Performance

Parameter		PA Module	Conventional UT
Configuration	Receiver / Pulser	32/128	2 / 2
	Range	9900μs	9900μs
	Velocity	340-15240m/s	340-15240m/s
Pulser	Test Mode	PE / PC	PE / PC / TT / TOFD
	Voltage	50V / 100V	100V / 200V / 400V
	Pulse Shape	Negative Square Wave	Negative Square Wave
	Pulse Width	30-1000ns/2.5ns	30-1000ns/2.5ns
	Rise Time	<8ns	<8ns
	PRF	20KHz	20KHz
	Delay	0-20μs/2.5ns	0-20μs/2.5ns
Receiver	Gain	0-120dB	0-120dB
	Bandwidth	0.5-15MHz	0.5-20MHz
	Delay	50μs/0.1μs	50μs/0.1μs
Data Acquisition	Sampling rate	100MHz	100MHz
	ADC resolution	10bit	12bit
	Focal law numbe	512	NA
	Focus type	True depth/half sound path/projection/any surface	NA
	Detection	FW/HW+/HW-/RF	FW/HW+/HW-/RF
Scan/Display	Type	Sectorial/linear scan	NA
	Display Mode	A/B/C/S/3D/TopC	A/B(TOFD)
	Unit	mm	mm
TCG	Points	16	
	Dynamic Range	40dB	
	Max Gain Slope	40dB/μs	
Report		WORD	
Data Storage	Storage Devices	USB/SSD (built-in)	
Display Screen	Size	10.4 inch	
	Resolution	1024*768pixel	
	Visual region	211mm*158mm	
	Type	IPS capacitive touch screen	
I/O Port	USB3.0	2	
	Internet	2 pcs; up to X86, 1000 Mb/s; down to FPGA, 1000 Mb/s	
	WIFI	2.4G/5G dual band, 150 Mb/s	
	Video Output	HDMI 1.4b	
	Encoder	LEMO 16-pin	
Language		English / Chinese	
Power Supply	DC Supply Voltage	15V DC 100W	
	Battery Type	One 11.25V 99.6Wh lithium battery	
	Continuous Working Time	4 Hours	
Case	Size	360mm×260mm×130mm	
	Weight	7Kg(With Battery)	

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PAUT DETECTOR DOPPLER

NOVASCAN

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3D
Real time 3D Detection function

TFM/FMC
Full focus detection Points 1024 * 1024

Support multiple groups of simultaneous focusing simulation

Automatic calculation of defect area

NovaScan PAUT Instrument

Novascan is a portable instrument with perfect functions, with real-time full focus imaging function, new guide process and customer-oriented operation design, which greatly simplifies the process setting process and improves the work efficiency. The instrument can also carry out independent TOFD / UT detection (dual channel), with perfect function and strong practicability. It is suitable for laboratory and complex field detection.

Complete function

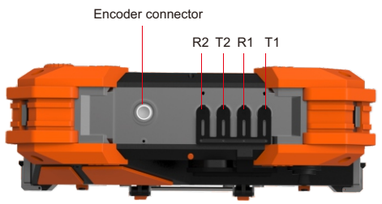
Novascan instrument contains almost all phased array detection functions and can support full focus detection, phased array detection, TOFD detection and conventional single channel detection. Phased array technology supports linear array, double-line array and double-sided array probes, which are suitable for most weld and corrosion detection scenarios. The unique corrosion intelligent analysis and socket detection of the instrument expand the special application field of the instrument. Combined with the design advantages of Duopule's scanner and probe, it can solve many non-destructive testing problems.

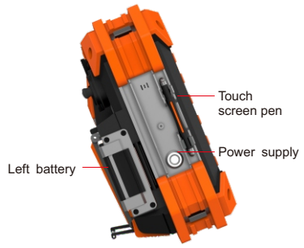
Excellent stability

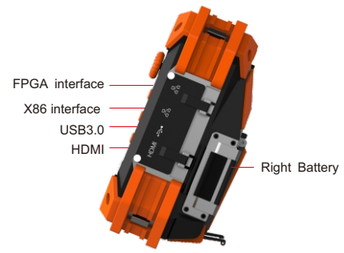
The instrument shell is made of durable aluminum alloy, the interface is strong and durable, and the whole machine is well sealed. Protection level IP66. 1024 * 768 pixel HD industrial capacitor screen.

Performance characteristics

- It adopts 128 channel transmitting and 32 receiving system, and can support 128 chip phased array probe at most.
- Full focus imaging is clear, and the number of points per frame is 1024 * 1024, which greatly improves the defect detection rate.
- It supports the free switching between phased array and full focus mode, and the instrument can adapt to different detection environments.
- The phased array channel can be connected with the conversion box to transfer out of the conventional channel (100V) for pa-ut combination detection; Independent conventional channel (400V) can also be used for pa-tofd combination detection.
- FPGA direct connection mode is provided, which has the function of board and card, and transmits the collected data to the upper computer system, which is convenient for users to customize secondary development.
- 128G built-in solid state drive, unlimited size of single data file.

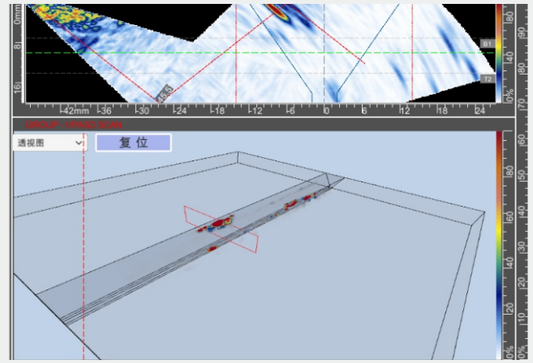


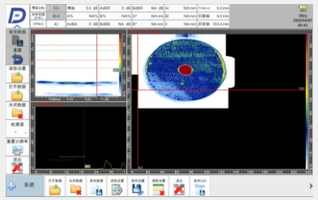




Real time 3D

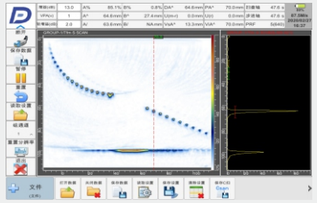
- In the detection process, the scanning status of the workpiece is displayed in real time, and the detected defects are displayed in 3D.
- The 3D diagram can be rotated to observe the defect morphology from multiple angles.
- After the detection is suspended, drag the data scanning line in the 3D diagram to view the s-scan and A-scan information at the corresponding position, so as to comprehensively analyze the nature of the defect.





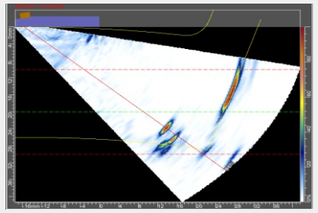
Two dimensional scanning

- Dual axis encoder can be used for high-speed two-dimensional scanning. The length of x-axis can be customized. The system automatically identifies the step size of Y-axis and displays the data in the two-dimensional scanning diagram after data processing. Scanning map can support 30m * 10m (x * y) at most. It can automatically identify corrosion defects and calculate the defect area.



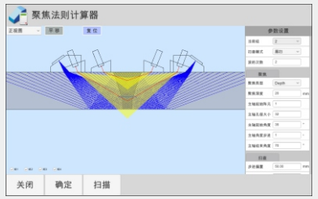
TFM

- Full focus (TFM) is a new detection method using full matrix acquisition data (FMC). Compared with the traditional phased array detection method, TFM has the advantages of high precision, small near surface blind area, large scanning range and so on. With the continuous development of electronic circuit technology, the problem of large amount of data of full focus technology will be solved, and the application prospect is good.



Pipe seat inspection

- The unique tube socket detection function of the software can realize the s-scan to display the cross-section of the tube socket workpiece at the relative position of the probe in real time during the movement of the probe, so that the inherent echo and defect echo can be easily distinguished, which greatly reduces the difficulty of defect evaluation 。



Focus law simulator

- It supports multiple groups of simultaneous focusing simulation, and can simulate the ultrasonic beam coverage of PA and TOFD. Detailed setting parameters can be selected in the parameter setting area, which can play an important reference significance for process analysis and formulation.