

CYPHER® V1.0 RELEASE NOTES

Release date: July 22nd, 2025

Build version: v1.0

Cloud-based Licensing System

This software is now activated through a cloud-based licensing system. Please contact your Eddyfi Technologies sales representative to learn how to access this latest version.

New Features

This inaugural version of Cypher version 1.0 establishes a new benchmark in phased array ultrasonic testing (PAUT) by combining unmatched Total Focusing Method (TFM)/PAUT performance, industrial-grade robustness, and intuitive user experience. It represents the unification of M2M and Zetec into a single next-generation platform. This version is designed for operators at all skill levels, thanks to an intuitive user interface, streamlined setup creation, and all the tools required for the following applications:

- Corrosion mapping
- Weld inspection
- Full Matrix Capture (FMC)/Plane Wave Imaging (PWI) TFM or Phase Coherence Imaging (PCI) in multi-groups configuration

Improvements

- Not Applicable

Resolved Issues

- Not Applicable

Known Issues & Remaining Anomalies

Calibrations

- Sensitivity and Time-Corrected Gain (TCG) calibration may cause beam saturation.
 - Workaround: Reduce voltage prior to calibration.
- Detection mode in calibration always set at maximum despite what is selected.
- In specific setup, TCG dynamic merge data is not shown.
 - Workaround: Complete TCG by using sectorial view and envelope amplitude view only.
- Encoder calibration with imperial units not working.

- Workaround: Use metric units when calibrating encoders.
- TOFD calibration not applied properly if TOFD probes are not created before groups edition.
 - Workaround: Create all probes before starting to edit all groups.
- Sensitivity calibration is not available.
 - Workaround: Create all probes before starting to edit all groups.

Home Panel

- Removing the USB drive during a file or folder copy/move operation may cause an exception.
 - Workaround: Ensure the USB drive is not removed during file or folder transfer to prevent potential issues.
- The analysis file (.utextension) is partially managed with its associated data files (.utdata) on different actions (USB export, folder change, remove, etc.)
 - Workaround: Make sure that your action on the data file is correctly considered in the analysis file.
- The time of file creation and modification is not displayed in the file preview on the home panel.

Setup Builder

- Back and forth between PAUT and conventional UT configuration may lose the displayed and applied values are not the same.
 - Workaround: Change sweep type to linear and go back to sectorial.
- Focal laws calculation may not work properly when using Distance timebase.
 - Workaround: Use another timebase mode.

Acquisition

- Position C-scan not working if compression is higher than 2.
 - Workaround: Use compression of 2 or less when doing position C-scan.

TFM

- Gain can be changed and impact views in PCI technique.
 - Workaround: Do not change gain with the PCI groups
- The sectorial view in the analysis menu is not usable for TFM or LW0° and may crash when interacting with cursors or switching to Side Merge and End Merge.
 - Workaround: Use the more efficient End view in the analysis menu for TFM or LW0° groups.
- The sectorial view in the analysis menu is not usable for TFM or LW0° and may crash when interacting with cursors or switching to Side Merge and End Merge.
 - Workaround: Use the more efficient End view in the analysis menu for TFM or LW0° groups.

Analysis

- Modifying a part with a data file makes it complicated to go back to the workspace.
 - **Workaround:** Navigate in each of the group windows.
- The sectorial view in the analysis menu is not usable for TFM or LW0° and may crash when interacting with cursors or switching to Side Merge and End Merge.
 - **Workaround:** Use the more efficient End view in the analysis menu for TFM or LW0° groups.
- TOFD Geometry parameters are not correct when data is reloaded. Reports are also affected.
 - **Workaround:** None

System

- Cypher OS doesn't always stop with closing application (remains open on a blank screen).
 - **Workaround:** Force shutdown by pressing the start button for 10s.
- Batteries display on the system bar can take up to 30s to be refreshed after a battery hot swap.
- Software may look frozen when clicking on layout selector button. Clicking inside views remains active but all other buttons are unresponsive.
 - **Workaround:** Wait several seconds for software to react.
- The virtual keyboard may not appear when attempting to modify certain text fields.
 - **Workaround:** Reboot the instrument or use an external keyboard.

Minimum System Requirements

- **Processor:** Dual core CPU @2GHz
- **Operating systems:** Windows 10 (64bits) or Windows 11
- **Memory:** RAM 8GB
- **Disk space:** 8GB
- **Display: minimal screen size:** 1280x800
- **Administrator rights:** Required for installation and software activation

Recommended System Requirements

- **Processor:** Quad core CPU @2.4GHz
- **Operating systems:** Windows 10 (64bits) or Windows 11
- **Memory:** RAM 16GB
- **Graphics card:** Not used for processing
- **Disk space:** 32GB - SSD
- **Display**
 - **Screen size:** minimum 1024x768
 - **External monitor:** Possible
- **Administrator rights:** Required for installation and software activation