

HYPACK 2025 Q2 Updates

FILES	LOCATION	VERSION	DATE	CHANGES
acd.exe	\root	25.2.0	8/19/25	Commented out the portion which was redrawing the channel on every tab change.
adcp.dll	\devices	25.2.0	4/25/25	Updated the ADCP Nortek Parsing to be able to parse the data from the Nortek Nucleus in addition to the AC2DP messages Added Nortek Signature message handling as it's own device type in the setup dialog
ADCPProfile.exe	\root	25.1.1	4/3/24	<p>Found issue with boat speed being 10x when loading a EDT file. HS2X was fine.</p> <p>Also found issue with the 2D DXF export potentially getting clipped so I've fixed that</p> <p>Ensured temperature data was coming from the M9</p> <p>Added ability to display all of the values in the spreadsheet also displayable in a graph window.</p> <p>To launch a graph window select Quick Graph under the view menu. You can have several of these open at once.</p> <p>They are also dockable.</p> <p>There's a list of check boxes to turn values on and off.</p> <p>For the X axis you can have it use time, DBL or ping number.</p> <p>If you wish to change the color of value, you can right click on the graph and a menu to set the color of items will appear.</p> <p>The settings panel is hide-able with the button on the top</p>
Ana_Tides.exe	\root	25.1.0	4/2/25	Newer keycheck code
AOIntegr.exe	\root	25.1.0	3/8/25	<p>-option added to auto synch at a specific time (once it happens it needs to be re check marked for the next day). It checks current time against desired upload time and runs when that time passes</p> <p>-auto synch compares file to current survey file in progress and won't attempt to upload</p> <p>-option to login/access different AO site (government users need)</p> <p>--URL is saved to ini file and repopulated if used</p>
bkgdplotter.dll	\root	25.2.0	4/29/25	HYPLOT initializes the IDC drawing transforms, but the TIFF dialog was overwriting them. Removed the code that overwrites the transform which would cause incorrect Color Bar location.
Cloud.exe / Cloud64.exe	\root - \x64	25.2.0	8/11/25	<p>This will effect LAS files. Going to pass to QC for testing and looping in TS for client testing.</p> <p>Rewrote the conversion of our geodesy to WKT so it doesn't go through an intermediate structure.</p> <p>Rewrote some of the ellipsoids and datums to match OGC WKT 2</p> <p>Added ability to load ESRI tiffs XYZ values</p>
coRTL.dll / coRTL64.dll	\root - \x64	25.2.1	7/23/25	<p>Accounted for map rotation during boat drawing during playback. Also fixed an issue with vessel tracking which also failed to account for map rotation which thus behaved incorrectly in rotated situations</p> <p>Assigned a default z sorting value for web map query files similar to Open Street maps</p> <p>Also fixed a long standing bug in getting z value from depth buffer which would occasionally crash. The error was silently suppressed now it works.</p> <p>Re-projects BAG boundaries using active Geodesy settings, calculates rotation and adjusts cell width and cell height values</p> <p>Updated version information to display Q1 in both the Splash screen and the about box.</p> <p>Fixed bug where custom images producing in the Raster File Editor weren't showing as available for decorating Targets or DG2 Files</p> <p>Lighting for Mtx, Bag, S102, Esri Tiff, Tin and Tin Surfaces</p> <p>Can Tin and Xyz by right clicking and selecting Display as Surface</p> <p>Added ability to load ESRI tiffs XYZ values</p>
cutfill.dll	\devices\dredgepack	25.2.0	5/6/25	Updated to handle elevation mode.
DevDepth.dll	\root	25.1.0	4/18/25	changed to include static runtime libraries, then recompiled everything. All windows appear to be working as intended now.

DevHPR.dll	\root	25.1.0	4/18/25	changed to include static runtime libraries, then recompiled everything. All windows appear to be working as intended now.
DevTide.dll	\root	25.1.0	8/4/25	changed to include static runtime libraries, then recompiled everything. All windows appear to be working as intended now.
export.exe	\root - \x64	25.2.2	7/22/25	Fixed the bug where having a blank edit box for an integer or floating-point value caused an access violation. Added the ability to export line names from edited files to DXF/DWG charts.
f280.dll	\devices	25.1.0	4/11/25	There was an integer overflow in the time calculation. NOTE: F208 driver replaces original f290 driver.
GenGeoUI.exe	\root	25.2.0	7/31/25	The separation value N-S is fixed
glew32.dll	\root - \x64	25.2.0	4/1/25	required for graphicalMRU.exe / graphicalMRU64.exe 25.1.1 and later
glfw3.dll	\root - \x64	3.4.0	4/1/25	required for graphicalMRU.exe / graphicalMRU64.exe 25.1.1 and later
GPSEllipse.dll	\root	25.1.0	4/18/25	changed to include static runtime libraries, then recompiled everything. All windows appear to be working as intended now.
GPSHeight.dll	\root	25.1.0	4/18/25	changed to include static runtime libraries, then recompiled everything. All windows appear to be working as intended now.
GpsMath.dll	\root	25.1.0	4/18/25	changed to include static runtime libraries, then recompiled everything. All windows appear to be working as intended now.
GPSSat.dll	\root	25.1.0	4/18/25	changed to include static runtime libraries, then recompiled everything. All windows appear to be working as intended now.
GPSSky.dll	\root	25.1.0	4/18/25	changed to include static runtime libraries, then recompiled everything. All windows appear to be working as intended now.
GPSSync.dll	\root	25.1.0	4/18/25	changed to include static runtime libraries, then recompiled everything. All windows appear to be working as intended now.
GPSUndul.dll	\root	25.1.0	4/18/25	changed to include static runtime libraries, then recompiled everything. All windows appear to be working as intended now.
graphicalMRU.exe / graphicalMRU64.exe	\root - \x64	25.1.1	4/14/25	Designed MRU display to look more modern with some more helpful displays for Heading, Pitch and Roll.
HYPACK 21.0.lw.xml	\root - \x64	n/a	2/17/25	Modified the soft license wizard to remember your keys after deactivation Also updated Soraco to latest version
Hypack.exe / Hypack64.exe	\root - \x64	25.2.2	7/23/25	Accounted for map rotation during boat drawing during playback. Also fixed an issue with vessel tracking which also failed to account for map rotation which thus behaved incorrectly in rotated situations Assigned a default z sorting value for web map query files similar to Open Street maps Also fixed a long standing bug in getting z value from depth buffer which would occasionally crash. The error was silently suppressed now it works. Rewrote the bisecting algorithm for interior points when doing parallel offsets Relaxed point equality in this algorithm from dx/dy 0 to an Epsilon tolerance Changed the relevant menu options to launch either x64\hyscan.exe or x64\hyscan_legacy.exe Also updated the Marine Search Mosaic option to launch x64\hyscan.exe Menu options will be disabled if running on a 32 bit OS Added Z Axis scale to Lighting dialog. Accepts floating point values from 1 min to 11 max. Ex. 5.25 Value is stored per View. So it is independent for each project and each view inside that project. For this iteration it will default to 1.0 for compatibility with prior versions until I can overhaul the internal attribute hierarchy handling to make it logical and user friendly / intuitive. Patched right click target selection code in Items Tree to ensure pop up menu choices refer to valid selection(s) and to prevent strange node highlighting when mousing over Tree Nodes in such a situation. Updated version information to display Q1 in both the Splash screen and the about box. Fixed bug where custom images producing in the Raster File Editor weren't showing as available for decorating Targets or DG2 Files

Lighting for Mtx, Bag, S102, Esri Tiff, Tin and Tin Surfaces
Can Tin and Xyz by right clicking and selecting Display as Surface

HypackHelp.chm	\Help	n/a	8/27/25	Updated Help files
hyplot.exe	\root	25.2.0	4/29/25	HYPLOT initializes the IDC drawing transforms, but the TIFF dialog was overwriting them. Removed the code that overwrites the transform which would cause incorrect Color Bar location.
HYPLOTMAX.exe / HYPLOTMAX64.exe	\root - \x64	25.2.0	7/11/25	Generated PDF documents from HyplotMax using a variety of source geodesy setups, Viewed results in Adobe, used their geospatial tool to verify embedded referencing reasonable Prevents double processing on Title Blocks / Blocks when loading from an .hpr or .htb file.
Hyscan_legacy.exe	\x64	25.2.3	6/9/25	Fixed numerous issues with parsing PPK files. Now reading Geophysics key properly
Hyscan64.exe	\x64	25.2.3	6/9/25	This is Hyscan_legacy.exe renamed to hyscan64.exe for backward compatibility.
Hyscan_beta.exe	\x64	25.2.2	5/9/25	-when Altitude tab is open instead of Scanview, on the Map form draw the blue boundary using the extents of it instead -change wording in New Target form amplitude image to Shadow Start and Shadow End -change slider colors to be distinct (red) from amplitude HYSCAN will no longer load "bad" beams from HS2x files. Mosaics will no longer include lines that are not enabled in the project Fixed dataset loading with offset bottom tracking
hyscan.exe	\x64	25.2.5	8/8/25	save state of main window and layout of docks on close and recreate on open save state of main window and layout of docks on close and recreate on open Fixed numerous issues with parsing PPK files. Now reading Geophysics key properly
Hysweep.exe / mbHardware.dll	\root	25.2.8	8/26/25	Bug fix parsing KMALL installation parameters. Heading offset of 359 degrees was interpreted as a reverse mount. When really it means forward mount, -1 degree offset. Fixes a bug in the Velodyne control window. This snuck in when we went to the modern compiler, Rad version 11. Is fixed in Rad version 12 New driver. GeoAcoustics GeoBeam which uses the Hydro-Tech multibeam hardware. Basically a copy of the Hydro-Tech driver (same interfacing notes). Removed references to GSOF from setup dialogs preventing it as an option. Modified data logging of KMALL. Uses RX and TX orientation from K-Controller installation parameters. Previously used the checkbox in driver setup but that was insufficient. Kongsberg configurations may be RX forward/reversed and TX forward/reversed and the checkbox only handled two of the cases (forward-forward and reversed-reversed). Checkbox is removed from driver setup. R2Sonic driver change to ignore quality codes from sonar Added catch to try and prevent corrupted KMALL data from being processed by HYSWEEP Added check box to enable using the SVP from Kongsberg Also found issue causing issue with Castway data not reading in correctly Updated checkbox label <ul style="list-style-type: none"> • Applies range adjustments to KMALL data. Range adjustments account for the difference between transmit and receive array locations. • Alarms missing installation parameters. These are needed for the range adjustments. Notes: The two changes are inter-related. The KMALL driver requests installation parameters. If not received within 10 second the alarms is raised and ranges are not adjusted. This should not happen and hence the alarm. If for some reason we do not receive installation parameters, real time soundings will be slightly inaccurate. But the survey can be fixed in MBMAX64 Device Offsets. Not an ideal solution.

There was an integer overflow in the time calculation in f280 driver.

NOTE: F208 driver replaces original f290 driver.

Backwards Time Jump Alarm is now optional in View Options, QC tab

Allows simulation drivers with Norbit, R2Sonic and Kongsberg OEM keys.

Fixed connection error with Seabeam

Revert sonar id's to pre-hypack 2025 version.

Now sends correct Norbit start / stop command. Now supports gps, motion and heading pass through. Also logs frequency of each head separately.

Norbit -87S driver improvements

Implements bit shifting to allow 32 bit Ping DSP average backscatter to be logged as 16 bit. A similar option was previously available in HYSWEEP View Options. It was never used and has been removed.

InfoOffsets.dll	\root	25.1.0	4/18/25	changed to include static runtime libraries, then recompiled everything. All windows appear to be working as intended now.
InputEcho.exe	\root	25.2.0	7/25/25	Forced the extension so the program doesn't log extensionless files giving the option of dat or bin extensions or letting the user choose their own Added overwrite warning Fixed the panels locking up Fixed Crashing
KeyView.exe	\root	25.1.0	2/17/25	Allow soft licenses to run on their expiration date Modified the soft license wizard to remember your keys after deactivation Also updated Soraco to latest version
KONGSBERGNETWORK.dll	\devices	25.2.0	6/19/25	Changed echogram offset from 13 samples to 8. Defaulted to EA440/EA640 in Setup, along with Bathymetry selected for Channels 1 and 2.
MAVLink v1.dll	\devices	25.2.0	5/7/25	Updated mavlink driver to constantly check for new lines from Autolines
MAVLink v2.dll	\devices	25.2.0	5/7/25	Updated mavlink driver to constantly check for new lines from Autolines
MBMAX64.exe	\x64	25.2.11	8/29/25	Fixes floating toolbar error. Bug fix parsing KMALL installation parameters. Heading offset of 359 degrees was interpreted as a reverse mount. When really it means forward mount, -1 degree offset. Added a new CoordinateUtils feature that allows a user to copy their cursor coordinates in MBMAX64 to the clipboard or open Google Earth at their cursor coordinates. -Accessed via the Edit dropdown menu in MBMAX64 -Coordinates at the current cursor are converted to DMS format -Only works when in Phase 2 Fixed Imagery menu option not enabling when it should Added in checked for bad borders and non existent borders This will effect LAS and BAG files. Going to pass to QC for testing and looping in TS for client testing. Rewrote the conversion of our geodesy to WKT so it doesn't go through an intermediate structure. Rewrote some of the ellipsoids and datums to match OGC WKT 2 Added the storage of geodetic information into HS2X files. Copies over the information from HSX files if exists otherwise, includes the project geodesy. If loading a HSX or HS2X file with geodesy information the report will include that geodesy information. Otherwise it will include the project geodesy. Added ability to screenshot AB Patch test, Cloud window, Cloud Pop and the Imagery Window to save to BMP, JPG, and PNG files New option to extrapolate SVP. In the past we have always used a full ocean model. New option is to extend the last SVP reading to the bottom. Default is the new option as that's more appropriate for shallow water surveys. Range adjustment fixed. Was using degrees instead of radians in the adjustment function call. We were reading position data both from KMALL SPO (sensor position) and CPO (compatible position) datagrams. Turns out we only need the SPO data.

Changed to use beam calculations that support transmitter beam steering. As part of this we need to pay more attention to selected sonar device (_RAW or _XYZ). Otherwise _XYZ data comes out spectacularly wrong! New Sonar ID "Kongsberg KMALL XYZ" supports this (Read Parameters, Processing tab, Sonar). It is set automatically by the KMALL reader when XYZ data is selected.

The EM2042 has the transmit array reversed while the receive array is pointed forward. We had no provisions for this. We now read orientation from installation parameters and use correct angle signs for both TX and RX.

Bug fix in RTK tide calculations: Now uses offsets from position / tide device. Previously used offsets from sonar device.

The 'Show Channel Plan' option now effects only the Survey Window. Channel Plan will now show up in the Profile and AB Cross Section Windows regardless of show setting.

Add ignore option to Sonar Processing form. Modified file readers to do ignoring when requested.

replace std::size (not supported in VS 2010) with _countof(). for DEVICE files.

Modified the S7K file reader to support dual head sonar data.

Shifts sonar ID codes where needed

Added a button in Device Offsets for entering k-controller tx-rx offset difference. Does not look for installation parameters file as originally planned. Does not expect range adjustment to be done by the survey driver. Guess the more complex stuff (that is more user friendly) can be done in the future.

-Changed KMALL 'MRZ' record parsing to avoid the doubling of data that was occurring when processing files from a dual head system.

-Updated our kmallcalcs and kmall.h file (mbss) to accommodate Kongsberg's newest KMALL revision (J).

nmea.dll	\\devices	25.2.1	7/24/25	Re-added missing XDR depth format into Setup.
NOAATides.dll	\\devices	25.2.0	5/6/25	Recompiled older drivers, added internet connectivity check to NOAATides
nps.dll / nps64.dll	\\root - \\x64	25.1.0	2/17/25	Modified the soft license wizard to remember your keys after deactivation Also updated Soraco to latest version
OffsetTarget.dll	\\root	25.1.0	4/18/25	changed to include static runtime libraries, then recompiled everything. All windows appear to be working as intended now.
posmv.dll	\\devices	25.2.1	7/31/25	Now can use different sensor output as a frame reference. Removed references to GSOF from setup dialogs preventing it as an option.
QlmDeleteKeys.exe	\\root - \\x64	19.0.25037.1	2/6/25	Modified the soft license wizard to remember your keys after deactivation Also updated Soraco to latest version
QlmLicenseLib.dll	\\root - \\x64	19.0.25037.1	2/6/25	Modified the soft license wizard to remember your keys after deactivation Also updated Soraco to latest version
QlmLicenseLib.dll.manifest	\\root - \\x64	n/a	2/6/25	Modified the soft license wizard to remember your keys after deactivation Also updated Soraco to latest version
QlmLicenseWizard.exe	\\root - \\x64	19.0.25037.1	2/6/25	Modified the soft license wizard to remember your keys after deactivation Also updated Soraco to latest version
SBMAX.exe	\\root - \\x64	25.2.0	8/6/25	Cleaned up some old/sloppy code, seemed to fix the overlay issue... Upgraded program to run in 64 bit.
SBBIN.exe	\\x64	25.1.0	8/6/25	Upgraded program to run in 64 bit.
SBMAX64.exe	\\x64	25.1.3	3/27/25	-only load/save echosounder init sv from project, not user settings -remove display of span of VEL file values in echosounder setting box -only load/save echosounder init sv from project, not user settings -remove display of span of VEL file values in echosounder setting box Gave XYZ output 3 digits of precision Convert Flow Min Max Depth to cm internally when read in both locations it is happening and removed an addition conversion that was happening elsewhere.
secserv.exe	\\root	25.1.0	2/17/25	Modified the soft license wizard to remember your keys after deactivation Also updated Soraco to latest version
sidus.dll	\\devices	25.2.1	5/12/25	driver that controls the Sidus rotator for application on a dredge. Sends commands through either a serial or ethernet connection. Allow the user to set limits both port and starboard to prevent cable damage, store the settings in the INI file Provide a graphical view showing the direction the rotator is pointed and update with every request Provide a go home function, to return the Sidus to the resting position Provide an emergency stop option to prevent further movement in any direction

Ss.exe / ssHardware.dll	\root	25.1.0	3/26/25	Fixed "divide by zero" error and crashes on launch with Trittech Starfish.
Subbot.dll	\devices	25.2.7	7/29/25	Trace number now written in more places in SEG Y file. Channel 2 should be highlighted when Analog Sub-Bottom is set up for Channel 2 in Hardware. Positioning errors have been mitigated. Starfix trace information should now properly sync with pings. File names from Fugro Starfix software can now contain spaces
survey.exe	\root	25.2.1	5/1/25	Added a trap for bad radius values in SHP ARC objects that caused errors loading certain boat shapes. Added a new shared memory area for the volume information. Fixed the disappearing icon on the main window. Removed unused button. New Logo in taskbar. Better visibility. Changed the Target Select box to a tree structure to enable turning groups of targets on and off. Used a different calculation to get the distance to start of line. Find the two points, either the main tracking point and start line point or the main tracking point and end line point, and find the distance between them. The last version was reading to the EOL point regardless of whether the line was swapped or not. That was the root of the error. Why it was doing that, I do not know.
tbs.dll	\devices\custom	25.1.0	3/3/25	Cleared the edit box after the user presses the enter button.
Tideman_mdb.exe	\root	25.1.0	4/3/25	Newer keycheck code
tin32.exe / tin64.exe	\root - \x64	25.1.0	4/16/25	Disabled BAG export from TIN. The BAG export isn't currently worth fixing because people shouldn't be making bag files in TIN. They should be making them in MBMAX64. Additionally the BAG library we are using is VERY old and in an uncompileable state. We should take the time to update it and MBMAX64 to use it and then we can re-add it into TIN. Just don't have time this release.
TrackSlope.dll	\root	25.1.0	4/18/25	changed to include static runtime libraries, then recompiled everything. All windows appear to be working as intended now.
tss320.dll	\devices	25.1.0	3/31/25	Added an "Ignore Heave" checkbox in Setup. In addition to not displaying heave in Survey, it would just write zero values for heave in the HCP records while still retaining pitch and roll.
vulcan.dll	\devices	25.2.1	7/17/25	Changed the depth/elevation values being used to update the matrix.
wc3DPlayback.exe	\root	25.1.0	2/19/25	Two small changes (1) display WC properly and (2) prevent crash on exit