

Eddyfi Magnifi® 5.2R4 Release Notes

Release date: June 13th, 2023

*****Cloud-based licensing system*****

Magnifi 5.x is now activated through a cloud-based licensing system.

For clients under a valid maintenance plan, access to version 5.2 is included. Simply type your current Magnifi key code in the *Manage License-> License code* field.

If you are not under a valid maintenance plan, please contact your Eddyfi Technologies sales representative.

New Features and Improvements

Tubing Applications

- AI-ECT module version 3.0, additional details under *Artificial Intelligence module* section.
- Increased data display refresh rate in Lissajous views, providing smoother and faster analysis when scrolling the cursor in strip chart views.
- Improved Probot control window to simplify instrument setup and provide a clearer view of instrument status.

Surface Applications

- Various modifications to the default parameters of Spyne setups:
 - Added indication codes;
 - Modified color palette;
 - Acquisition resolution reduced to 1 smpl/mm;
 - Transverse median filter window changed to 500 mm;
 - Automatic detection boundaries increased;
 - Alternate layout 1 C-scan + 1 Lissajous is now 1 C-scan + 2 Lissajous.
- Supports new surface ECA probes:
 - Low frequency Spyne probe:
 - ECA-SPYNE-C-203-025-066
 - Padded probes for fillet welds:
 - ECA-PDC-FW-017-500
 - ECA-PDC-FW-030-250
 - ECA-PDD-FW-016-500
 - ECA-PDD-FW-030-250
 - P-Flex probes:
 - ECA-PFLEX-C-079-HF-032
 - ECA-PFLEX-D-034-HF-032
 - ECA-PFLEX-D-056-HF-032

Resolved Issues

Generic

- User is now warned when adding an indication to a NDD file, and vice-versa
- Fixed some minor display issues in Windows 11 environment
- Fixed a crash that could happen when selecting duplicate C-scans
- Corrected errors caused by too long of an inspection folder path or data file name
- Errors no longer occur when the inspection folder path contains non-Latin characters
- Edition of the calibration shortcuts menu has been fixed
- Low battery warning message is displayed less often
- Replaced references to Magnifi R by Magnifi CPN
- Fixed a display issue for the report when using micrometers as a unit

Tubing Applications

- Updated firmware to fix intermittent crashes while performing IRIS acquisition with Ectane 3
- Fixed a problem causing the Ectane 3 to send twice the tension value to the transducer when performing IRIS setup on an instrument that includes both ECT and IRIS capabilities
- Probot:
 - Resolved issues that could prevent from connecting to the Probot
 - Removed the unnecessary error “Unable to disable relay 1”
 - Take-up reel tension now applied as soon as the connection is established
 - Acquisition is only launched if a planned file is selected
- Fixed issues that occurred when IRIS data with enabled A-scan envelope loaded
- Missing frequency recommendation warning field added to the RFA Wizard

Surface Applications

- Resolved problem that caused signal amplitude attenuation on I-Flex probes when transmit-receive and impedance topologies were used simultaneously
- Spyne Wizard no longer shows units of count (cnt) instead of sample
- It is now possible to disable and re-enable median filters with Spyne data

Known Issues and Limitations

Tubing Applications

- Error message and delay before being able to reconnect to the instrument when the connection between the PC and the Probot gets interrupted

Artificial Intelligence Module

Technology: Eddy current testing (ECT) for tubing bobbin data

Version: 3.0

Performance

- 97% probability of detecting significant indications^{1,2}
- 98% probability of detecting tubesheets and support plates properly²

¹Significant indications in the test database correspond to a vertical signal amplitude at 50% of the calibration hole signal or a vertical signal amplitude between 25% and 49% of the calibration hole signal combined with a depth of 40%.

²90% confidence level.

Improvements

- Improved precision on marking the beginning and the end of relevant indications

Limitations and Restrictions

- Cannot detect more than 1,000 indications per tube
- No detection under tubesheets
- ECT-BBFS saturation, ECT-BBST flexible, DefHi, and ECT-BBAC air conditioning probes are not supported
- Tubes with external fins, ID and/ OD mechanically enhanced tubes
- Indications with lengths greater than 1,000 pixels are not detected. For a typical sampling rate of 2 samples/mm, this represents a length of approximately 50 cm (19.7 in).

System Requirements

Minimum Requirements

- Processor: Core i5 (or equivalent).
- Operating systems:
 - Edition: Windows® 8.1, Windows 10 version 1607 (Anniversary Update) or Windows 11
 - System type: 64-bit operating system
 - Note: The software is tested and optimized for most major language packs available on the Windows suite.
- Memory: 8 GB.
- Graphics card: GPU with DirectX 11 support.

- Disk space: 20 GB.
- Network: Built-in network card.
- Display:
 - Screen size: 13 in
 - Resolution: 1366 × 768 pixels
 - Display scale: 100% (Windows preferences setting).
- Administrator rights: User must have local administrator permissions on the computer to install and use Magnifi.

Recommended Requirements

- Processor: Core i7 (or equivalent).
- Operating systems:
 - Edition: Windows 10 (latest version)
 - System type: 64-bit operating system
 - Note: The software is tested and optimized for most major language packs available on the Windows suite.
- Memory: 16 GB.
- Graphics card: Dedicated GPU with DirectX 11 support.
- Disk space: 100 GB.
- Network: Built-in network card.
- Display:
 - Screen size: 15 in
 - Resolution: 1920 x 1080 pixels
 - External monitor: 22 in or larger, with a minimum resolution of 1920 × 1080 pixels (for extensive analysis purposes)
 - Display scale: 100% (Windows preferences setting).
- Administrator rights: User must have Administrator permissions on the computer to install and use Magnifi.

Firmware

Included in this release of Magnifi are the following packages:

Ectane 3

- Version: 1.0R5

Ectane 2

- Version: 2.1R13

Ectane

- Version: 1.8R5.1 (same version as for Magnifi 3.5R15).