Performance

Option		Parameter
Configuration	Receiver/Pulser	4/4、8/8
	Velocity	340-15240m/s
Pulser	Test Mode	PE/PC/TT/TOFD
	Voltage	100V/200V/400V
	Pulse Shape	Negative Square Wave
	Pulse Width	25-1000ns/2.5ns
	Rise Time	<8ns
	PRF	96KHz/48KHz
	Delay	20μs/2.5ns
Receiver	Gain	0-120dB
	Bandwidth	0.5-25MHz
	Delay	20μs/2.5ns
Data Acquisition	Sampling Rate	100Mhz
	ADC	12bit
	Maximum A-scan points	16384
	Number of focusing rules	1024
	Detection	FW/HW+/HW-/RF
Scan/Display	Display Mode	A/B/C/D/Strip Chart/FFT
	Unit	mm/inch
TCG	Point	16
	Gain Range	40dB
Gate	Number	A/B/C/I+Custom Gate
	Threshold	0-100%
	Trigger Mode	Peak/Leading Edge
Language		Chinese/English/Russian
I/O Port	Ethernet	1000 Mb/s
	Encoder	LEMO 16-pin
Physical specification	Temperature	-10℃～45℃
	Size	360.5mmx200mmx60.7mm
	Weight	2.5KG
	Power Supply	15V DC

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DOPPLER ELECTRONIC TECHNOLOGY

Ultrasonic Board

ROBUST M1

SDK development package

Simultaneous detection of multiple groups of UT/TOFD

4/8 channels (canbe customized)

ROBUST M1
Ultrasonic Board

Independent multi-channel ultrasonic testing board adopts advanced modular unit design, which can provide 4-channel and 8-channel standardized product series according to different requirements. At the same time, users can customize more channels according to specific application requirements to meet more personalized testing requirements. Each channel supports independent parallel sampling technology, which not only ensures the high efficiency and precision of sampling, but also significantly improves the overall performance of the detection system.

Each channel of the board has a pulse repetition rate (PRF) as high as 12KHz, which enables it to cope with high-speed automatic detection tasks and is suitable for application scenarios with high requirements on detection accuracy, speed and real-time. Its stability and high efficiency make it an ideal choice for ultrasonic testing in industrial, medical and scientific fields. Whether it is thickness measurement, defect detection or other ultrasonic testing applications, it can provide accurate and reliable test results.

In addition, the advantage of modular design lies in its flexibility, users can easily upgrade and expand the number of channels according to actual needs, and ensure that the system always maintains efficient and stable performance in the face of changing needs. This enables the ultrasonic testing board to provide continuous technical support and guarantee in the future technical progress and project expansion, which greatly enhances the adaptability and long-term competitiveness of products.

Software function

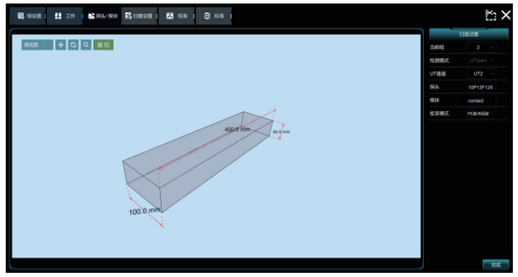
The board provides a complete SDK development package, which can be redeveloped according to the application characteristics of different industries, and is suitable for automatic production lines in metallurgy, steel, railway, machinery and other industries; You can also create customized solutions according to user's needs, and realize the whole chain service from design to installation and debugging. At the same time, the board provides supporting universal software to facilitate users to carry out basic research and experiments. The board is reliable in performance and easy to maintain. All kinds of communication interfaces adopt universal design, which can better match all kinds of automation production lines and provide guarantee for the quality control of industrial automation products.

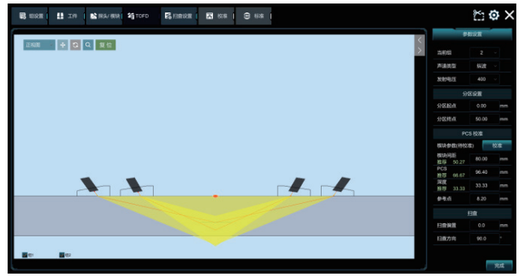
8-channel board

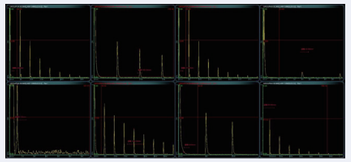
4-channel board

TOFD Beam Coverage Simulation

The software supports workpiece defination, which can set the relevant parameters, welding shape and data set according to the actual situation. The 3D real-time simulation function make it closer to the real workpiece.The weld types in the software basically cover the commonly used types.With TOFD multiple group coverage simulation, the software visually shows the coverage area of each group of TOFD, and easily help complete the TOFD process setting and detection of thick objects.

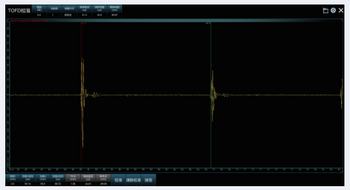






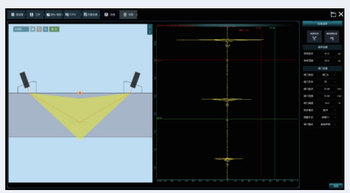
Multi-group Detection Process

Support simultaneous detection and display of multiple groups of UT / TOFD on the same screen.



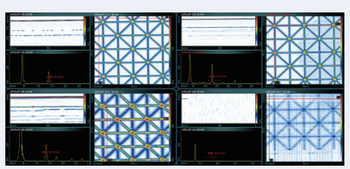
Covering a Variety of Calibration Methods

The software can perform calibration modes for the velocity, delay, TOFD, encoder and so on, and supports manual TCG.The calibration interface is friendly and convenient to operate, which can help users to quickly complete the calibration and greatly improve the work efficiency.



Powerful TOFD Analysis Module

The software has a powerful TOFD analysis module, supporting LW straightening, LW removal, depth measurement and depth correction functions, which makes the defect positioning more simple and accurate.



High-speed parallel to improve efficiency

The card supports advanced parallel sampling technology to realize synchronous data acquisition and real-time processing. The pulse repetition frequency (PRF) of each channel is as high as 12kHz, which can realize high-speed and high-precision signal acquisition. At the same time, real-time C-scan imaging can be performed, which significantly improves the efficiency of multi-channel parallel detection and meets the requirements of high-speed detection in industrial scenes.