



# What's New In Version 4.1



**STAY  
UP-TO-DATE !!**



## Why upgrade your instruments & software to the latest release

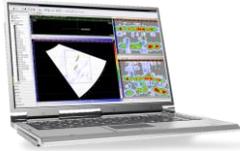
- Maximize your investment and productivity.
- Get benefit from:
  - New features
  - Enhanced functionalities
  - Enhanced user interface
  - Probe and wedge database update
  - Software fixes





# Version 4.1 Supported Products

**NEW**



prisoxa

veo+



# Products that are not supported by the version 4.1



veo 16:64

veo 16:128



## New features & functionalities code reference in this document

	Instrument Conventional UT enhancement
	Instrument TOFD enhancement
	Instrument Phased Array enhancement
	Instrument FMC enhancement
	UTstudio+ software enhancement (incl. UT-TOFD-PA-FMC-TFM)



## What's new in 4.1 at a glance

- FMC recording and TFM imaging solution
- UTstudio+ new software features and compatibility
- New Linear Scanning improvements
- Multiscan now support more probes
- New gate synchronization option
- Interface optimization
- Updated translations and help files



# VEO+, one of the best portable multiscan Phased Array solutions in the world, now with FMC-TFM!



32:64PR | 32:128PR | FMC-TFM | MULTISCAN  
16:64PR | 16:128PR | TOFD & UT 2PR

1024 @ 0.1°  
125MHz



64bits



128GB

- VEO+ covers most of the advanced ultrasonic NDT inspections using Phased Array.
- VEO+ now gives access to the Full Matrix Capture (FMC) recording and Total Focusing Method (TFM) imaging technologies to its existing and growing customers base.
- This FMC-TFM complementary inspection technique is a significant addition to an already high value, high-performance toolbox.



# The Sonatest new FMC-TFM solution is based on three product evolutions



Smart Portable Phased Array Solution. Rethink your standard!

16:64PR | 16:128PR | FMC-TFM | MULTISCAN  
32:64PR | 32:128PR | TOFD-UT 2PR





## VEO+ FMC-TFM software option

**NEW**



- VEO+ has now access to a **new FMC-TFM software option**. This software option is available to **all existing and new VEO+ instruments** with the installation of the software update 4.
- This software option makes the VEO+ able to **perform and record FMC scans**.
- Field upgradable, a code activates the functionality; **no need to return the instrument**.
- The FMC-TFM software option is a **VEO+ exclusive feature** available from software update 4.



## UTstudio+ analysis software

**NEW**



- UTstudio+ is the new analysis software **supporting VEO+ and PRISMA** running software 4 version.
- UTstudio+ can **read FMC scan** from the VEO+.
- UTstudio+ is fully loaded to **generate high resolution TFM images**, perform simple to advanced analysis and generate reports.
- UTstudio+ doesn't support the old generation of veo16:64 and veo16:128 (these run with the old UTstudio version).



## UTview FREE viewer software

**NEW**



- UTview is the new FREE viewer software **supporting data files from UTstudio+, VEO+ and PRISMA** (from version 4 and above).
- UTview can read **any Sonatest VEO+ and PRISMA utdata files** including the TFM imaging files.
- UTview however **won't generate new TFM images** from an FMC scan, this is exclusively available for the UTstudio+ license software.

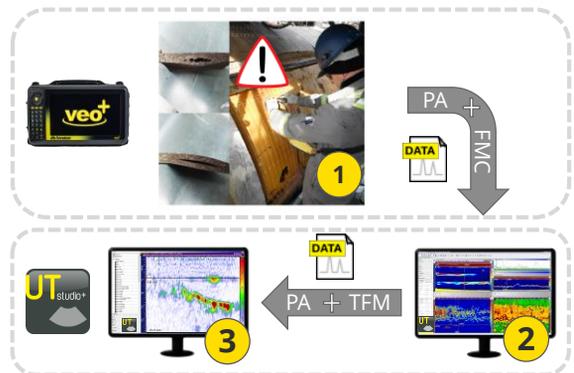


## VEO+ FCM-TFM solution and the typical field inspection actions, a workflow as simple as 1-2-3!

Most of the advanced applications can be solved with VEO+ and Phased Array.

For the other critical applications:

- 1 The inspector activates an FMC scan on VEO+ and encodes the defective zone;
- 2 He transfers the FMC utdata set to his PC and creates a new encoded TFM imaging utdata using its UTstudio+ software;
- 3 He combines both Phased Array and TFM image results in his report to conclude on his inspection.





# VEO+ FCM-TFM solution and the typical field inspection actions, a workflow as simple as 1-2-3!



# New VEO+ FCM-TFM software option

The new VEO+ FCM-TFM software option includes:

- Enable user to perform and record a new FMC scan
- Available to **ALL** existing and new VEO+ instruments
- Available from the VEO+ 16:64PR version
- Code activation, no need to return the instrument



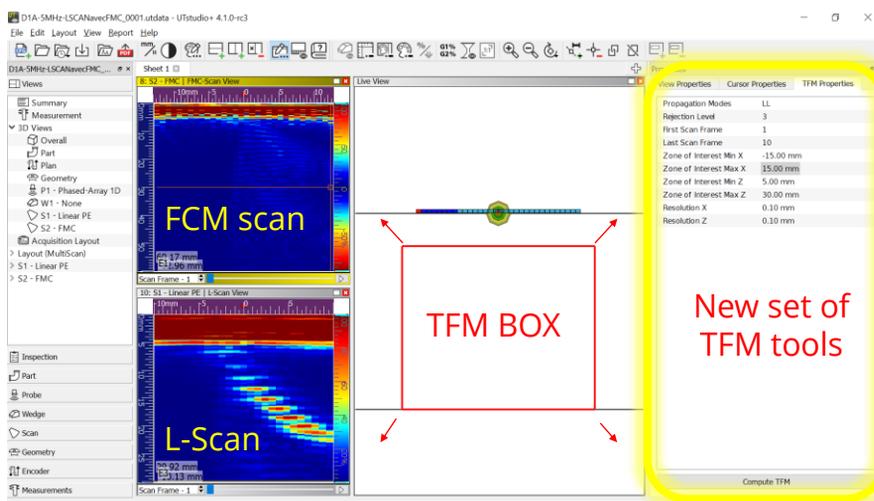


## New UTstudio+ TFM tools



### FMC-TFM solution:

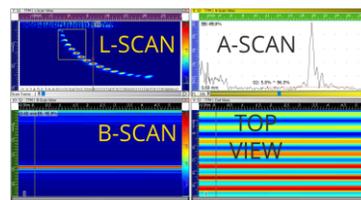
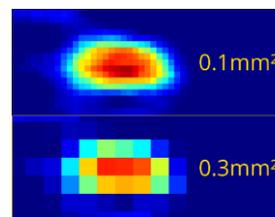
- Complete UT traceability
- Future-proof and compatible solution
- Multi-mode analysis using up to 9 algorithms
- Multiscan TFM and Phased Array scan are combined in one UTdata
- FMC and TFM single or 2D mapping encoding



## New UTstudio+ TFM tools



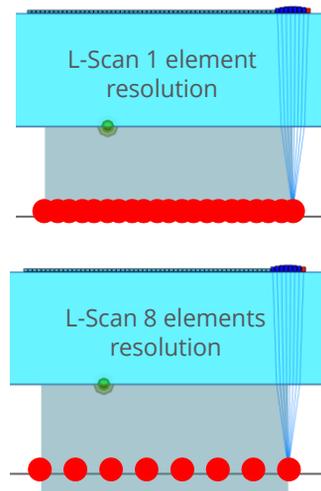
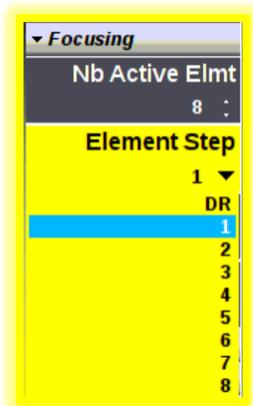
- High-resolution TFM imaging no matter the range
  - High-resolution (0.1mm<sup>2</sup>) TFM images are now possible even on a long acoustic range (1024 pixel<sup>2</sup>). This is ideal for large volume inspection solutions.
- UTstudio+ easy TFM analysis tools
  - In UTstudio+, a TFM scan appears exactly as a “high-resolution linear scan”. This allows using the same known and standard tools: views, annotations, gates and palettes facilitating measurements and reporting.
- ... and all the expected TFM imaging advantages
  - Improved sub-surface resolution
  - Improved SNR and spatial image resolution
  - Improved defect geometric characterization





# New Linear Scanning (L-Scan) resolution option

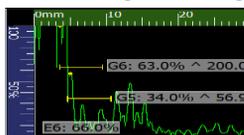
- New focusing option for the L-Scan
  - DR = Double Resolution
  - Element step variable from 1 to 8 elements
- Can be configured directly on the VEO+ or PRISMA or UTstudio+



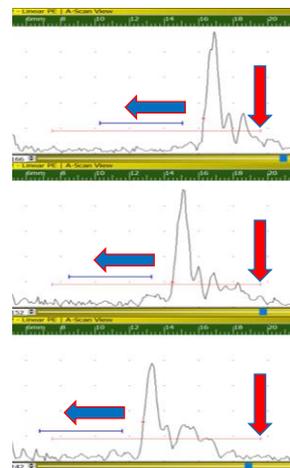
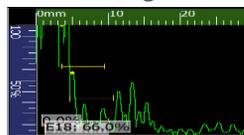
# New gate options Multiscan now up to 12 probes

- New trig conditional gate position system
  - The gate follows the trig position of the previous gate
  - The gate position from the trig is managed via a trig offset parameter (+/-)
- Gate flag ID can be hidden (good for multiscan interfaces)
- VEO+ now accept up to 12 probes for multiscan solutions

View with gate ID flag



View without gate ID flag





# UTstudio+ and UTview new icons and tools design



- The software icons and tools have been revamped to modernize the look and feel of the interface.



- Cartesian
- Angular
- Gate
- Freehand
- Hyperbolic
- Extraction Box

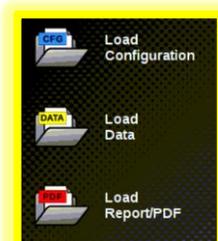
- Views
- Inspection
- Part
- Probe
- Wedge
- Scan
- Geometry
- Encoder
- Measurements



# New UTdata icon (yellow) and VEO+ tab icons



- UTdata icon is now yellow. All UTdata will now become yellow if UTstudio+ is set as the default program.
- New modern VEO+ tab menus icons (similar to UTstudio+).
- Embedded PDF reports or documents are red.



- Views
- Inspection
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