Version 6.01 Release Notes

Updated 9/21/2018

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Improvements and Resolved Issues By Release

Version 6.01

Release Date: Sept. 21, 2018

New Instruments Supported:
- Leica TS13 Total Station
- Stonex R35 Total Station (including onboard)

Other New Features and Improvements SurvCE:
- All sound related settings are now consolidated in the "Audible Settings" button from the Advanced Settings helmet item. Stakeout prompting settings remain accessible from the Stake tab of settings.
- The Stake Report dialog now includes the Point ID and Description of the point being staked out for Stake Points.
- Hybrid+: Resection now displays GPS receiver status and errors when "Use GPS" is enabled.
- Hybrid+: SurvCE now displays the levelling dialog when storing points from total station in Localization.
- Hybrid+: SurvCE now notes each Cross Check in the RW5 raw file as a comment, noting that a cross check was performed and listing the horizontal and vertical residuals.
- Hybrid+: The Cross Check report dialog now offers the option to retry the cross check. This will repeat the total station search and read, and get a new position from the GPS.
- Hybrid+: Users may now enter into Store Points, Stake Points, Auto by Interval, etc. in GPS mode without setting up their Total Station. Attempting to switch instruments with a TS that has not been setup will show the Backsight dialog and prompt users to setup their instrument.
- Hybrid+: GPS Search is now available in Resection after the second hybrid point is taken.
- Hybrid+: A new "silent" option is now available for Cross Check. This option will perform the cross check and note the error in the RW5 but suppress any errors.
- Hybrid+: GPS quality will now be noted in the RW5 raw file whenever a Cross-Check is performed.
- Hybrid+: It is now possible to switch jobs without restarting Hybrid+. Note that a crosscheck must be performed to validate setup on the new job.
- Some GIS options have been relocated to Advanced Settings->GIS Input Settings.
- Web Map Overlays WMTS option now supports WMTS servers that offer CRS of :3857 and WKSS of :GoogleMapsCompatible.
- Australia GDA2020 Coordinate Systems are now supported, including WA Project Grids.
- SurvCE will now warn the user if an RTCM3 projection is received and the 1021-1027 option is not enabled. This feature is limited to data collector internet.
- RW5 file reprocessing now supports GNSS tilt records.
- SurvPC now offers users the ability to increase the precision of their NMEA GGA messages by 1 decimal point when setting up their NMEA output.
- SurvCE now requires RTCM3 projection dialog to be displayed before finishing GPS configuration or connection when the 1021-1027 option is enabled.
- Robotic total stations will now rotate more accurately to the reverse face during set collection.
- Users may now change the date format used in the RW5 file under the System tab in Job

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Settings.
- The reconnect button in the helmet menu has been enhanced for reliability.
- SurvPC will now save valid WMS URLs in a drop down list to make for easier switching between WMS servers.
- SurvCE will now warn the user when the backsight is accidentally measured in the reverse face.

Bug Fixes in SurvCE:
- Out of order calls to get crd points from alphanumeric and CRDB now works correctly. This corrects a problem when using JPN in field to finish.
- AUSTRIA/MGI-GIS Grid/Austria West Zone, AUSTRIA/MGI-GIS Grid/Austria Central Zone, AUSTRIA/MGI-GIS Grid/Austria East Zone have been improved.
- The SurvCE shortcut will now start SurvCE correctly when the user has chosen to install somewhere other than root.
- Processing RW5 files with depth sounder data now works correctly.
- The point list will no longer appear corrupted when the current Job is reselected in File/Job. Note that this was a display issue only.
- Hybrid+: Users will no longer receive IMU-level prompts when storing the calculated occupation point in Resection.
- Hybrid+: RTCM3 projection is preserved when configuring Hybrid instruments.
- Hybrid+: Performing a GPS Search with "Ignore GPS Verticals" enabled will no longer adjust the zenith angle.
- Hybrid+: The GPS Search icon will now appear in the drop down search list when GPS Search is available during a Hybrid Resection.
- Hybrid+: SurvCE will now ensure that both the TS and GPS equipment setup information is written to the RW5 file when Hybrid+ is used.
- Hybrid+: GPS Hrms/Vrms records will be added to the RW5 file whenever a Hybrid Resection point is taken.
- It is no longer possible to get into an endless data-validation loop when entering invalid data in some edit boxes.
- The "One Shot" icon will now work in GPS mode.
- When exiting SurvCE/PC, any received RTCM3 projection is now discarded. This prevents the old projection from being used when the job is reloaded.
- Storing a point now warns user if RTCM3 "Use 1021-1027" is on but there is no current RTCM3 projection.
- SurvCE will now wait for the RTCM3 projection to be received before finalizing configuration when the option is enabled.
- There is no longer a potential to fail when feature code groups are used and the group definition is no longer valid.
- The breakline dialog inside of Grid Scan will now appear correctly. Previously the topbar could appear corrupted.
- The "read" button in point projection is now working for total station.
- SurvCE will now find a user defined APN in the list if the *.apn file exists.
- ISPOL SC1 import has been improved to better handle identical offsets (vertical walls, for example).
- NGVD29 coordinate systems now work more quickly.
- Pressing the Defaults button for NMEA output port settings will now give the correct default values.

- SurvCE no longer has the potential to falsely display the localization error dialog when receiving RTCM3 projections.
- GeoPak Import now works correctly.
- Set collection will now use the user-entered description correctly. Previously there was a chance that an old description could be used.
- Export DXF/DWG now better handles the INSERTS/BLOCKS for Entities which have attributes. E.g. Carlson Block Points. Avoids issues when loading the data in AutoDesk products.
- Line stakeout is now more reliable when using average readings.
- GPS Average now applies the RMS tolerance correctly.
- Now showing last tolerance exceeded instead of reading count when tolerance fails in Average GPS dialog.
- SurvCE no longer has the potential to skip some direct face measurements in set collection.
- Stakeout in TEXT mode is now working correctly.
- TS Levelling dialog now uses correct default setting for leveling instrument and buttons for Read, Store, etc. are now shown correctly
- GPS Rod height now correctly transferred from Version 5 Rover and Base settings.
- When selecting a new/existing job on startup, the default filename will use the correct file extension. Previously, the default filename would use a .crd extension even if the last file used had a .crdb extension.
- Port settings from Version 5 files now imported correctly.
- The backsight height will no longer be erroneously written over the foresight height when going to the robotics tab from store points.
- The Check BS routine in the Robotics tab no longer has the potential to use the wrong target type.
- Export Drawing now relies on the setting used by customers which produce and deliver directly the drawing with no Office intervention on the data, setting> "Disable F2F descriptions when the user edits the polylines in Map"; in this case although the linework is no longer Carlson F2F qualified, the software will still export the Points (inserts) to the appropriate LAYER.
- SurvCE will now show the error values in the correct distance units during sensor calibration.
- Changing settings from the Single Setup, Remote BM, and Robotics tabs is now more reliable.
- SurvCE will no longer incorrectly add the label "EDM Mode" into the RW5 file.
- The stake points routine will now show the "Turn To AR" data even when no distance is available.
- When occupying an unknown point with the same point ID as the next expected foresight point ID, the next expected foresight point ID will be incremented automatically.
- Cancelling Configure Rover now makes sure previous rover is configured.
- When selecting a new job, if the last job used was a .crdb type and the new filename does not have an extension typed in by the user, .crdb will be the file type for the new file.
- SurvCE will resume updating angles in the joystick screen after a turn or search command.
- The Sonarmite Depth sounder is now working correctly.
- Leveling "Update Points in Job" dialog now shows correct Point Elevation for beginning benchmark point.
- Leveling "Update Points in Job" dialog now shows correct elevations for open loop traverses.
- GPS rod heights will be correctly written to the note file when the option is selected by the user.
- When staking out in locked mode, and the read button is pressed, the instrument will now use Stakeout review instead of attempting to store the point.

- There is no longer a potential for failure in stakeout when moving to next point or using the map from the stakeout screen when "Stake Review" is active.
- The localization report now correctly displays the Combined Scale Factor. Previously it displayed the 1/CSF value.
- Grid to Ground manual entry is now working as designed.
- There is no longer the potential for total stations to fail to rotate during a traverse when D&R is enabled.

New Features and Improvements SurvPC:

Note that all relevant features in SurvCE are included in SurvPC

- Esri version 10.6 is now supported.
- A PRO or PRO set file will be saved whenever a complex or simple profile is displayed. SurvPC will also generate a PRO settings file.
- SurvPC will now only offer the "Force All Features To Be Selectable" option when an Esri job is being used.
- The Res folder will now be deleted by uninstall unless the user copied additional files to that location.
- Hybrid+: SurvPC will now do a voice prompt whenever a cross check has failed or passed when using "Silent" Cross Check Mode.
- Graphics for checkboxes, radio buttons, etc. have been updated for a crisper image.

Bug Fixes in SurvPC:

Note that all relevant bug fixes in SurvCE are included in SurvPC

- It is no longer possible to launch multiple simultaneous instances of the software on very fast tablets. This unusual situation could result in unexpected errors.

Version 6.0

Release Date: July 11, 2018

New Instruments Supported:
- Carlson BRx6+
- CHC M6
- CHC i70
- ComNav G200
- ComNav T300+
- geo-Fennel FGS100
- Geomax Zoom 90S
- iGage iG8
- HiTarget QBox8
- Hemisphere C321
- Hemisphere A326
- South G1+
- Stonex S800/S800A
- Stonex S900/S900T/S900A
- ** Support for the Focus 10 and Trimble 5600 have been removed*

New Data Collectors Supported:
- CHC LT35
- Trimble Juno 5
- Pentax PS9

* Support for Windows Mobile 5 data collectors has been removed in version 6.0.

Major New Features and Improvements SurvCE:
- SurvCE now offers the Hybrid+ Survey module to survey with both GPS and Total Station at the same time. Visit www.survce.com/hybrid for more details.
- Log Raw GPS has been redesigned to allow static logging without configuring an RTK Rover or Base. The process has been streamlined for ease of use.
- SurvCE now offers an advanced total station search icon to allow selection of search type from inside of any live survey screen.
- GNSS Analysis has been updated to the 2017 version.
- SurvCE now supports a laser pointer icon in all live survey screens for any total station with a laser pointer.
- SurvCE now supports web map overlays from Google, Open Street Maps, ArcGIS REST, and user defined Web Map Servers (WMS/WMTS/TMS).
- SurvCE can now read and export PRJ projection files.
- SurvCE now includes a Robotic Total Station Simulation driver for demos and testing. Pressing F12 will switch modes between standby, locked, and tracking in the simulator.
- SurvCE now includes Snap options inside of store points to facilitate drawing in the field as part of the survey process. An UNDO option has also been included.
- Total station control icons Search, Lock/Track, Target, and Laser Pointer will now be available in more screens.

- A new status icon will now show the status of the instrument connection from all screens.
- SurvCE now includes a "GIS Inspector" feature in the Map screen that allows viewing and editing GIS attributes as linework is created and edited.
- SurvCE now supports obstructed view stakeout mode.
- SurvCE now includes a "Surface Inspector" for elevation difference which allows storing and staking points from the surface as well as viewing cut/fill to the surface using Snaps.
- SurvCE now displays a red tolerance bar to indicate that a measurement is currently outside of a user defined tolerance.
- SurvCE now supports an automatic backsight check in the joystick screen.
- Auto by Interval when level now stores the most level reading which was recorded during the required level tolerance period.
- SurvCE now supports continuous reflectorless measurement for total stations which support the feature.
- SurvCE now offers the ability to demo the roading module on an already registered copy of the software.
- SurvCE now supports a two-prism pole in the 2-Point offset routine.

Other New Features and Improvements SurvCE:
- Labels related to scaling in the scaling dialogs have been updated to more accurately match the value being displayed.
- On the Process Raw dialog, a GPS button has been added next to the scale setting. Clicking this will auto-fill either the Combined Scale Factor (Ground to Grid) or the localization scale from the current job.
- On the Edit/View System dialog, a GPS button has been added next to scale setting. This button will take a GPS measurement and auto-fill a combined scale factor.
- Map screen redrawing has been improved to increase speed.
- SurvCE now supports coordinate System "UNITED ARAB EMIRATES/WGS 84/Dubai Local TM".
- The Czech grid files have been updated to add support for 1710.
- Projection type Hotine_Oblique_Mercator_Azimuth_Center is now supported.
- Coordinate system CANADA/NAD83/MTM Zone 11 is now supported.
- Coordinate system "USA COUNTY KS/KRCS" (20 zones) is now supported.
- Transverse_Mercator_South_Orientated is now supported. South African projections have been updated to use this option and scale factors have been switched for -1 to 1.
- In CarlsonCloud, a file is now sent immediately if the user confirms it. It is no longer necessary to hit the send button.
- The Pause/Break button will now switch the GPS Simulation between states (autonomous/float/fixed).
- The Convert WGS84 to NAD83 checkbox has been removed from the localization dialog.
- The Coordinate System Report (HTML) now writes scale factor and latitude of origin with more precision.
- In MAP/CAD Basic when background is set to dark color, SurvCE now displays the UCS icon correctly.
- SurvCE will now always prompt before connecting to an instrument, allowing the user to bypass connection more easily when necessary.
- When running F2F in Carlson CAD, points created when drawing polylines will now be part of the feature class.
- When exporting drawing data in CAD, the user can now decide whether to export nodes or skip in the export.

- SurvCE now offers options for Optimal Proximity STK Distances, Australia/Europe. E.g. km/m/mm, km/m/cm. This option is available under helmet->Advanced.
- SurvCE now supports export format PREGEO .dat for Italian Cadaster support.
- GIS CAD Basic now automatically stores points for Centroids, F2F creation using MAP commands.
- SurvCE now allows associating attributes with multiple fields.
- SurvCE now supports Start and End during GIS prompting.
- The Input/Edit Attributes option is now more visible. This options allows the user to show and remove attribute types.
- The "Point stored" message is changed to "SIMULATION point stored" for simulation, and lengthened to 800 ms.
- Nautiz Z4, Zenius -- SurvCE will use allow internal compass use on Nautiz X4 and Zenius data collectors.
- SurvCE will now show status "Turning" when the joystick is being moved in the robotics screen.
- SurvCE now offers the user all orientation options (Set zero, set to current, set azi, set to:) from the Configure button of the Resection screen. The prompt to set zero on the first resection point has been removed, as final orientation of the instrument now happens at the end of resection.
- In 2 point offset, a selected point's coordinates will populate immediately after a point is selected. Previously, an enter was needed to cause the update.
- MAP/Polyline and 3DPoly allows: +/-/Len (Right or Left or Length segments added to the entity).
- For all polyline commands in the map when Len = Extend by Brg+Dist is used, the software will now allow escape without going back to the main menu.
- CAD Basic Polyline Commands (2D, 3D, 2D (Road), 2D Free Sketch) now support Direction and Distance.
- The resection routine now includes a point count in the header bar.
- If "Average with Prior Measurements" is selected when storing a point with an existing ID in GPS mode, the software will check the distance between the new coordinates and the existing coordinates. If this distance is greater than 10cm, the user will be prompted to confirm that they wish to continue with the average. This should prevent errors of incorrectly averaging to the wrong point ID.
- Constellation checkboxes have been moved from the Advanced dialog under the Receiver tab to their own dialog "Configure Constellations".
- Proximity Radius setting has been moved from the JobSettings-Stake tab to the Equip-Tolerances page.
- SurvCE now includes a line in the raw file to report the min, max and average latency when averaging.
- SurvCE will no longer show the laser tab in offsets when the laser is not active.
- In demo mode, if the software blocks the user from storing because the point limit is exceeded, SurvCE will no longer increment the point ID, giving the false impression that the point was stored.
- Configuration and coding style options for the "One Touch" feature have been moved to a more convenient location.
- Manual Transfer is now available as an option in the SurvCE desktop demo to allow the demonstration of the CE File Transfer Tool from a Windows device.
- SurvCE now supports Cutsheet options Design North/and East for STK Points.
- Users can now choose a point from their current job to seed the GPS Simulator. This new

option is available in GPS Utilities or in point details within the map and live survey screens.
- GPS Simulation options for rotation increment, acceleration rate, and jitter have been added to GPS Utilities to allow for more user control.
- SurvCE can now run the command "View 3D Profile" using a 3D Polyline.
- ComNav AllStar -- The F2 key will now function as the enter key.
- The option "Increment number or time on valid Readings" in advanced GPS average has been renamed to "Ignore Invalid Readings". SurvCE will now show the correct status when readings are rejected with this option enabled. The setting will now be retained between sessions.
- The option "Use Point Symbols" has been renamed to "Use Symbols from FCL" and moved to Point Settings->View Settings for convenience.
- Point protect now works more intuitively when importing ASCII text files without point names.
- GNSS Analysis now allows turning on/off Vertical Blunders in the User Interface.
- SurvCE now includes a new option to allow use of Section Typical Templates; interpolation of cross sections when there is an equal number of angular points left/right will use now the string's contiguity.
- Export Ascii Custom now includes options for exporting: DEPTH - Raw depth sounder reading. SEAFLOOR Z - Always elevation adjusted for depth sounder (Excludes Water Elevation). DEPTH_QUALITY - Raw depth sounder quality.
- SurvCE now exports the coordinate system information as part of a LandXML export.
- SurvCE now supports TDS Ascii Export. Infrared, SDR and TDS transfer have been removed.
- SurvCE now has increased protection against the creation of an invalid localization by introducing logic to automatically turn off horizontal or vertical control on newly added invalid points.
- When an existing localization file is loaded, the geoid separation information will be compared against current user settings. Current user settings for geoid separation will override geoid separation data in the localization file. A note regarding the change will be recorded in the rw5 file.
- The One point sensor test dialog now grays out the errors when the receiver is not fixed, noise is detected, or tilt is more than 30 degrees.
- The NMEA GGA messages generated by SurvCE will now always includes the correct geoid separation, latency, and RTK Base ID when available. Digits of precision for lat and lon in all NMEA messages generated by SurvCE/SurvPC has been increased from 6 to 8.
- The internal compass of the Nautiz X8 can now be used for guidance in proximity stakeout. Caution: Hold the data collector near level. Too much pitch/roll will cause X8 hardware not to provide compass reading.
- RW5 file will now note the breakdown of satellite count by constellation type. Example: --HRMS:0.065, VRMS:0.066, STATUS:FIXED, SATS:16[G10,R6], PDOP:2.371, HDOP:1.100, VDOP:2.100, TDOP:1.997, GDOP:3.100, NRMS:0.043, ERMS:0.049. This is supported on limited drivers at this time.
- The Quickview dialog for onboard total stations now includes total station battery status.
- The Monitor Skyplot routine can now display S/N ratios for more than 24 satellites. Press the large arrow icon to scroll to a new set of data.
- SurvCE now offers the option "Use Previous File" in elevation difference. This allows speedier access to the elevation difference routine by skipping file selection and auto-loading the last used surface.
- When a geoid is specified, only the name will show on the monitor skypot screen, instead of the entire path.

- SurvCE will now turn to the correct point in stakeout when using reflectorless with a target height.
- JPEG format is now supported for map backgrounds, and decoding PNG/JPEG is now significantly faster.
- CRDB filenames now support Latin characters.
- Antenna calibration values have been updated to NGS14.
- The warning threshold for low disk space in raw data logging has been increased from 100KB to 1MB to better warn the user.
- When exiting the software, or switching instruments, SurvCE will now disable the Total Station laser pointer if it is on.
- Users will now be prompted with "Operation Completed Successfully" when exporting DXF files or SHP files.
- SurvCE now displays "Vrms" and "Hrms" instead of "VRMS" and "HRMS" to save space in the bottom bar and in other displays.
- Import Ascii now assumes destination is the current job. The option to choose another job has been removed.

Bug Fixes in SurvCE:
- SurvCE will no longer fail in some cases when attempting to use the leveling routine.
- The wait cursor will no longer appear on top of the success dialog in cloud account creation.
- SurvCE will try to determine whether internet is available before attempting connect to NTRIP using data collector internet.
- When using Data Collector Internet registration on a data collector, the OK button on notification of successful registration will once again work and the top bar will not be scrambled and unselectable.
- The base name is now fully displayed in GPS Monitor.
- Is is now possible to cancel from the "checking internet status" dialog.
- Legacy geoids with 0-360 longitudes are now working correctly.
- Entering Configure Rover, Base or Total Station no longer tries to make a connection.
- The user will no longer be warned that the base position is unavailable when the software has not yet obtained a valid position.
- Text on the "Configure NMEA Output" button will no longer run off the screen when logging.
- The degree symbol will appear correctly when SurvCE runs on an onboard TS with a Chinese/Korean code page.
- SurvCE will display the complete prompt for reading including Reading # in the Resection dialog.
- When using feature codes via the button next to the description box, all icons for the codes will be displayed. Previously icons could be hidden the first time a job was loaded.
- When recording an average position the timestamp for the start of the average in the rw5 will come from the first actual reading of the average. Previously, it was possible for this timestamp to be from the reading prior to the start of the average.
- When Job Settings/ Auto Store Pick Points from MAP is disabled, SurvCE will still create a BK point in resection if needed.
- SurvCE will now hide the 1021-1027 option when the network type is not NTRIP.
- SurvCE now hides "send NMEA to network" when Listen-Listen is selected.
- Newly created rw5 files for crd or crdb files created during the import ascii process will now contain the correct job name in the header line.

- When a user selects Local Coordinates for Base configuration and those coordinates match grid coordinates for the current autonomous position within 5" of latitude and longitude, and the selected localization file is empty, the base will be configured with the latitude, longitude and elevation that have been calculated from the grid coordinate entered.
- Survey sets will now be considered incomplete sets if either FD or FR Sdist == 0. This eliminates invalid records in rw5 files when the reverse face is canceled during a survey set.
- SurvCE will display a better message when cloud login fails with error code that probably means collector date is off by more than six months.
- SurvCE no longer has the potential to fail when the com settings button is pressed for GPS Search.
- SurvCE now hides the Windows keyboard icon and the Windows taskbar when capturing photos for points.
- SurvCE will now block out of level measurements for the fixed (level) point in the one point test.
- The eLevel is now visible in reverse graphics mode.
- Removed Data Collector Internet from Base Configuration of GPS that don't support it.

New Features and Improvements SurvPC:
Note that all features in SurvCE are included in SurvPC
- Bluetooth now connects better in Windows 10 for most devices.
- Audible prompting in stakeout is now supported. This feature can also prompt on instrument status changes.
- SurvPC now supports SQL query of the MXD in SurvCE.
- SurvPC now supports Esri version 10.5 and Esri related features have been enhanced.
- SurvPC now allows creation and use of virtual serial ports in the data collector Nmea out routine.   This makes it possible to send positions for use by another program running on the tablet.
- The Join feature has been improved to detect and remove identical features if they become part of a new entity.
- The EDIT/ADD option now allows a user to connect two feature classes.
- MAP commands dedicated to manipulate the vertexes, break, etc. will now display the vertexes using symbols from the pgn (s) / markers.
- The process for filling in gaps of unused points for numeric crd files has been improved.
- The Esri registration dialog has been updated and redesigned for clarity.
- SurvPC running on a tablet will better control the OS keyboard while more reliably allowing it to appear when a different application becomes active.

Improvements And Resolved Issues By Manufacturer

GNSS Receivers

Carlson

Version 6.01

- BRx6 -- Port baud rate options for NMEA output from the receiver will be determined based on the hardware version. Hardware version 1.0 only supports 115200 baud rate from the 7-pin port (USB tail on the cable). Hardware versions 1.1 and up support baud rates from 9600 to 115200 on the 5-pin port (no USB tail on the cable).
- BRx6 -- NMEA output that is configured from the Receiver/Advanced section will now correctly stream from the Bluetooth and Cable ports of the receiver.

Version 6.0

- BRx6 -- "Auto Start Base" feature is now supported for the base station. When this option is enabled, the receiver will restart in base mode with last used settings every time it is powered on.
- BRx6 -- RTK reset command will be sent after the datalink parameter is changed to use LBand (Atlas) only, when the user has selected Atlas-only RTK. Previously, the RTK reset command was sent before the datalink parameter was set.
- BRx6 -- When Atlas LBand is selected as the radio type for RTK, the REF tab will not be visible in Monitor/Skyplot.
- 10Hz will no longer be shown as a "Subscription". This is a permanent activation on all BRx6/S321 models.
- BRx6 -- When the position status is Atlas (Converging) or Atlas (Converged), the program will no longer warn the user that the base position cannot be stored. Base Position does not apply in this situation.
- BRx6 -- When Atlas LBand is selected as the radio type for RTK, all unnecessary options will be hidden.
- BRx5 -- SurvCE now supports downloading the GPS/GLONASS almanacs. This is used for mission planning.

CHC

Version 6.0

- i80 -- SurvCE is updated to CHC SDK 1.6.1.2566. This new SDK is best compatible with firmware 1.6.31.
- i80 -- The base position can now be queried from the rover.
- i80 -- Vectors are now supported.
- i80 -- Disabled radio channels will no longer be offered an an option in the configuration.
- i80 -- The software will no longer show an invalid base position on the REF tab when none is available.
- i80 -- The connection method has been improved for reliability.

Geomax

Version 6.01

- Zenith35 -- Extra safe mode is now supported.

Version 6.0

- Zenith35 Pro -- Sensor calibration is now supported.
- Geomax model names have been improved to match official Geomax names (removed spaces).
- The Zenith35 no longer supports relative antenna offsets.

HiTarget

Version 6.01

- V100: Radio baud has been changed to default 115200
- QBox8: The HiTarget QBox8 driver has been reverted to driver used in version 5.07. The Simple NMEA only driver has been added as a separate option.

Version 6.0

- V90+ -- SurvCE will now retrieve more device information, including the expiration date.
- V90+ -- SurvCE will now default to baud rate 115200 when configuring the internal UHF radio.
- V90+ -- SurvCE will now offer the correct ports for all RTK options for base and rover.
- V100 -- The SD card will no longer be listed as an option for storing raw data.

Javad

Version 6.0

- Antenna definitions are now updated to include radius and shmp values.
- SurvCE will now send the correct "internal" command for the Javad when an internal antenna is selected.
- SurvCE will send the correction station ID for Javad receivers.
- SurvCE will now set all antennas to "auto" mode instead of internal or external.
- Triumph2 -- SurvCE now checks and reports expired maintenance.

Leica

Version 6.01

- Base elevation will now be broadcasted correctly.
- GS14: Modem connection is now more reliable. Auto-connect has been disabled.
- Tripod antennas models are now included in the antenna list.
- The RTK tab port now recalls the Bluetooth setting properly.

Version 6.0

- All Leica GPS drivers have been modernized and updated to be consistent with other SurvCE drivers.
- Leica receivers will now support more radio settings when the firmware supports it.
- The Leica GPS driver will now warn the user if extended OWI is not detected.
- SurvCE will no longer show unused radios in the radio list..
- Domain name NTRIP servers are now supported.
- APN Username and Password are now supported.
- Direct IP connection is now supported.
- SurvCE will now report a missing SIM card to the user.
- Data collector internet is now supported on the GS14, GS15, and GS16 from all data collectors using a secondary Bluetooth port.
- The GX1230 driver is no longer actively maintained but is still available under Manufacturer: Legacy GPS

Navcom

Version 6.0

- Removed prompt from Localization asking for StarFire or RTK localization. Use 14 parameter method instead.
- Navcom RTK check no longer allows DGPS positions.

Satlab

Version 6.01

- SL800: SurvCE will no longer post an error when an unnecessary command fails in configure rover.
- SL800: The SL800 now fixes more reliably.

South

Version 6.0

- SurvCE will now display the correct base elevation for South receivers in the ref tab.

Septentrio/Altus/Altus

Version 6.0

- APS3 -- Satel Radio configuration now grays out the Forward Error Correction (FEC) if the current protocol does not support it being changed. Satel Protocol is the only protocol that is allowed to change the FEC.

Spectra Precision

Version 6.01

- SP80: Receiver Wifi is now working correctly.
- Large source tables will now download more reliably.

Stonex

Version 6.01

- S900A: Surefix, Atlas, and aRTK are now available for the S900A.
- S10 and newer: Reset RTK is now supported.
- S9i: The S9i radio driver is now identical the S800.
- Stonex receivers will no longer disconnect from the NTRIP server when going through configuration for a second time without changes.

Topcon/Sokkia

Version 6.01

- Topcon and Sokkia GPS Bases will now broadcast correctly when configured to broadcast over internal radio.

Version 6.0

- GR5 -- RTCM MSM is now supported.
- GR5 -- Beidou, Galileo, and SBAS are now supported. The method of parsing available sats is improved.
- GR5 -- SurvCE will now alert the user if the "_GPS" option is not available, as a strong indicator that the OAF file is not sufficient.
- GCX3 -- RTCM MSM is now supported.
- GCX3 -- Beidou and Galileo are now supported. The method of parsing available sats is improved.
- Sokkia GSR1700CSX -- This driver has been moved to legacy drivers and will no longer be actively supported.

Total Stations

Carlson

Version 6.01

- CR+: SurvCE will no longer block changing the target when the connection is lost on the total station. This can cause unnecessary errors.
- CR+: SurvCE will no longer periodically fail to read distance on reflectorless shots in direct mode.
- SuperG: The SuperG tablet will now connect to its internal GPS correctly.

Version 6.0

- SurvCE now offers the ability to ignore the backsight on a power search. This option can be found under power search settings.
- CR2/CR5/CR+: SurvCE will now query the device serial number and write it in the RW5 file.
- CR2/CR5/CR+: Continuous reflectorless measurement is now supported.
- CR2/CR5/CR+: SurvCE will now warn earlier if the instrument is out of level.

Geomax

Version 6.01

- Zoom90 Onboard: The international CAB to install the Zoom90 has been corrected to include a missing file that prevented SurvCE from starting.
- SurvCE will now show all the tabs it should on the Total Station instrument setup page when Zipp20 or Zoom40 is selected running onboard.
- Zoom40 will remain selected in onboard version. About SurvCE moves to File tab as in the rest of 6.0. Check Level and Show continuous angle updates both work correctly now.

Version 6.0

- The installer for Zipp20 Onboard is renamed to Zipp20_Zoom40_Onboard to indicate support for the Zoom40.

Leica

Version 6.01

- The "Leica Adjusted Offset" is once again displayed in the define target dialog.
- Leica total stations will now measure the reverse face correctly in backsight.
- SurvCE will now more reliably warn the user when search is used and the total station is already pointing to a prism.
- Check level streaming rate has been increased.

Version 6.0

- All MTS/RTS -- SurvCE will no longer set the ATR Field of View and Visibility settings to "normal", but will instead ignore these and leave what the user has selected on the total station.
- SurvCE now offers the ability to ignore the backsight on a power search. This option can be found under power search settings.
- All Models -- SurvCE will now query the device serial number and write it in the RW5 file.
- All Models -- SurvCE will now warn earlier if the instrument is out of level.
- The TPS 100/1000/2000/5000 drivers are no longer actively maintained but is still available under Manufacturer: Legacy TS.

Spectra Precision

Version 6.01

- Focus 30/35: SurvCE toggle between RL and prism no longer has the opportunity to fail due to unexpected default value.
- Focus 30/35: Change of status from tracking to standby is now correctly reported.
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Topcon/Sokkia

Version 6.01

- Non-Robotic topcon total stations will no longer have a 5 second heartbeat. The heartbeat causes unnecessary beeping on the total station.
- Sokkia IX: The Sokkia IX will now set angle and read more accurately.
- Topcon 9000: Set Angle and Read is now working again.
- IX: The Sokkia iX will now correctly lock on to the prism after a smart lock when using Smart Staking in Hybrid+.
- Sokkia IX with RC: The Sokkia IX will now find the prism when pressing the search icon in the joystick screen and already locked on a prism.
- Sokkia IX with RC: Measurements no longer have the potential to time out when the RC is used and the search before the read takes a long time.
- Sokkia IX with RC: The Sokkia IX will no longer search twice when starting tracking when the RC is in use.
- The Check level routine no longer lags for Sokkia robotics.
- SokkiaIX: The robot will no longer periodically fail to rotate after a fine edm mode measurement.

Version 6.0

- Sokkia RTS -- The Auto-Tracking setting has been removed from the user interface. That setting will be changed automatically as the software is used.
- Topcon GM Top Basic -- SurvCE will now be able to cancel measurements and will no longer show the false "lost connection" error message.
- The Set 1Way/30R drivers are no longer actively maintained but is still available under Manufacturer: Legacy TS.