



## Sonatest Veo3 – Full Specification

Version 1.0 – as of February 8<sup>th</sup>, 2021

GENERAL	PHASED ARRAY (32:128 PR)	UT-TOFD (2PR)	FMC-TFM (64 Elements)
<b>Multi-scan Quantity</b>	Up to 8 scans	Up to 2 scans (UT & TOFD) Up to 2 scans	Up to 6 TFM scans/ 1 FMC Scan
<b>Pulsers / Receivers</b>	32:128PR	2PR (4 connectors)	Up to 64 elements probe
<b>Gain Range</b>	80dB	100dB	80 dB
<b>Sampling Frequency</b>	125MHz @ 12-Bit (processing 16-Bit)	50/100/200MHz @ 10-Bit	125MHz @ 12-Bit (processing 16-Bit)
<b>System Bandwidth</b>	0.2 to 23 MHz	0.2 to 18 MHz	0.2 to 23 MHz
<b>Max Pulse Rate Frequency</b>	50 000 Hz	20 000 Hz	50 000 Hz
<b>Pulse Voltage</b>	100-50V ActiveEdge©	400-100V ActiveEdge©	100-50V ActiveEdge©
<b>Focusing Mode</b>	Natural or Constant Depth/Path/Offset/Resolution	n/a	Focusing at all points TFM
<b>Resolution</b>	Up to 0. 1°	n/a	500K Pixel *(Maximum number of Pixel)
<b>L-Scan Resolution</b>	1 element, double resolution, or customer element steps	n/a	TFM resolution up to 0.01mm
<b>Max PA Beams</b>	Focal laws Up to 4096 beams	n/a	FMC -> Post procession maximal 4096 Beams & 1024 pixel <sup>2</sup>
<b>Measurement tools</b>	EXTRACTION BOX, 4 gates/ A-Scan, TCG, DAC Split-DAC	4 gates/A-Scan, TCG, DGS/ Split-DGS, DAC/Split-DAC	EXTRACTION BOX and all the standard PA tools
General Phased Array		General FMC/TFM Technique	
<b>Max Points per A-Scan</b>	Up to 8192 points per A-Scan (sub-sampling available to reduce file size)	<b>Propagation mode</b>	TFM -> 10 algorithms
<b>Data Storage &amp; File Size</b>	128 Gb SSD & <b>no file size limits</b>	<b>Fast TFM</b>	Sparse matrix Capture (SMC)
<b>User Template</b>	For improved conformity	<b>Envelope / TFM smoothing</b>	Hilbert Smoothing (Default)
<b>Advance Focal Law Calculator</b>	Sectorial Pulse-Echo, Sectorial Pitch & Catch, Linear Pulse-Echo, Linear Pitch & Catch, Curve surface solution.	<b>TFM Calibration Wizard</b>	Velocity and Zero, Time Corrected Gain, Amplitude Fidelity Wizard
OPERATING SYSTEM			
<b>Onboard Reporting Tools</b>	PDF auto-report, Export data to CSV file, Save screen capture	<b>Onboard PDF Reader</b>	Ability to load and read any PDF documents
<b>Onboard Scan Plan Tools</b>	Onboard 3D live rendering	<b>Calibration Standards</b>	ISO18563 (EN16392) & EN12668
<b>Integrated Online Help</b>	ACTIVE help genius for parameter optimization procedures, reports	<b>Remote Control</b>	Powered by VNC & VPN
USER INTERFACE & PORTS			
<b>PA &amp; UT Connectors</b>	1 IPEX 128 channels	<b>UT-TOFD (2PR)</b>	4 LEMO 1 or 4 BNC
<b>Instrument Display</b>	10.4" wide 1024 x 600 LCD, LED Backlight 460cd/m2, Projective Capacitive Touch Panel Anti-glare Surface Treatment, Hardness of cover surface 6H		
<b>Encoder Ports</b>	2 axes: Scan, Index or Clicker (LEMO 1)		
<b>GPIO Port (TTL)</b>	Start, Stop, Index, Reset, Alarm(s), Trig... (LEMO 1)		
<b>Communication Ports</b>	WiFi 802.11n, Ethernet Gigabits & 3 master USB2		
<b>Remote Display Ports</b>	WiFi, Ethernet or VGA		
<b>Data Transfer Ports</b>	WiFi, Ethernet or USB		
OPERATING TIME, ENCLOSURE & ENVIRONMENTAL			
<b>Operating Temperature</b>	- 10°C to 40°C (14°F to 104°F) storage -20°C to 60°C (-4°F to 140°F)		
<b>Operating Time</b>	6h (hot swappable batteries)		
<b>Power Input</b>	AC 110V/240V @ 50Hz/60Hz		
<b>Unit Dimensions</b>	115 x 220 x 335 mm (4.52 x 8.66 x 13.19 in)		
<b>Weight</b>	5.1 kg (11 lb) no battery, 460 g (1 lb)/battery)		
<b>Environmental Rating</b>	Designed for: IP66 MIL-STD-461G section 5.21 RS103		



## Sonatest Software Specification

Version 1.0 – as of February 8<sup>th</sup>,2021

UTmap	UTstudio+	Xpair
C-scan Stitching	Gate edition in post-processing preserve amplitude information	VNC viewer with showing the whole instrument
C-scan flip/Rotation/Inversion	IFT Gate post-processing	Virtual key mat functionality
Independent C-scan analysis	Software Gain post processing	VPN network for remote application
Defect Auto-Sizing with contouring imaging	Drag and drop images in Microsoft suite	FTP transfer protocol to up/download file
Part image/photo importation	3D data rendering	Innovative Teaching tool
Export to CSV	A-B-C-End-Top-S-3D Views	Take Remote Control of your Instrument
Export to CSV Statistically Process	Raytracer with flaw positioning	Transfer Files
Automatic report generation Report	FMC data post-processing into 10 different mode	Send Configurations
	FMC CSV export	
	Annotation boxes to CSV table	