



Sonatest Veo3 – Full Specification

Version 1.0 – as of February 8th, 2021

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



Sonatest Software Specification

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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	

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