V3.2　2014-07-08	
Updates:	New Features	1. Separate of image acquisition and image analysis procedures, improve the calibration efficiency. 2. Integrated Tool of the screen to cabinet and screen data merging. 3. Modify the software icon.
	Bug Fixes	
Writer:	Lei Yin	
Version & Release Date:	V3.1.2　2014-06-20	
Updates:	New Features	

	Bug Fixes	1. Fixed the problem that for regular partition wrapping correction, the whole partition tends to be darker. 2. Fixed the problem that after regular partition wrapping correction, the wrapping tends to be brighter. 3. Fixed the problem that in some countries, camera parameters in the operating system cannot be set. 4. Fixed the problem that for regular partition, the starting point of partition topology cannot be changed using the right-button.
Writer:	Lei Yin	
Version & Release Date:	V3.1.1 2014-04-10	
Updates:	New Features	
	Bug Fixes	1. Fixed the problem that the captured image is black when camera exposure time is equal to 200 or less than 200. 2. Fixed the problem that an exception occurred when connecting camera failed. 4. Fixed the problem that the notification is wrong when software covered installation.
Writer:	Lei Yin	
Version & Release Date:	V3.1 2014-03-12	
Updates:	New Features	1. Eliminates the seam between module and cabinet after calibration. 2. It can calibrate the new module, make its uniformity as same as the surroundings. 3. It can find out that the LED lights on the border are covered, then avoid these lights and continue calibration. 4. It can avoid the influence of interference light around a fixed partition (e.g. Street light). 5. It can detect the difference between control system and control computer, and give prompt.

		6. When LED point positioning failed in complex environment or In a partition of complex shape, the user can adjust the LED location manually. 7. Supports Canon 70D camera. 8. Interface easier to use. 9. Reduced the time of single image acquisition in large partition mode.
	Bug Fixes	1. Fixed the problem that red changed soft red after calibration. 2. Fixed the problem that white change reddish white after calibration. 3. Fixed the problem that partition boundary cannot be eliminate when the size of partitions were different. 4. Fixed the problem that a memory error happened when having lots of partition. 6. Fixed the problem that camera do image acquisition before display show corresponding image. After calibration, the screen uniformity became worse. 7. Fixed the problem that some blue highlights appeared on the display after normal partition calibration. 8. Fixed the problem that a rainbow phenomenon appeared on the display after large partition calibration. 9. Fixed the problem that a caterpillar phenomenon appeared on the display after calibration.(eight or sixteen lights together are brighter than surroundings)
Writer:	Lei Yin	
Version & Release Date:	V2.0　2013-10	
Updates:	New Features	1. Added large partition mode which size can be 224 plus 150. 2. Added partition boundary elimination function. 3. Added screen boundary elimination function. 4. Added the function for locating the screen position by artificial auxiliary way when there was more interference light source. 5. Added the function that the software removed the background light interference before analyzing image data under large partition mode. 6. New automatic analysis function of saturation.
	Bug Fixes	1. Fixed an occasional problem that the software may be no response during

		running. 2. Fixed an occasional problem that the camera occasionally did not do image acquisition when clicking "Auto", "Analyze" or "Start" button. 3. Fixed an occasional problem that the screen display white as green after screen modification. 4. Fixed the problem that the partition information may be lost if the software exit abnormally.
Writer:	Lei Yin	

3 Compatibility

Large Partition Mode	Synchronous control system–NovaLCT	Supported version: V5.0 and above
	Asynchronous control system–NovaLCT-Pluto	Not supported