

RELEASE NOTES

NEW FOR CONTOUR SOFTWARE RELEASE C1-21.09 (SEPT 2021)

User Interface	User Interface Refresh	Overall style and design updates for the UI.
	Browse files	Added button to open current scan folder from within the UI.
	Default date format	Users can select the format for saved dates through the Scanning tab of Device Settings.
Enhancements	B&W Imagery availability	Added the ability to capture black and white photos during scanning (at varying speeds) and save them to disk.
	Confidence Threshold/Confidence Filter	The threshold (low, medium, high) for scan matching quality can be manually changed during scanning. By selecting Low or Medium Confidence, Contour will continue scanning even when scan matching may be poor. The default confidence threshold for scanning can be set in the Scanning tab of Device Settings.
	Camera Exposure options for Cover Photo	The camera exposure level can now be adjusted for the cover photo.
	New processing preset	The Color + Loop-Close + Level processing preset has been added. This preset is now recommended by Kaarta for best results.
	Color adjustment during Resume/Replay	Color can now be adjusted for images captured during Resume/Replay.
	Kaarta Cloud Uploading	During uploading to Kaarta Cloud, you have the option to include/exclude images and raw data.

NEW FOR CONTOUR SOFTWARE RELEASE C1-20.07 (JUL 2020)

User Interface	Kaarta Cloud enabled	Options for uploading scan data directly to Kaarta Cloud have been enabled from the newly installed Kaarta Cloud tab of the Scan Details screen. To successfully upload to Kaarta Cloud, an account is required, and Contour must have Wi-Fi connection to a wireless network.
	Main Gallery Menu	Options available on the Main Gallery (sort by, view, select, import, device settings) have been consolidated into the centralized Main Gallery Menu.
	Processing tab	The Reality Layer tab of Scan Details is now called Processing.
Enhancements	Ability to compress	When copying a scan to USB, you can elect to compress

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	files for upload	the files for compatible upload to Kaarta Cloud.
	Resume/Replay	Improved the resume/replay scan interface. Added the option of a slider bar to choose location from which to resume or replay a scan.
	Added Recycle Bin	Deleted files are temporarily placed in the recycle bin instead of being permanently removed from Contour.
	Improved post-processing performance	Improvements in post-processing allow for the processing of larger pointclouds on the device, at a quicker rate.

NEW FOR CONTOUR SOFTWARE RELEASE C19.10.02 (DEC 2019)

Bug Fixes	Copy to USB	Repaired issues that were causing the user interface to close or crash when copying scans to a USB drive.
	Importing point clouds	Repaired issue that was causing a failure to import point clouds not stored on the device. The import button on the Main Gallery can now be used to import scans from other devices.
Enhancements	Improved sharpening	Improved the sharpening post-process results.
	Scan detail display	Improved the scan detail display of files sizes and number of photos.
	Increased video rate	Increased video rate to 20 times real time for faster playback and review.

NEW FOR CONTOUR SOFTWARE RELEASE C19.10.01 (NOV 2019)

Bug Fixes	Floor leveling	Repaired issue that was causing the cleaning process to fail to produce a point cloud when leveling a file large enough for tiling.
	Trajectory tracking	Repaired issue that was occasionally making the trajectory lose laser mapping updates and only track visual odometry (sometimes for an extended period). This fix should have a significant impact on colorization, especially in environments challenging for visual odometry.
	Resume from prior map	Repaired issue that was causing the failure to resume from a prior map, when the map was far from 0,0,0. Map manager now adjusts the map spatial center to the start location before reading the prior map, so that data far from 0,0,0 is not thrown out due to being out of map range. <i>Note: Resume from a prior map will not load points that are</i>

NEW FOR CONTOUR SOFTWARE RELEASE C19.10.01 (NOV 2019)

		<i>farther than 800m in x/y or 200m in z from 0,0,0.</i>
	Contour software upgrade installation problems	Repaired issues with previous software upgrade. The update process will now automatically try to fix any package management problems by running "dpkg --configure -a" and "apt-get install -f". The upgrade installation will no longer display error messages when installation works properly.
Enhancements	Improved visualization	Trajectory visualization is now improved during live scanning (colored by time and larger). The trajectory display is published at a lower rate, improving the processing load/lag.
	Auto-restart of sensors	Sensor drivers (encoder, IMU, color camera, and B/W camera) are automatically restarted if no data is received for a specified time (10-12 seconds).
	Auto-pause	Auto-pause works more consistently. During scanning (if the confidence meter is low), the scan is automatically paused after 12 seconds. There is a count-down that displays on screen for the final 5 seconds to alert the impending pause. Auto-pause also occurs while resuming or replaying a scan in the event the initial lock-on fails. Auto-pause functionality during replay only applies to new scans that were performed after this patch was installed.
	Jumpback	Jumpback functionality has been added. If confidence is lost on a scan, it will "jumpback" to 5 seconds prior to the loss of confidence. This automatic jumpback increases the likelihood of recovering by resetting the location to the last stable position. You can now also replay a scan with a jumpback. The jumpback replay functionality only applies to new scans that were performed after this patch was installed.
	TeamViewer software update	The newest version of TeamViewer QuickSupport is included in this patch.

NEW FOR CONTOUR SOFTWARE RELEASE C19.10 (OCT 2019)

User Interface	Additional Scanning Menu options	Options for viewing scan data in the user interface have been expanded to include changing the pointcloud orientation, adjusting pointcloud colorization, as well as changing the depth of view and scale of the scans.
	Photo color adjustment scale	A sliding color scale can now be utilized when taking a cover photo or adding a photo to a scan to adjust color settings.
	Scanning status bar	The scanning status bar (including User Messages, Elapsed

NEW FOR CONTOUR SOFTWARE RELEASE C19.10 (OCT 2019)

		Time, Confidence Meter, and Total Points Collected) has been moved to the top of the screen.
	Multi-touch zoom	Pinching will now zoom the scanning view on the Contour user interface.
	Confidence Meter	Confidence Meter is now displayed as a visual indication of confidence (a color scale from red to green), instead of a numerical output.
Accuracy	Improvements	The overall accuracy of Contour has improved significantly, yielding 2-5cm variance across an entire interior scan when coupled with other scan-matching improvements.
Scan files and Previews	Smaller scan formats	Pointcloud files are now saved as binary files with much smaller sizes. Raw data files are now much smaller and record all the time, enabling replay of raw data to investigate any issues encountered while scanning
	Pointcloud Preview	The Scan Detail screen shows a preview of the pointcloud generated and replay of the path walked to help identify the scan.
Improved post-processing	High density	Improved post-processing cleans and colorizes pointclouds up to full collected density at faster speeds. This allows faster post-processing through more efficient and optimized algorithms.
	Job queue	You can now queue multiple jobs to run unattended. Set them up, hit run, and sleep peacefully.
Software	High Definition scanning mode	High Definition mode provides greater pointcloud detail and uses a more selective uncertainty rejection model. When scanning thoughtfully, the use of this mode produces significantly better pointcloud and post-processing results.
	Point Density view	Point Density view provides a real-time color preview map using point density to visualize where more scanning is needed. Point Density view supports better scanning for much improved modeling. See points collected locally while scanning. This feature uses a color range to represent low to high density.
	Color by intensity	Color by intensity visualization blends and mixes colors resulting in an improved color pointcloud and better visual definition. In turn, this reveals more detail for scan-to-BIM or scan-to-information processes. This feature uses intensity information for colorization (every point in the pointcloud gets a color from a picture or from intensity).
	Improved colorization	The color imaging camera has improved exposure, gain, and white balance control. Software now blends and filters images faster and better in the direct colorization of pointclouds.
	Binary .ply files	Binary .ply files accelerate the data pipeline flow. They are

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Firmware	Upgrade	smaller and much faster to transfer and process. For existing Contour users, a key improvement is related to the operation of the lidar encoder, which gives precise rotation of the lidar. Improved firmware results in smaller scan data and reduced errors in pointclouds. This is a firmware update requiring a factory reprogramming to implement. Scan quality is significantly improved, with no other changes to the system. Additionally, this update allows future firmware upgrades to be implemented over Wi-Fi without requiring units to be returned to the factory.
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