NextSCAN

The Next-Gen PA UT TFM / FMC Analyzer

Power Generation Manufacturing Automotive Transportation Oil & Gas Areospace

NEXT NDT
Safety of The Future

A New Generation of High-Performance Phaseye Technology - Flaw Detector

1. HD Capacitive Touch Screen
2. Phased Array Probe Interface
3. System Integration Interface
4. Encoder Interface
5. Power Input
6. USB 3.0
7. Mini DP
8. RJ45 network port
9. Battery Installation Port

A new generation of phased array flaw detector, full focus/phased array display on the same screen

FMC, TFM, and PA technologies can rapidly produce accurate and real-time 3D imaging. Whether conventional ultrasound technology, single-beam, or multi-group, adding PA functions produces even more detailed results. On top of that, synchronous multi-axis encoder linkage makes automatic and semi-automatic detection 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.

More detail - born for professional work

The body is made of high-strength aluminum alloy shell, durable, excellent shielding; Large size industrial capacitive screen; Supports up to 1TB storage capacity; Two hot-swappable lithium batteries can meet the daily working time of about 5 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.

Better Function

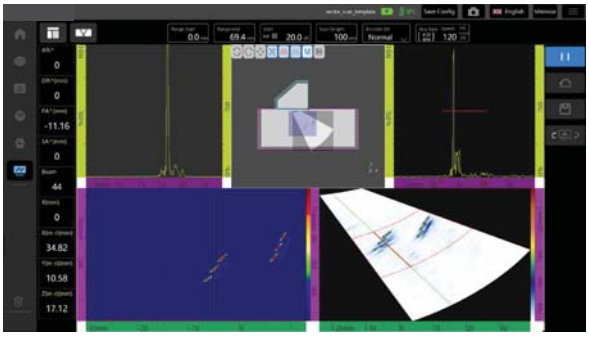
- PA / UT transmit and receive configuration 64: 128 PR
- Focal Law Number 8192
- Maximum data collection speed 2 GB/s
- Digitization frequency 200 MHz
- Pulse voltage (PA) 30 V - 200 V
- Bandwidth (PA) 0.4 MHz ~ 25 MHz
- 256 GB SSD hard drive, up to 1TB expansion
- Communication support WIFI, 3.0 USB, Gigabit or more Ethernet, MiniDP, Bluetooth connection

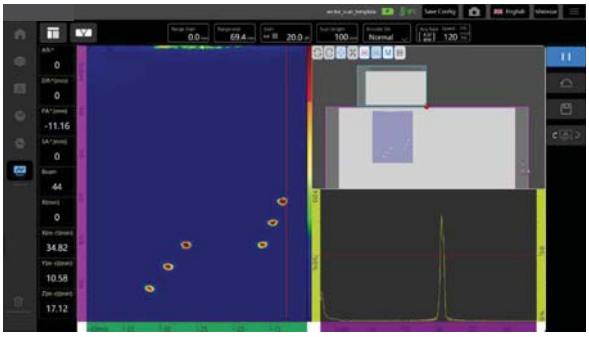
Provides Fast, Efficient, Real-time 3D imaging Capabilities

NextSCAN FMC-64 is a powerful flaw detection instrument with both FMC/TFM and PA. The on-board software fully embodies the efficiency and ability of detection, and has perfect data processing and reporting functions, especially in the data processing of TFM and PA, so that the data you need is readily available, so that defects can be found nowhere! The software has added A variety of display modes, including A, B, C, D, S and 3D imaging, so that the displayed image is closer to the real workpiece, so that the detection is more intuitive and clear!

The new ultra-high performance architecture

The 300Gb DDR bandwidth allows real-time TFM to be realized, and the system runs more smoothly.The 16bit / 100MSPS ADC allows for extremely high dynamic range, allowing you to see more detail.The special circuit design greatly reduces the transmission and reception losses, and achieves a very high signal-to-noise ratio.A new focus law calculator with built-in proprietary intellectual property directly 3D simulates echo response distribution.Up to 200V of emission voltage allows the perfect solution for large workpiece inspection.At the same time 64 channels receive, can achieve a variety of special applica tion requirements such as face array, two-sided array.The FMC data acquisition speed can reach 2GB/s, far exceeding the data acquisition rate of existing portable detection systems.It can realize the parallel use of multiple machines and realize the functional application of large-scale systems.





Integrated probe and instrument design

Using years of experience in instrument research and development, we combined our probe design, R&D, and manufacturing capabilities to produce our **Next**SCAN FMC phased array system with no equal. Eintek can assist you with professional high-end ultrasonic application development, from professional software to custom state-of-the-art probe designs, from encoders to scanning frames; we provide a full range of professional and world-class solutions!

NextSCAN Specification

TECHNICAL SPECIFICATION with TFM/FMC/PCI/PWI/3D

1. General parameters

Dimensions (W x H x D):	348*277*114 mm (13.7*10.9*4.5in).
Weight:	approx. 6.09 kg (including 1 battery).
Screen size:	11.6 inches / Resolution :1920*1080).

2. Hardware design parameters:

Ipex Connectors /Lemo 00 : PA -1 / UT -2 Channel ,TOFD (PR)

Touchscreen:	Capacitance
Operating temperature:	-10°-45°C (14°-113°F)
Storage temperature:	-10°-60°C (14°-140°F)
Cooling fans:	2 nos
Operating humidity:	70% max at 45°C without cooling
Battery running time:	5 hours of operation
USB 3.0:	2 ports
Wireless connection	With/Without Dongle
Video Output:	Mini DP -HDMI
Internal Memory:	256 GB SSD hard drive, 1TB expandable
Drop Test:	MIL-STD-810G
Ingress Protection:	IP65
Individual Data file size:	>30GB

LAN Port: Gigabit or more Ethernet / Bluetooth Enabled

Encoders 2-axis encoder line(quadrature or clock/direction)

3.UT Specification

	PA	UT/TOFD
System bandwidth	0.4 MHz to 25 MHz	0.4 MHz to 25 MHz
Pulse width	20ns to 1250ns	20ns to 1250ns
Pulser voltage	30- 200V	30V-300V
Maximum PRF	20KHz	20KHz
dB range	0-80dB	0-100dB
Pulse shape	Pos,Neg Bipolar Sq	Negative Square
Code compliance	ISO 18563-1:2022	EN22232:2020

Real-time average: up to 64

TCG Multipoint Acquisition: Multipoint

Scan Techniques : PAUT beam types (linear, sectorial, and compound), single ultrasonic beam (UT), TOFD, TFM, PCI,FMC & PWI

Rectification:+HW.-HW,FW, RF ,Envelop

4.NextSacn PA/TFM Configuration

NextSCAN (PR)	32:64	32:128	64:128
Pulser Channels	32	32	64
Receiver Channels	64	128	128
Number of groups	8	8	8
Number of bits	16	16	16

A Maximum number of data points: 16834

Maximum number of focal law : 8192

A Scan maximum ampitude :Upto 1600%

Digitization frequency: 200MHz

5. TFM/FMC/PCI/PWI

Function: TFM/FMC/PCI/PWI

TFM Frame Rate: 256 x 256 Upto 80Hz Dual

Mode TFM/PCI

Parallel PA+TFM acquisition

TFM resolution: 1024 x 1024

Dual side PAUT data acquisition FMC/PCI

Real Time TFM& PCI envelope

Maximum data collection speed: 2 GB/s

Upto 128 Channels of TFM

6. Software features

Probe and Wedge Database

Focusing Method: Depth, Path, Horizontal

2D Focal Law Calculations

Beam Overlay Display

3D display of workpiece structure

Remote Control

3D Data View

Support wireless transmission

Digital Inputs and Outputs

2 analog I/O with a external trigger

Display layouts : 8 layouts at a time

A,B,C,S,TFM,PCI,PWI, Merged B -Scan or 3D

Raw FMC data transfer with Nextview s/w

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