

NextSCAN

The Next-Gen PA UT TFM / FMC Analyzer



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Designed from the ground - up.

NextSCAN is the most versatile NEXT generation high - performance PA UT with Total Focusing Method (TFM) and Full Matrix Capture (FMC) scanner for field flaw inspections.

NEXT-Gen TFM Analyzer

NextSCAN uses FMC, TFM, and PA technologies that can rapidly produce accurate and real-time 3D imaging. Using conventional ultrasound technology, single-beam, or multi-group, adding PA functions produces even more detailed and dynamic results. Synchronous multi-axis encoder linkage makes automatic and semi-automatic detection even more efficient.

- Full Matrix Capture (FMC) - up to 128 elements capture at 2GB/S
- Total Focus Method (TFM) - Real Time High Efficiency & High Resolution
- Built-in Focal Law Calculator (FLC) - 3D simulation technology predicts sound field distribution
- A variety of hardware configurations to meet different detection needs - 32: 64PR 32: 128PR 64: 128PR, etc.

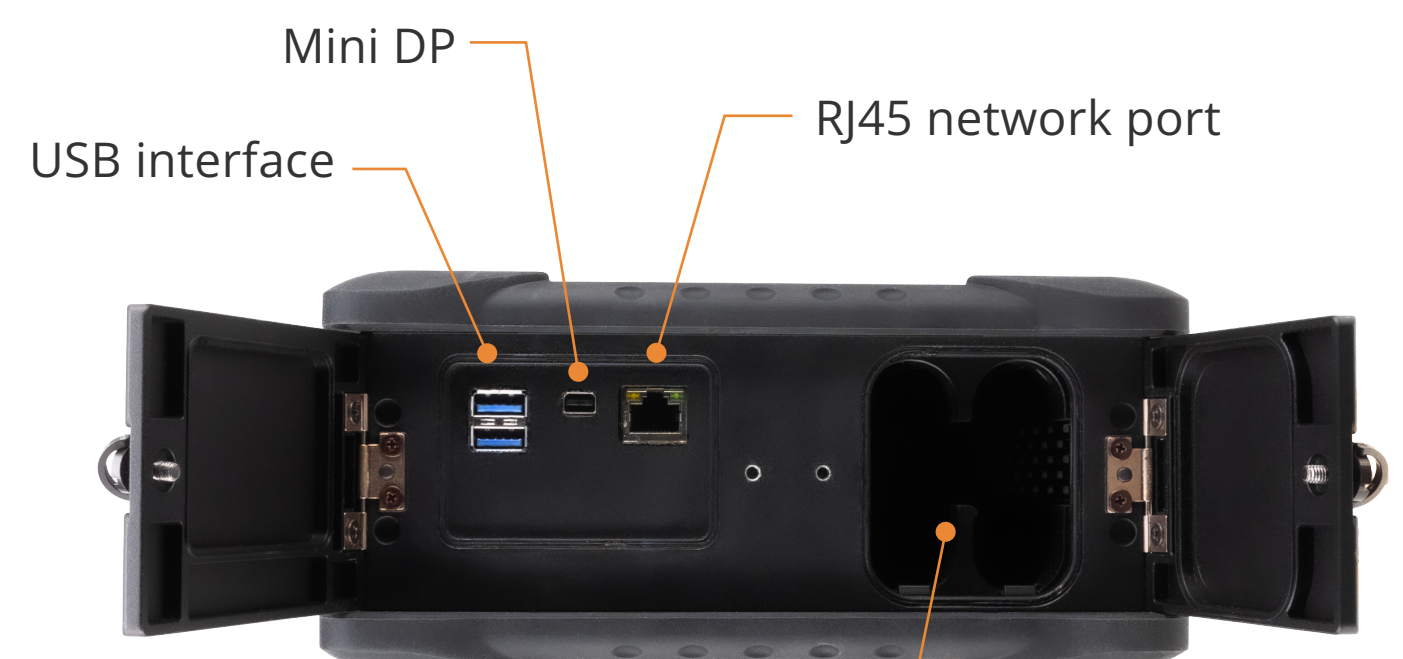
Don't let the compact size fool you. With a 12 inches brightly lit resistive touch screen that is suitable even for outdoor harsh weather. The outer case adopts a high-strength aluminum alloy shell, which is sturdy and durable and has excellent shielding; a large-size industrial capacitive screen; supports up to 1TB storage capacity; 2 hot-swappable lithium batteries can meet the daily working time of 5 to 8 hours.

Up to 128 channels of TFM that unlocks more detection details.

Complete TFM toolbox including TCG calibrated high-resolution TFM imaging, up to 128 wafers, 3-axis cannula fillet weld inspection with real-time overlay display.



HD capacitive touch screen
Custom configuration from 32: 128PR - 64: 128PR

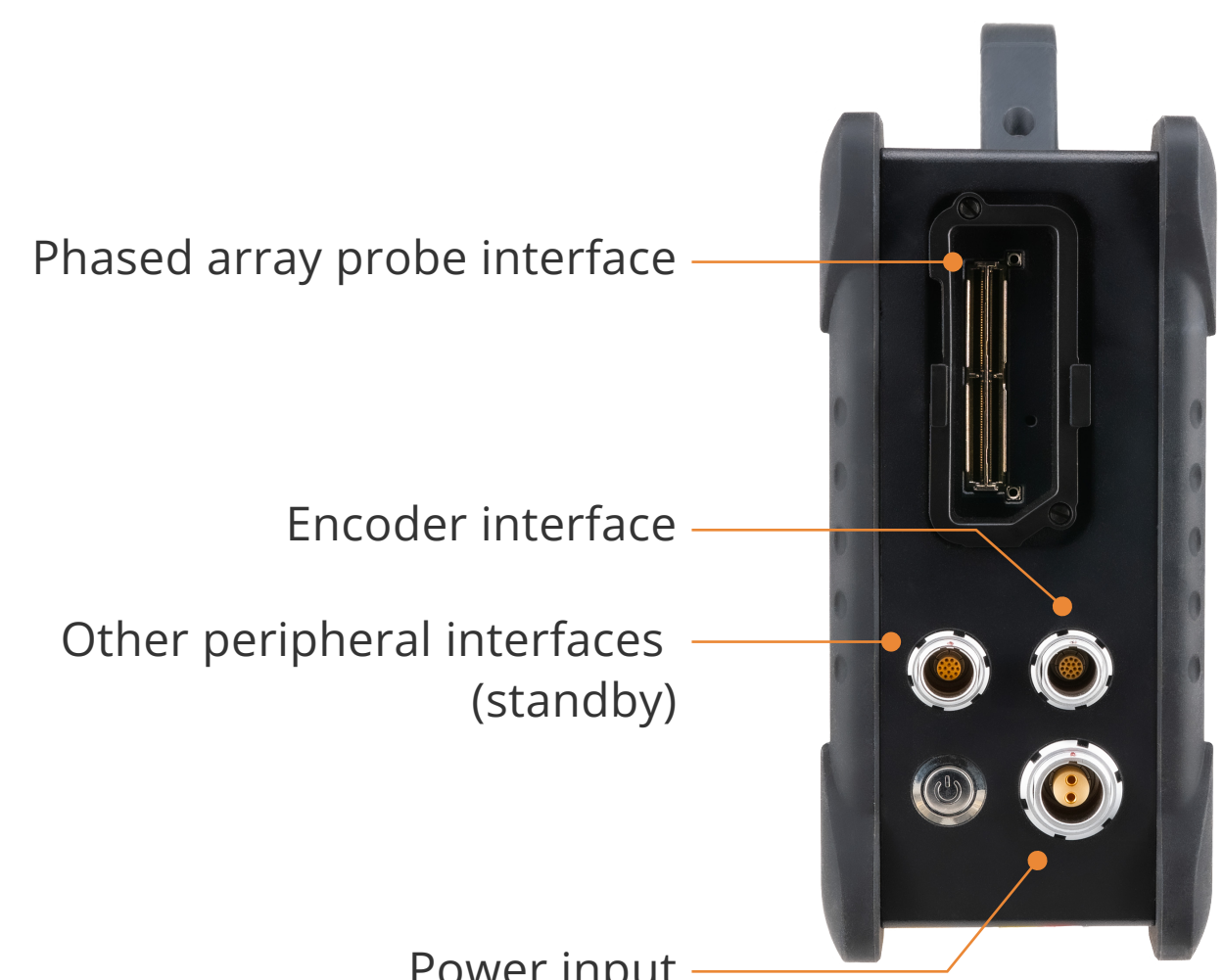


2 hot swappable batteries - up to 5 hours

Cutting-Edge Performance

Below is just a shortlist of some top-notch specifications:

- PA/UT pulser and receiver configuration: 64: 128PR
- Max focal laws: 8192
- Max data throughput: 2GB/s
- Digitizing Frequency: 100MHz/ 200MHz
- Pulser Voltage (PA): 100V/200V
- Bandwidth (PA): 0.4MHz to 25-MHz
- Storage: 256GB SSD - up to 1 Tb
- Connectivity: Wifi, 3.0 USB, Gigabit Ethernet, MiniDP, Remote Management

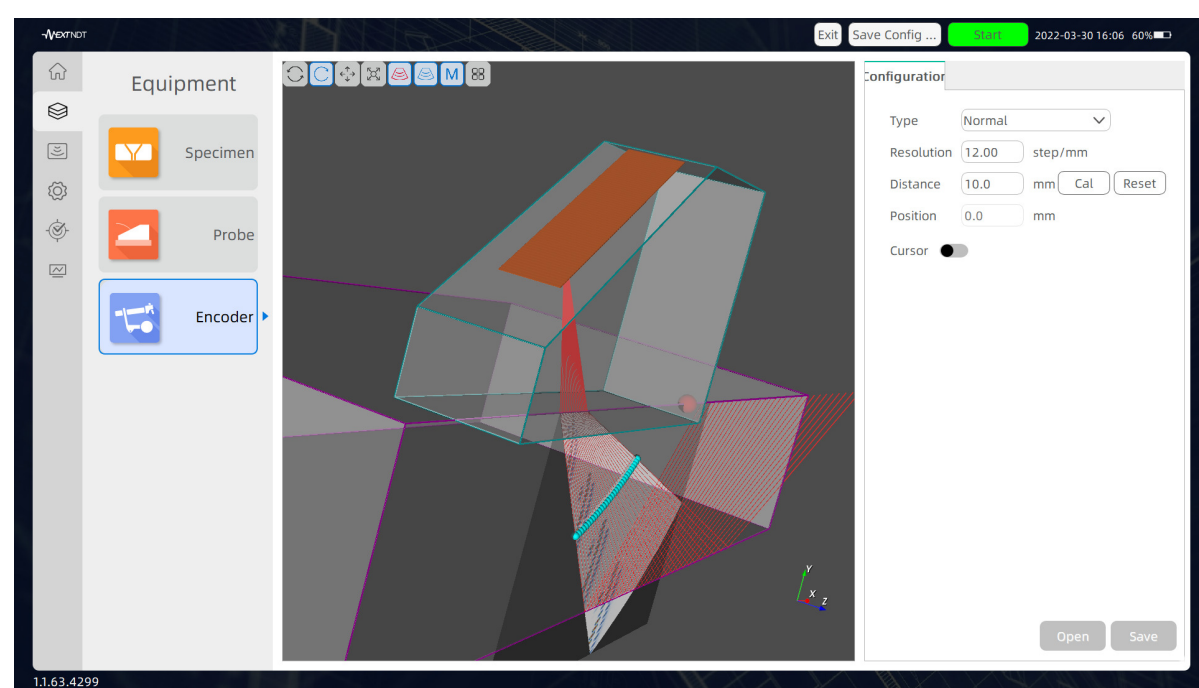
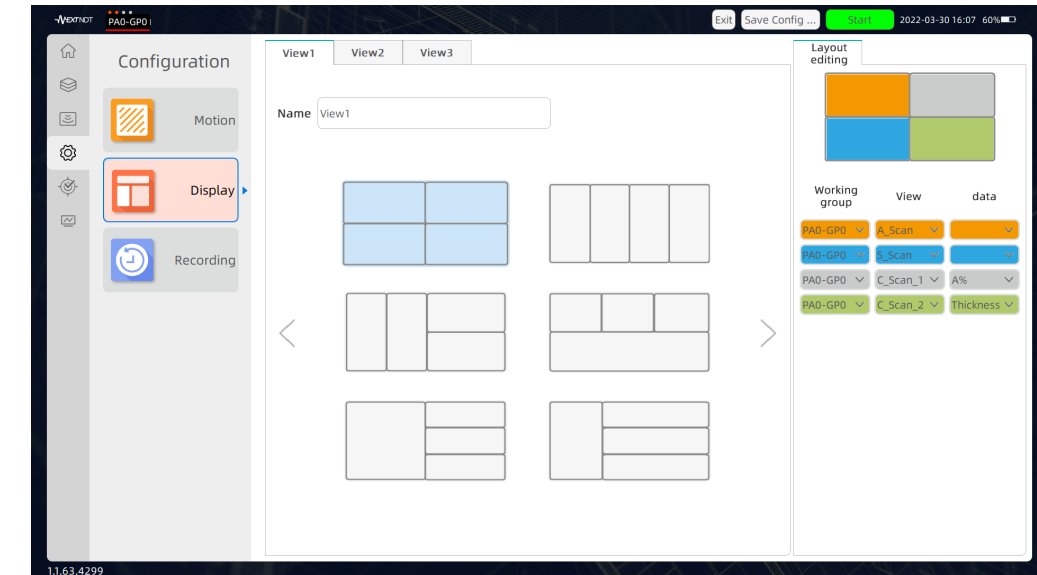


Ultra-High Real-Time Imaging Powered By NextSOFT

NextSCAN includes NextSOFT, our time-tested, powerful, yet easy-to-use software. NextSOFT has many advanced features and functions to assist in capturing all your Parallel PA & TFM UT signals. Most importantly, NextSOFT delivers to you the highest real-time 3D imaging and resolution the industry has to offer with many options via A, B, C, D, and S scans

Probe/Sensor Is What Set Us Apart

NextNDT is the probe and sensor manufacturer with a dedicated team of hardware and software experts standing behind every purchase.



Isn't it nice to know that the engineers that build and design NextSCAN's circuit boards and software work side-by-side with the engineers that build the probes - the eye of the system? With ever-growing complex NDT issues in the industry today, NextNDT, with all in-house engineers, can help customize a tailor-made solution specifically for you, everything from the hardware, software, and sensors. At NextNDT, we can build it faster, better, and more economical than our competitors, we guarantee it.

Highlights

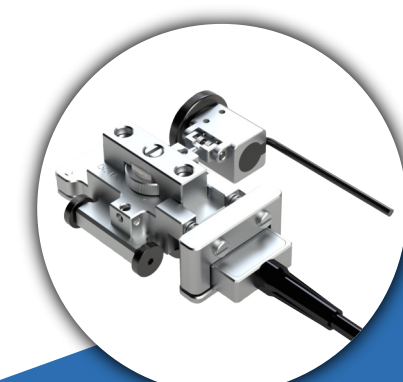
- The 300Gb DDR bandwidth enables real-time smooth TFM display.
- The 16bit / 100MSPS ADC enables the ultra-high dynamic range to see more details. A special circuit design dramatically reduces the loss of transmission and reception and achieves an ultra-high signal-to-noise ratio.
- Built-in new focal law calculator with independent intellectual property rights, direct 3D simulation of sound field distribution. The emission voltage of up to 200V makes detecting small and large precision workpieces a perfect solution. At the same time, 64 channels can meet various special application requirements such as area array and double-sided array.
- The FMC data collection speed can reach 2GB/S, far exceeding the data collection rate of existing portable inspection systems. It can realize the parallel use of multiple machines and the application of large-scale system functions.

Applications

- Multi-group weld inspection procedures fully covered
- HTHA and hydrogen damages inspection with TFM
- Thick welds and CRA/stainless steel weld inspection enhanced with 128-element aperture
- Corrosion mapping of large areas
- (up to 5 x 5 m/ 1 mm step)
- Complex geometry dedicated solution for nozzle and fillet welds (Y and T joints)

Solutions

- Complete toolbox for TFM including TCG calibration
- Ultra-high imaging TFM imaging up to 128 elements
- 3-axis nozzle inspection with live overlay display
- 3-axis paintbrush for composite and corrosion mapping
- Real-time Adaptive TFM (ATFM) for inspection of wavy surfaces



Specification

General parameters

Dimensions (W x H x D)	310*247*96 mm (23.2*9.7*3.8in)
Weight	5 kg (Including 1 battery)
Screen size	11.6 inches (1920*1080)
Touch screen technology	Capacitance
Working temperature	-10°-45°C (14°-113°F)
Storage temperature	-10°-60°C (14°-140°F) (Built in battery)
Cooling fan	2
Operating temperature	70% maximum without cooling at 45 ° C (113 ° f)
Battery running time	2 batteries for 4-5 hours (Hot plug performance)
Hard disk capacity	256 GB SSD (Scalable to 1T)
USB 3.0	2
Encoder I/O	2 axis
Simulation / Number I/O	2 Analog input and output; 1 external trigger
Call the police	4
Wireless connection	yes
Video output	Mini DP
PA Passageway	yes

TFM / FMC

TFM / FMC function	TFM / FMC
Pulse receiver	64:128
Bit depth	16
Frame rate	256 x 256: Max to 80Hz
Parallel multi-mode full focus mode TFM	yes
Parallel PA + TFM acquisition	yes
Image resolution	1024 x 1024
A Scan storage	yes
TFM post processing support	yes
Surface adaptation support	ATFM
Support mode	LL LLL LLLL TT TTT TTTT LTT TLT TLL

PA configuration

PA configuration	64:128 PR
Number of groups	It can be upgraded to 4 probes and 8 groups
Inspection technology	PA
Digit	16 bit
A Scanning height	Max to 200%
A Max number of scanned data points	Max to 16384
Max number of focus rules	8192
Max PRF	20 kHz
Max data transmission	2 GB/s
Digital frequency	100MHz / 200MHz
Pulse shape	Negative square wave pulse / Upgradable positive and negative square wave pulse
Pulse generator voltage	PA: 100V / 200V
Pulse width	25ns to 1250ns
System broadband	0.4 MHz to 25 MHz
Gain range	0-81 dB
Real time average	Maximum to 64
TCG multipoint acquisition	yes

Software features

User experience	Smooth operation
Automatic probe identification	yes
Automatic scanner identification	yes
Automatic wedge recognition	yes
Focusing mode	True depth, sound path, projection
2D focus rule calculation	yes
Installation wizard	yes
Screen wireless image	yes
Wireless remote control	yes
S scan	yes
Real time file merge	yes
3D Data view	yes
Support wireless transmission	yes