

Eddynet® and RevospECT, Velocity® and RevospECT HX – Zetec Software ET Product Bulletin

For Version 1.17.3, Release

This is an official version of software that is released in accordance with the Zetec Quality Management System (QMS). For software design, validation, and release, Zetec's QMS is based on the ISO 9001 International Quality Standard. Zetec's Quality Assurance Manual and quality certifications are available for download at https://www.zetec.com/about-zetec/quality-compliance/.

Please see your authorized Zetec sales contact or <u>www.zetec.com</u> for more information.

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NOTES

INSTALL FIRST

Recommended Operating System (64-bit or 32-bit, prefer 64-bit):

- Microsoft Windows 10 Enterprise or Pro
- On the radar: evaluating Windows 11

Zetec has validated the product to work on Windows 10 Enterprise versions of software. Windows 7 is no longer used in Zetec's test process. Zetec will be evaluating our install and performance on Windows 11 over the next year.

INSTALLER

With the 1.16.0 release, Zetec has combined the installers for Eddynet and RevospECT with Velocity and RevospECT HX products. This combined installer enables a user to install the products as they need, including on the same machine. Although the products can all be safely installed on the same machine, they cannot be run at the same time. For example, a user can run Eddynet OR Velocity but not at the same time.

With this new installer, the version numbers have been synced up. The prior Eddynet release was 1.15.x and the prior Velocity release was 1.3.5. With the combined installer, the versions of both Eddynet and Velocity are the same.

EDDYNET AND VELOCITY VERSION 1.16.0 AND GREATER

Velocity has been reworked to align more closely to Eddynet. This will result in variations from version 1.3.5, generally for the better. This rework has enabled Eddynet and Velocity to benefit from fixes and enhancements to both platforms. There may be changes in behavior from the prior version. Going forward, the entire product line will benefit from sharing a common core.

For this release, the icons for all applications have been redesigned and the splash screens have been updated. Additionally, the License Manager has added a new software launcher feature. This allows users to see what products can be run given the licenses present on the workstation and run them directly.

With this release, we have transitioned both products to PostgreSQL 10, running on port 7678. During install, there is an optional migration process to transfer databases from existing local installs to the new Postgres server. All backups from this system with have a ".10" in their name.

VELOCITY AND REVOSPECT HX

RevospECT HX is now a released product for the Heat Exchanger market. Validated and expanded over several inspections, it is available for customer usage.

RevospECT HX Analysis at Acquisition is a new licensed module which allows a single acquisition operator to perform both acquisition and analysis duties in the same time it would take to perform acquisition alone. Zetec's powerful RevospECT technology automatically analyzes the data in the background as it is collected with virtually no additional burden on the operator.

VELOCITY/SA

For the 1.16.0 release of Velocity, Velocity/SA is not included in the installer. Please use UltraVision ET 3.12R1 or later release for Surface Array inspections.

JUMP TO VELOCITY RELEASE NOTES

VELOCITY AND REVOSPECT HX 1.17.3

JUMP TO EDDYNFT RELEASE NOTES

EDDYNET AND REVOSPECT 1.17.3

INSTALLATION NOTES

Supported User Models

Single User, Shared Data

The software was designed around a single user model. A single user model is where all users share the same user login. This is like the model implemented in EddynetSuite on the HP-UX operating system (for those that go that far back). For example, if you have used our software in the past, you are likely familiar with user1. Shared data refers to users of the same computer sharing data such as licensing, results paths, and the like.

Multi-User, Shared Data

Multi-user refers to more than one user logging into the same computer with different accounts. Windows is not a true multi-user computer system, so a user cannot use the computer simultaneous to another user. Shared data refers to users of the same computer sharing data such as licensing, results paths, and the like. This model is most likely suited to a lab type environment where IT (Information Technology) requires users to log into computers as themselves. Given the variety of IT requirements, Zetec encourages customers to perform their own due diligence prior to deployment to ensure the software can conform to the precise needs of the job.

Users vs. Administrator Groups

Installing the software requires the user's privileges to be elevated to Administrator credentials. However, once installed the software can be operated with lesser credentials. It is recommended to have all operation of the software be by users of the same permission level. Given the variety of IT requirements, Zetec encourages customers to perform their own due diligence prior to deployment to ensure the software can conform to the precise needs of the job.

- **NOTE:** If transitioning from an Eddynet version prior to 1.8.x, the user must return all in-use licenses via Eddynet License Manager before installing Eddynet 1.10.0 or greater.
- **NOTE:** if transitioning from an earlier version of Velocity, the user must return all in-use licenses via License Manager before installing 1.16.0 or greater.

TO INSTALL THE SOFTWARE

- **Step 1.** Uninstall any previously installed version of Eddynet and RevospECT and/or Velocity.
- Step 2. Double-click the ZetecSoftware executable (ZetecSoftware.exe): The Installation Wizard is displayed.
- Step 3. Click the Next button to begin the installation.

- Step 4. Read the license agreement; select the "I accept the terms in the License Agreement" radio button, and then click the Next button.
- Step 5. Optional Database Migration Read the message and proceed as desired. Note the migration process only happens to database currently available in the PostgreSQL Server running locally. Backed up databases can be imported in the programs once installed.
- Step 6. Feature Selection Select the products you desire to license and run. Click Install
- Step 7. Click the Finish button.
- **NOTE:** To install and configure the Eddynet Web Portal, please see the Cal Board Quick Start Guide.

TO UNINSTALL THE SOFTWARE

- **Step 8.** Select Start > Control Panel: The Control Panel is displayed.
- **Step 9.** Select Uninstall a program: A list of installed programs is displayed.
- **Step 10.** If Eddynet/WP was installed, highlight *Apache HTTP Server 2.2.19* and click Uninstall.
- Step 11. Follow the steps detailed in the wizard to remove the Apache webserver software.
- **Step 12.** To remove *Eddynet or Velocity*, highlight the entry and click Uninstall.
- **Step 13.** Follow the steps detailed in the wizard.
- **NOTE:** If downgrading a product (for example, uninstalling Eddynet 1.7.2 and installing Eddynet 1.6.4), please return all licenses prior to uninstall. This will prevent any incompatibilities when moving to an older product.

MICROSOFT LICENSING RESPONSIBILITY

The software is built and tested for operation on the Microsoft Windows® 7 and 10 operating systems. However, it is the customer's responsibility to obtain a Windows operating system and maintain proper and valid Windows licensing with Microsoft. Please contact a local Microsoft representative regarding licensing requirements.

ZETEC LICENSING RESPONSIBILITY

See the installed License Manager User Guide for a definition of features and license explanation for each product.

It is not recommended to run the License Manager on a virtual machine as this has been a source of instability.

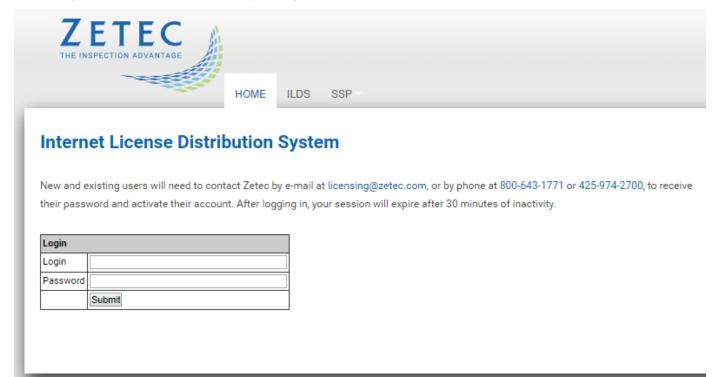
For Eddynet/WP, there is no specific license. However, Site Configuration needs to be run to configure Eddynet/WP.

NOTE: As with all our products, Zetec welcomes feedback.

License Compatibility:

With the release of Eddynet 1.8.0, Zetec rolled out an updated version of its software licensing website called Internet Licensing Distribution System (ILDS, https://ssplicensing.zetec.com), see FIGURE 1.

Figure 1 Internet License Distribution System login screen



Contact your authorized Zetec sales representative for further information.

DOCUMENTATION

All manuals for the installed software programs are included in the install package.

See Start Menu→All Programs→Zetec→Documentation

EDDYNET AND REVOSPECT 1.17.3

EDDYNET/AN

Enhancements

- E0543 Restoring the Expanded chart length after closing the displayed dialogs (Locating Setup, Voltscalce, PChan Editor, etc.).
- ➤ E0917 Added support for toggling through pre-configured filters in the C-Scan. They are selectable using an arrow in the lissajous or a keyboard shortcut and configured with a middle click on the filter button in the lissajous.
- **E0925** Added support for changing all C-Scans to predefined sets of channels rather than one at a time. This replaces the behavior of the C-Scan lissajous pre-selected channel button.
- > E0951 Added the Auto Report Entry buttons to the Comparison View tab.

Bugs Fixed

- ▶ B0182 Modified the zoom1/zoom2 behavior to be like the legacy analysis product, allowing switching between the two zoom levels with a single click. Also fixed a drawing issue in the waterfall plot when un-zooming.
- B4554 Changed the layout of the tear off landmark menu to better support plants with many landmarks. A second column of entries will be displayed when needed.
- B4573 Addressed an issue after having recalled a report entry, the axial location in the upper C-Scan lissajous was not updating while scrolling data.
- **B4784** Addressed an issue with Auto Scroll, setting it to 0 was not turning it off.
- B4790 Addressed an issue where right-clicking the new floating quick edit buttons would open a menu, obscuring the buttons and preventing the right-click.
- E0954 Addressed an issue where the C-Scan lissajous would not highlight the measurement button when recalling indications.

EDDYNET/AQ

Enhancements

- **E0955** Added the model file for the CAP-1400 steam generator.
- E0964 Added support for the UFC based fixtures for limited non-manway mount, non-trunk-based, applications.

EDDYNET/CORE

Bugs Fixed

B4628 – Addressed an issue where users wanted to include the use of the _ (underscore) or a single character for the Id Alias for History.

B4793 – Addressed an issue when importing the same database multiple times.

EDDYNET AND REVOSPECT 1.17.2

EDDYNET/AN

Enhancements

- E0886 Added the AN database name to the RPTS main window to help the user ensure they are working from the correct source.
- **E0932** Added *Quick Edit* buttons for use with the C-Scan. The buttons are on a toolbar that can be torn off and floated and re-docked as needed.

Bugs Fixed

- **B2113** Addressed a message presented to the user telling them to refresh the Report Editor, now the software will perform the refresh rather than prompt the user to do so.
- B4583 Addressed an issue where the Landmark Override dialog would get hidden and allowed multiple dialogs to be created. Now only one will be created and it will be a top-level window.
- B4766 Addressed an issue with COMB where backups would fail because of a timing issue.
- ➤ **B4769** Addressed an issue where MRPC data would not plot if the number of slices were more than ~100 per scanline.
- **B4773** Addressed an issue with the Encode Search, it was not allowing user to double-click to open a file.
- **B4777** Addressed a crash with E-Reso when re-comparing a calibration group.

EDDYNET/AQ

Enhancements

- **E0939** Added support for setting the colors used for *Tested* and *Untested* tubes in the ZR-100 robot display. Also removed two unnecessary color options and added a color swatch to the menu.
- ➤ E0940 Changed the increment the bowl boundary button changes from 1 to .1 of an inch (or active length unit). The user will want to manually get the bowl boundary close and then fine tune it with the buttons.

EDDYNET/CORE

Enhancement

➤ E0944 – Logging for some of the .NET based applications can have two sources (technology based, C# or C++). When using the *Tail Log* menu item or F12, both logs will be opened and when complete, the user will need to manually close these. This can be used when Zetec requests logging information for troubleshooting purposes.

REVOSPECT PRO

Enhancements

- **E0931** Added multiple selection support to the Indication Code Summary in RPTS.
- **E0935** For the RevospECT Noise Only license, added the ability to add and modify canned filters.
- **E0942** For the RevospECT Noise Only license, added the ability to use history to prevent noise measurements from happening where there is a known indication.

- ▶ B4673 Addressed an issue with Dashboard loading temporary files and hanging which would require the program get closed and restarted.
- **B4703** Addressed an issue with RPTS where the counts were wrong when using the Force or Break match feature.
- ▶ **B4771, B4778, B4783** Addressed an issue with RevospECT Visualization tool when display sets did not follow the assumed naming patterns. For example, +Pt, +pt, +PT or pp. This could affect the creation of the graphs, MAPOD outputs and CSV exports.

EDDYNET AND REVOSPECT 1.17.1

EDDYNET/CORE

Bug Fixed

▶ B4775 – Addressed a bug where the changes to a Display Set label in Site Configuration would fail to be read and displayed to the user as expected. This bug was identified when trying to read a single channel Display Set. This could also apply to other parts of the product. Because the bug is on the read, settings that may have been affected may not have to be recreated. We recommend confirming your setups are as expected.

EDDYNET AND REVOSPECT 1.17.0

EDDYNET/AN

Enhancements

- **B4650** Results IQ Expanded the Outage column width in the *Outages to Synchronize* section of the *Select DM Database* dialog making it easier to see the complete outage name.
- B4743 To support analyzing third-party data which we don't have full details of, non-ZAC techniques can have their sample rate overridden in Site Configuration.
- ➤ E0649, E0919 Added support for displaying up to 4 C-Scans in the C-Scan and Comparison tabs. Additionally, channels of comparison views are now stored to the display setup, supporting use of comparison views as screening tools.
- **E0810** Added access to the Encoder Settings from the Standard Analysis pull down and fixed issues related to initialization and persistence with historical data.
- **E0823** Added the ability for the user to carry over Volt scale and the Mix coefficients in their AutoCal setup. When calibrating in AN, the user will be prompted to carry over the settings.
- ➤ **E0831** Added additional visibility to Tube Comments in the Dashboard through a tooltip and in the *Progress Messages* section, the complete text of the comment. Additionally, in AN and the Report Editor the Tube comment is accessible.
- E0833, E0835, E0903 Added support for reading the EPRI XML based data file format (includes summary and messages).
- **E0861** When moving data in the lissajous with the right-button, the data is not centered first, allowing repeated adjustment. Left click will still null the data.
- **E0900** Increased the limit on scanline and xhatch skip in the C-Scan to 99. This makes analyzing high density data a little simpler.
- **E0905** In the C-Scan for RPC, the display set name is included along with the channel and mix description (if applicable). This helps clarify which coil is being displayed.
- **E0907** Updated nomenclature from *Remeasure From/To* to *Measure Endpoints*.
- ➤ E0916 Made improvements to the Keyboard shortcuts used to manipulate the data displays and made access to how to use them easier. From the About menu, select Keyboard Shortcuts to see help for all displays. Other additions:
 - ? now available from all displays which have keyboard shortcuts
 - d hide/show display controls in the current tab
 - D hide/show channel controls in the current tab
 - m median filter on/off for current C-Scan
 - Shift M median filter on/off for all C-Scans in the current tab
 - s Spike filter on/off for current C-Scan
 - Shift S Spike filter on/off for all C-Scans in the current tab
- E0918 Added an "Apply All" button to the C-Scan adjust filter dialog, and an 'f' keyboard shortcut to bring up the dialog from the waterfall and C-Scan.

Bugs Fixed

- **B2998** Added the active tab to the display setup, so it will be activated upon load setup or restore config, rather than going to the last tab on startup or staying on the current tab when loading setups.
- B4761 Addressed an issue where an incomplete autocal config would slow down the process of loading data with an incomplete technique. The user is presented with a Notification about the situation, once.
- B4764 Addressed a naming issue with Comparison tabs, names could not include angle brackets.

EDDYNET/AQ

Enhancements

- **E0914** Updated the MIZ-8x MRPC 3-coil template. Gains for several of the inputs were set high (dropped from 33 to 29dB).
- > E0915 Updated the MIZ-8x 2x19 X-Probe template to not include unused frequencies.
- **E0921** Added the model file for the OPR-1000 steam generator.

EDDYNET/CORE

Enhancements

- E0837 Added Merge 2nd Max option to array merge type options.
- **E0904** Added default Bobbin, MRPC and Array coil types to the Coil Type setup.
- ➤ E0912 To help users get up and running quickly, there now exists a default Procedure (Z1234 login, default technique, vessel, analysis database, etc.). These enable a user to get up a running quickly. However, to create results of record, it is recommended to ensure the Procedure is setup appropriately.

Bugs Fixed

- ➤ B2529 The software no longer uses c:\tmp as a temporary file location. This was causing challenges with security postures which prevented access to this location. It now uses %ALLUSERSPROFILE%\Zetec\tmp.
- B4581 Addressed an issue where user was not able to add licenses to the local grid until the grid was cancelled.

EDDYNET/DM

- **B4546** Addressed some deficiencies in support for the EPRI XML results format.
- B4689 Addressed an issue in Tubesheet Builder where the editing of the From/To Row and Column values were not saving.

REVOSPECT PRO

Enhancements

- **E0824** Added a feature that allows a single zone mapping in locale mapping. Leave the selection for Feedwater location blank to have the inlet straight leg beyond the tubesheet be a single zone.
- **E0828** Enable the ZRB detectors to detect in the circumferential direction.
- **E0832**, E0841 Added an auto noise rotation filter for use in Bobbin, MRPC and Array classifiers.
- **E0836** Improved the error message when there are RevospECT farm incompatibilities to help aid the user in resolving the issue(s).
- **E0844** Added a feature to change the Indication Code of a current report entry to each address History line.
- ➤ **E0848** Added tooltips in the Dashboard's Override column to limit times the user may need to reference the manual.
- **E0863** Added a feature to RPTS that allows the user to segregate results that were resurrected from History (not count as Hits) to help understand the effectiveness of the configuration.
- **E0865** Added a feature to enable reporting from the upper or lower edge only.
- **E0926** Added an option to Dashboard to hide tube comments. See related **ENHANCEMENT**.

- **B4342** Addressed an issue with RPTS where matching was not producing the optimal results when there were multiple targets.
- B4562 The Presence of Data check now includes Include Min Voltage Variation and Additional Tube End Correction settings.
- B4651 Address an issue with RPTS where there could be a false miss or overcall at the end of the reports.
- ▶ **B4757** Addressed an issue with the Dashboard's *Full Reload Of Files* button not being available when paused. Also fixed a problem where files would go straight from Submitted To Farm to Complete, and a bug where Dashboard wouldn't allow you to exit a calgroup.

EDDYNET AND REVOSPECT 1.16.9

EDDYNET/AN

Enhancements

- ➤ E0884 For RDTiff-based data, the channels are ordered 1-4 absolute and 5-8 differential. An option was added to allow the user to change it to 1, 3, 5, 7 as differential and 2, 4, 6, 8 as absolute. See the Site Configuration manual for how to use the Order RDTiff Channels By Timeslot/Drive feature.
- E0890 The C-Scan is now showing the display set names setup in Site Configuration for both RPC and Array data.

EDDYNET/AQ

Enhancements

- E0885 When using the Test Planning via Habitat mode, the TV file setup in Site Configuration will be read to update the plugged tube list.
- E0892 When using the Test Planning via Habitat mode, the Expand test feature was added to the Test Plan load dialog.

Bugs Fixed

- > **B4719** Removed the Default button from the Model File Selection page.
- **B4724** Addressed an issue where an All Stop or AAS Fault on a multiple extent test would leave the tests status in an incorrect state.
- **B4726** Addressed an issue where using the Test Planning via Habitat mode, the loaded test plan name was not being displayed in the status bar.

EDDYNET/CORE

Enhancement

E0898 – For customers with access to licensed Customer Features, added the ability to toggle them on/off on the License Manager Info page.

- > B4694 Addressed an issue with the License Manager producing a Codeword with invalid characters.
- **B4721** Addressed an issue where the Calibration Timer in Acquisition could be 0:00 or set outside the max setup in Site Configuration.

EDDYNET/DM

Enhancement

E0888 – Added the Vessel Parameter page to the Tubesheet Builder.

REVOSPECT PRO

- **B4673** Added *Full Reload Of Files* button in Dashboard for situations where acquisition has paused and not all files from the calgroup are appearing in the data file list.
- **B4709** Addressed an issue where the Dashboard would become sluggish and/or unresponsive.
- **B4714** Addressed an issue with the calculation of the time remaining value.

EDDYNET AND REVOSPECT 1.16.8

EDDYNET/AN

Bug Fixed

B4708 – Addressed an issue with APTS not restoring the previous sessions results for a returning user.

EDDYNET/AQ

Bug Fixed

▶ **B4639** – Addressed an issue with the MIZ-85 and the 10D pusher system. The air bypass was not allowing the user to ignore the faults.

EDDYNET/DM

Bug Fixed

> B4706 – Addressed an issue where the software would crash when Applying the PID Setup manually.

REVOSPECT PRO

Enhancement

> E0883 – For the Noise tool MAPOD output, the default is now CSV rather than HTML.

VELOCITY AND REVOSPECT HX 1.17.3

VELOCITY/AN

Enhancements

- E0543 Restoring the Expanded chart length after closing the displayed dialogs (Locating Setup, Voltscalce, PChan Editor, etc.).
- ➤ E0917 Added support for toggling through pre-configured filters in the C-Scan. They are selectable using an arrow in the lissajous or a keyboard shortcut and configured with a middle click on the filter button in the lissajous.
- **E0925** Added support for changing all C-Scans to predefined sets of channels rather than one at a time. This replaces the behavior of the C-Scan lissajous pre-selected channel button.
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Bugs Fixed

- ▶ B0182 Modified the zoom1/zoom2 behavior to be like the legacy analysis product, allowing switching between the two zoom levels with a single click. Also fixed a drawing issue in the waterfall plot when un-zooming.
- B4554 Changed the layout of the tear off landmark menu to better support plants with many landmarks. A second column of entries will be displayed when needed.
- B4573 Addressed an issue after having recalled a report entry, the axial location in the upper C-Scan lissajous was not updating while scrolling data.
- **B4784** Addressed an issue with Auto Scroll, setting it to 0 was not turning it off.
- B4790 Addressed an issue where right-clicking the new floating quick edit buttons would open a menu, obscuring the buttons and preventing the right-click.
- B4792 Addressed an issue with the reading of MIZ-27 files. The user was receiving an encode mismatch error message.
- > E0954 Addressed an issue where the C-Scan lissajous would not highlight the measurement button when recalling indications.

VELOCITY/CORE

Bug Fixed

B4793 – Addressed an issue when importing the same database multiple times.

VELOCITY AND REVOSPECT HX 1.17.2

VELOCITY/AN

Enhancements

- E0886 Added the AN database name to the RPTS main window to help the user ensure they are working from the correct source.
- E0923 Updated support for reading Corestar collected data.
- **E0932** Added *Quick Edit* buttons for use with the C-Scan. The buttons are on a toolbar that can be torn off and floated and re-docked as needed.

Bugs Fixed

- **B2113** Addressed a message presented to the user telling them to refresh the Report Editor, now the software will perform the refresh rather than prompt the user to do so.
- B4583 Addressed an issue where the Landmark Override dialog would get hidden and allowed multiple dialogs to be created. Now only one will be created and it will be a top-level window.
- > B4766 Addressed an issue with COMB where backups would fail because of a timing issue.
- B4769 Addressed an issue where MRPC data would not plot if the number of slices were more than ~100 per scanline.
- **B4773** Addressed an issue with the Encode Search, it was not allowing user to double-click to open a file.
- > B4777 Addressed a crash with E-Reso when re-comparing a calibration group.

VELOCITY/CORE

Enhancement

➤ E0944 – Logging for some of the .NET based applications can have two sources (technology based, C# or C++). When using the *Tail Log* menu item or F12, both logs will be opened and when complete, closed. This can be used when Zetec requests logging information for troubleshooting purposes.

REVOSPECT PRO HX

Enhancements

- **E0931** Added multiple selection support to the Indication Code Summary in RPTS.
- **E0935** For the RevospECT Noise Only license, added the ability to add and modify canned filters.
- **E0942** For the RevospECT Noise Only license, added the ability to use history to prevent noise measurements from happening where there is a known indication.

- B4673 Addressed an issue with Dashboard loading temporary files and hanging which would require the program get closed and restarted.
- **B4703** Addressed an issue with RPTS where the counts were wrong when using the Force or Break match feature.
- ▶ **B4771, B4778, B4783** Addressed an issue with RevospECT Visualization tool when display sets did not follow the assumed naming patterns. For example, +Pt, +pt, +PT or pp. This could affect the creation of the graphs, MAPOD outputs and CSV exports.

VELOCITY AND REVOSPECT HX 1.17.1

VELOCITY/CORE

Bug Fixed

B4775 – Addressed a bug where the changes to a Display Set label in Site Configuration would fail to be read and displayed to the user as expected. This bug was identified when trying to read a single channel Display Set. This could also apply to other parts of the product. Because the bug is on the read, settings that may have been affected may not have to be recreated. We recommend confirming your setups are as expected.

VELOCITY AND REVOSPECT HX 1.17.0

VELOCITY/AN

Enhancements

- ▶ B4650 Expanded the Outage column in the Outages to Synchronize column list making it easier to see the complete outage name.
- **B4743** To support analyzing third-party data which we don't have full details of, non-ZAC techniques can have their sample rate overridden in Site Configuration.
- ➤ E0649, E0919 Added support for displaying up to 4 C-Scans in the C-Scan and Comparison tabs. Additionally, channels of comparison views are now stored to the display setup, supporting use of comparison views as screening tools.
- **E0810** Added access to the Encoder Settings from the Standard Analysis pull down and fixed issues related to initialization and persistence with historical data.
- **E0823** Added the ability for the user to carry over Volt scale and the Mix coefficients in their AutoCal setup. When calibrating in AN, the user will be prompted to carry over the settings.
- ➤ **E0831** Added additional visibility to Tube Comments in the Dashboard through a tooltip and in the *Progress Messages* section, the text of the comment. Additionally, in AN and the Report Editor the Tube comment is accessible.
- **E0833, E0835, E0903** Added support for reading the EPRI XML based data file format (includes summary and messages).
- **E0861** When moving data in the lissajous with the right-button, the data is not centered first, allowing repeated adjustment. Left click will still null the data.
- **E0880** Added the Bobbin Tubesheet Profile feature to Velocity/AN (requires a C-Scan license).
- **E0900** Increased the limit on scanline and xhatch skip in the C-Scan to 99. This makes analyzing high density data a little simpler.
- E0905 In the C-Scan for RPC, the display set name is included along with the channel and mix description (if applicable). This helps clarify which coil is being displayed.
- **E0907** Updated nomenclature from *Remeasure From/To* to *Measure Endpoints*.
- ➤ E0916 Made improvements to the Keyboard shortcuts used to manipulate the data displays and made access to how to use them easier to access. From the About menu, select Keyboard Shortcuts to see help for all displays. Other additions:
 - ? now available from all displays which have keyboard shortcuts
 - d hide/show display controls in the current tab
 - D hide/show channel controls in the current tab
 - m median filter on/off for current C-Scan
 - Shift M median filter on/off for all C-Scans in the current tab
 - s Spike filter on/off for current C-Scan
 - Shift S Spike filter on/off for all C-Scans in the current tab
- RQ 7.3.15.5 Improved reading of Magnifi formatted data.

E0918 - Added an "Apply All" button to the C-Scan adjust filter dialog, and an 'f' keyboard shortcut to bring up the dialog from the waterfall and C-Scan.

Bugs Fixed

- B2998 Added the active tab to the display setup, so it will be activated upon load setup or restore config, rather than going to the last tab on startup or staying on the current tab when loading setups.
- B4761 Addressed an issue where an incomplete autocal config would slow down the process of loading data with an incomplete technique. The user is presented with a Notification about the situation, once.
- > B4764 Addressed a naming issue with Comparison tabs, names could not include angle brackets.

VELOCITY/AQ

Enhancement

> E0875 - Updated the MIZ-200 MRPC 3-coil template. Gains for several of the inputs were set high.

VELOCITY/CORE

Enhancements

- **E0837** Added Merge 2nd Max option to array merge type options.
- **E0904** Added default Bobbin, MRPC and Array coil types to the Coil Type setup.
- ➤ E0912 To help users get up and running quickly, there now exists a default Procedure (Z1234 login, default technique, vessel, analysis database, etc.). These enable a user to get up a running quickly. However, to create results of record, it is recommended to ensure the Procedure is setup appropriately.

Bugs Fixed

- ➤ B2529 The software no longer uses c:\tmp as a temporary file location. This was causing challenges with security postures which prevented access to this location. It now uses %ALLUSERSPROFILE%\Zetec\tmp.
- B4581 Addressed an issue where user was not able to add license to the local grid until the grid was cancelled. Software licensing only.

VELOCITY/DM

- **B4546** Addressed some deficiencies in support for the EPRI XML results format.
- B4689 Addressed an issue in Tubesheet Builder where the editing of the From/To Row and Column values were not saving.

REVOSPECT PRO HX

Enhancements

- **E0824** Added a feature that allows a single zone mapping in locale mapping. Leave the selection for Feedwater location blank to have the inlet straight leg beyond the tubesheet be a single zone.
- **E0828** Enable the ZRB detectors to detect in the circumferential direction.
- **E0832**, E0841 Added an auto noise rotation filter for use in Bobbin, MRPC and Array classifiers.
- **E0836** Improved the error message when there are RevospECT farm incompatibilities to help aid the user in resolving the issue(s).
- **E0844** Added a feature to change the Indication Code of a current report entry to each address History line.
- **E0848** Added tooltips in the Dashboard's Override column to limit times the user may need to reference the manual.
- **E0863** Added a feature to RPTS that allows the user to segregate results that were resurrected from History (not count as Hits) to help understand the effectiveness of the configuration.
- **E0865** Added a feature to enable reporting from the upper or lower edge only.
- **E0926** Added the option to the Dashboard to hide tube comments. See related **ENHANCEMENTS**.

- **B4342** Addressed an issue with RPTS where matching was not producing the optimal results when there were multiple targets.
- B4562 The Presence of Data check now includes Include Min Voltage Variation and Additional Tube End Correction settings.
- B4649 Addressed an issue with RevoHX@AQ where the user was not being informed that their configuration needs attention.
- B4651 Address an issue with RPTS where there could be a false miss or overcall at the end of the reports.
- ▶ **B4757** Addressed an issue with the Dashboard's *Full Reload Of Files* button not being available when paused. Also fixed a problem where files would go straight from Submitted To Farm to Complete, and a bug where Dashboard wouldn't allow you to exit a calgroup.

VELOCITY AND REVOSPECT HX 1.16.9

VELOCITY/AN

Enhancements

- ➤ E0884 For RDTiff-based data, the channels are ordered 1-4 absolute and 5-8 differential. An option was added to allow the user to change it to 1, 3, 5, 7 as differential and 2, 4, 6, 8 as absolute. See the Site Configuration manual for how to use the Order RDTiff Channels By Timeslot/Drive feature.
- E0890 The C-Scan is now showing the display set names setup in Site Configuration for both RPC and Array data.

VELOCITY/AQ

Enhancement

E0892 - When using the Test Planning via Habitat mode, the Expand test feature was added to the Test Plan load dialog.

Bug Fixed

B4719 – Removed the Default button from the Model File Selection page.

VELOCITY/CORE

Bug Fixed

B4694 – Addressed an issue with the License Manager producing a Codeword with invalid characters.

VELOCITY/DM

Enhancement

E0888 – Added the Component Parameter page to the Tubesheet Builder.

REVOSPECT PRO HX

- **B4673** Added *Full Reload Of Files* button in Dashboard for situations where acquisition has paused and not all files from the calgroup are appearing in the data file list.
- B4709 Addressed an issue where the Dashboard would become sluggish and/or unresponsive.
- **B4714** Addressed an issue with the calculation of the time remaining value.

VELOCITY AND REVOSPECT HX 1.16.8

VELOCITY/AQ

Enhancements

E0864, E0876 – These enhancements are designed to enable a user to automate acquisition with the MIZ-200 and Velocity. See the Habitat documentation for details.

Bug Fixed

B4696 – Addressed an issue where the title bar said *vessel* rather than *component*.

VELOCITY/CORE

Bug Fixed

B4647 – Addressed an issue where the Report Validation page referenced Vessel ID rather than Component ID.

REVOSPECT PRO HX

Enhancement

E0883 – For the Noise tool MAPOD output, the default is now CSV rather than HTML.

KNOWN ISSUES

GENERAL

Setup Instructions

o (Refer to the AQ Getting Started Guide for more information on setup.)

Site Configuration: When creating a Vessel or Component, pay attention to setting the units of measure as they are intended to be used for the job. Setting the units of measure prior to creating techniques will help avoid any confusion that may arise from changing this later in the setup process.

Time zone reliability

 When using EREDB exports, to ensure that all timestamps are captured accurately, all machines contributing to the Analysis and Data Management for a job should be set to the same time zone.

File name conventions

- The following characters should not be used when creating file names through the Eddynet, velocity and RevospECT products. These characters are restricted for use in filenames by Windows, not all interfaces will correctly help the user with this issue: \/: *?" <> |
- Downloads from Zetec's https://ssplicensing.zetec.com website that take longer than 15 minutes will fail as the server times out. If this is a problem, please contact Zetec and we will review with our IT Team.
- [Velocity] For users of the MIZ-28, it is recommended to collect data in the Eddynet format for ease of integration with Velocity software (both MIZ-28 data formats are supported in Velocity).
- Velocity/AQ, Velocity/AN, & Velocity/DM are intended for tubing applications.
- If License Manager does not show any applications, restart License Manager. When switching from local to remote licenses, at times the application list may be empty. Restarting License Manager will populate the list.

EDDYNET/AN AND VELOCITY/AN

In 1.16.6, E0550 added support for mapping multiple Vessels or Components to one AN database. This works properly only when calgroup names are unique across an inspection. If using non-Zetec acquisition or not being careful across multiple Zetec acquisition stations, multiple components can have the same name, e.g. 000001.CAL. Results will get mixed up if sharing an AN database and using duplicate calgroup names.

EDDYNET/AQ

Acquisition — B0711

- When recording data in Partial Manual mode with the MIZ-85iD, the operator needs to click the All Stop button at the conclusion of the test.
- Acquisition B0996

o If planning on using a mixture of eddy current instruments (MIZ-80iD, MIZ-81iD, MIZ-85iD) from the same Eddynet/AQ-installed computer, it is necessary to remove some of the XML files when switching from one to another. Find these files in the %ALLUSERSPROFILES%\Zetec\AppData directory. Delete all directories which have technique names associated with them. If the user accepts the default install location, %ALLUSERSPROFILES% will be defined %SystemDrive%\ProgramData. For most users, this will be C:\ProgramData.

Acquisition — B0544

 When testing the end-to-tubesheet with MRPC and a tube end extent of TEH+0 (or any positive elevation), and recording during the push, the expected extent will not collect. Test with an extent of TEH-# (some negative elevation).

Acquisition, MIZ-85iD – B1779

- When configuring auto acquisition with the MIZ-85iD care needs to be taken to ensure Start/End Delays factor in ramping. An example considering the far tube end:
 - Assuming coils are 2 inches out on the far tube end
 - Record/Reverse speed of 60 in/sec
 - Start Delay, time based, is 0.25 seconds
 - Distance covered by the probe based on ramping (1 sec ramp = acceleration of 60 in/sec)
 - Distance = 0.5 * acceleration * time equals a distance of 1.875 inches which is still in air, the probe will stop.
 - Record/Reverse speed of 40 in/sec, equals a distance of 2.11 inches which means some hit and miss at the tube end

Data Stripper and Conversion Spooler – B1818

To perform a re-conversion on a directory, the user must double-click the source data directory.
 The tool does not monitor for deleted destination files nor for editing of source files.

Inspection Test — B0553

For plugs to show on the Robot tubesheet display when loading an EIMS database, first ensure the
plugs exist on the model file that is loaded in addition to the EIMS database. The model file can be
edited with the EIMS-TSB program if needed.

➤ Machine Vision — B0782

 The Machine Vision box can beep on occasion for no reason. The beep is not associated with any known failure mechanism and has not been shown to effect performance.

Machine Vision 2 — B0529

 Typical lighting intensity should be set to 1% - 5%. Higher intensity settings could interfere with the calibration process.

➢ PIMS — B0828

 When viewing reports in the Excel format, the Zetec logo is presented in the foreground preventing cells beneath it from being selected.

➢ PIMS — B0967

 When viewing reports in the Excel format, an error may be received indicating there is "unreadable content" in the file. The report will still be viewable despite the warning.

> ZR-100

It is recommended to move the robot into position when calibrating and not move it until the
calibration process is complete. The software does not prevent the operator from clicking the
Move button during this time, but doing so can lead to an invalid, though successful, calibration. In
addition, it is recommended to perform a Positive Verification when calibration is complete.

ZR-100 — B0874

 When uninstalling the robot, it is recommended to use the Install Wizard and click the Reset button to remove previous calibration information. This will help avoid some potentially confusing messages that are no longer applicable.

ZR-100 — B0567

ZR-100 Controller firmware updates can occasionally be problematic. Verify the following two
things before starting the firmware update: Ensure there are no Eddynet/AQ programs connected
to the ZR-100 controller. If problems arise, cycle power to the ZR-100 Controller being updated
and then initiate the firmware update process.

> ZR-100 — B1040

 The user needs to select a block to test when using Nearest Block or Block Serpentine test methods. The user may be misled by the ability to select sort direction.

EDDYNET/DM

Migrating previous versions of DM database – B0683

Migration script may fail for old databases with atypical column naming conventions.

Report Symbol Manger – B0608

 Report Symbol Manger - Symbol Query widget is missing default values for Row, Col, Volts, Deg, Pct, Extent, and Elevation.

EDDYNET/WP

Analysis Team Cal-Board Editing – New RQ

 Analysis team is presently required to update the Cal-Board outside of the Eddynet/AN application (using the Eddynet Cal-Board Editor application).

Apache Server may not start if Microsoft Internet Information Services (IIS) is running.

 There may be a port conflict between Apache and IIS which will prevent the Apache service from starting. If this happens you can turn off IIS by opening Control Panel / Programs and Features / Turn Windows Features On or Off. Navigate to Internet Information Services and deselect it. Start the Apache Services by clicking the Apache icon in the hidden icons of the sys tray and click start.

VELOCITY/CORE

- The Outage Name and component analysis database are linked. Do not change the Outage Name after having created results for a component; otherwise, the results will not display in the Report Editor. To get them back, change the Outage Name back to original name.
- Site Configuration for Analysis Groups: include a short name. Without a short name, the 'Export For DM' feature will not work properly.
- If the License Expiration Pending message displays in License Manager and is not dismissed, License Manager will lock up and prevent the software from working properly.

EDDYNET/VELOCITY HABITAT SDK

COMPATIBILITY

Eddynet/Velocity 1.17.3 is compatible with:

Eddynet/Velocity Habitat SDK 1.16.9

Customer software will need to re-implement any applications using this interface if transitioning from a version prior to Eddynet Habitat SDK 1.16.9. The documentation installed with the Habitat SDK includes documentation for the revision to the interface.

NEW IN 1.16.9

Enhancement

- **B4711** Performance improvement to support sending larger messages (thousands of tests). In addition, the speed at which the test load was improved.
- **E0893** Added TestStatusOverride which is sent when the user manually changes the state of a test in the Inspection Test window.

Bugs

B4711 – Addressed and issue when loading subsequent test plans, tests were accumulating in the Inspection Test window.

NEW IN 1.16.8

Enhancement

- E0864, E0876 Addition work to support for remotely controlling ZAC in Instrument Only mode. Added:
 - o InstrumentConnect and InstrumentConnected
 - InstrumentDisconnect and InstrumentDisconnected
 - o InstrumentError
 - CreateCalGroup and CalgroupCreation
 - o ExitZAC
 - o Command line parameters that can be sent to start ZAC without the need for user input.

FIRMWARE NOTES

NOTE: All firmware can be found in the following location: [installed directory]\firmware. Example, C:\Program Files (x86)\Zetec\ZetecSoftware\firmware.

Eddynet Firmware

Table 1 Lists Eddynet devices and the currently recommended firmware versions.

Device	Firmware Version	Compatible Eddynet Version
Machine Vision	ZMV Setup 1.3.5	Eddynet 1.8.0 and greater
ZR-100	zr100.2.2.5	Eddynet 1.13.0 and greater
MIZ-80iD	Instrument — miz80i.3.2.2 TURC — miz80t.4.1.2	Eddynet 1.14.5 and greater
MIZ-81iD	Instrument — miz81i.2.3.2 TURC — miz81t.3.1.9	Eddynet 1.8.0 and greater
MIZ-85iD	Instrument — miz85i.5.1.7 MRPC — miz85mrpc.5.0.11	Eddynet 1.8.0 and greater
ZR-1	1	Eddynet 1.8.0 and greater
UFC1A (5100 CPU)	ufc1_5100.2.0.2 Transition File – UFC1A	Eddynet 1.8.0 and greater
UFC1 (2301 CPU)	ufc1_2301.2.0.1 Transition File – UFC1	Eddynet 1.8.0 and greater
UFC1 (5500 CPU)	1.0 (not currently included on install)	Eddynet 1.8.0 and greater

Velocity Firmware

Table 2 Lists Velocity devices and the currently recommended firmware versions.

Device	Firmware Version	Compatible Velocity Version
MIZ-200 <i>iD</i>	MIZ-200 1.4.7	Velocity 1.16.0 and greater

REVISION HISTORY

MIZ-80iD

Instrument 3.2.2

- Added support for ScrAAS encoder-based scripts.
- Better support newer browsers.

MIZ-85*iD*

Instrument 5.1.7

Adjustment to the Diagnostics gain check.

Instrument 5.1.6

Drive and balance update when using the Intelligent probe.

MRPC 5.1.11

Addressed an issue with the wheel pressure status signal resulting in faults being reported in AQ.

MIZ-200*iD*

Instrument 1.4.7

Added a new RPC configuration.

Instrument 1.4.6

- Addressed an issue with the MIZ-200 Webserver performance.
- Added support new probe modes.
- Added support for the VPP alarm type
- > Addressed issues with the pie alarms phase and amplitude accuracies

Instrument 1.4.5

Adjust drives to prevent noise spikes when encoder/external triggering.

Instrument 1.4.3

- Addressed bug causing noise in high heat environments.
- Updated a PIM mode for 4pin driver pickup mode that enables inputs 2,3,4,6,7,8 and gen 2.

Instrument 1.4.2

- Addressed bug with Diagnostics Gain Drive Amplitude check.
- FPGA fixed Continuous mode when external or encoder sampling.

EARLIER RELEASES

EDDYNET AND REVOSPECT VERSIONS

To limit the size of this document, releases notes prior to Eddynet 1.16.4 have been removed. These can be requested from Zetec Customer Service or download an older Release Bulletin from https://ssplicensing.zetec.com.

VELOCITY AND REVOSPECT HX VERSIONS

To limit the size of this document, releases notes prior to Velocity 1.16.8 have been removed. These can be requested from Zetec Customer Service or download an older Release Bulletin from https://ssplicensing.zetec.com.

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