

PHASEYE Channel	Maximum PRF	PA system bandwidth	PA maximum aperture	TFM maximum aperture
64:128 PR	40KHz	0.4 MHz to 25MHz	64	128
32:128 PR	20KHz (upgradable to 40KHz)	0.4 MHz to 18MHz	32	64
32:64 PR	20KHz (upgradable to 40KHz)	0.4 MHz to 18MHz	32	64

### General parameters

Dimensions (W x H x D)	348*254*114 mm (13.7*10*4.5in)
weight	About 4.96kg (including 1 battery)
Screen size	11.6 inches (1920*1080)
Touchscreen Technology	capacitance
Operating temperature	-10°-45°C ( 14°-113°F )
Storage temperature	-10°-60°C ( 14°-140°F ) (with battery inside)
Cooling fan	2
Operating humidity	70% max at 45°C (113°F) without cooling
Battery runtime	5 hours operation on 2 batteries
Hard disk capacity	256 GB SSD (expandable to 1T)
USB 3.0	2
Wireless connectivity	have
Video Output	Mini DP
PA Channels	have

### Software Features

User Experience	Smooth operation
Probe Database	have
Wedge Database	have
Focus mode	Depth, path, level
2D Focal Law Calculation	have
Beam coverage display	have
3D display of workpiece structure	have
Remote Control	have
PAUT and TFM are displayed simultaneously	have
Multi-modal TFM simultaneous detection	have
3D data view	have
Support wireless transmission	have

Standard Kit  
 PHASEYE® phased array instrument, including FMC / TFM function and PA function, power cord and printed "Easy Getting Started Instructions". The package also includes the latest version of PHASESOFT software, hard carrying case, calibration certificate, lithium-ion battery, anti-glare screen protector, The package includes a DC charger with power cord, a USB stick with software and user manual, and analysis software.

### PA Configuration

Number of groups	Upgradable to 4 PA probes or 128 UTs, 128 groups
Number of digits	16 bit
A-scan maximum amplitude	Up to 1600%
Maximum number of A-scan data points	Up to 16384
Maximum number of focal laws	8192
Digital frequency	200MHz
Pulse generator voltage	±100V
Pulse shape	Negative square wave, positive square wave, bipolar square wave optional
Phased Array Gain Range	0-120 dB
Pulse Width	20ns to 1250ns
Real-time average	Up to 64
TCG Multi-point Collection	yes

### FMC/TFM/PCI/PWI

TFM supported modes	LL\LL\LLL\TT\TT\TTT\TTTT
	TL\TL\LTT
TFM resolution	1024 x 1024
Number of digits	16
Real-time Envelope	have
FMC/PCI Functionality	support
PWI/TFM Function	support
FMC/PCI Functionality	support

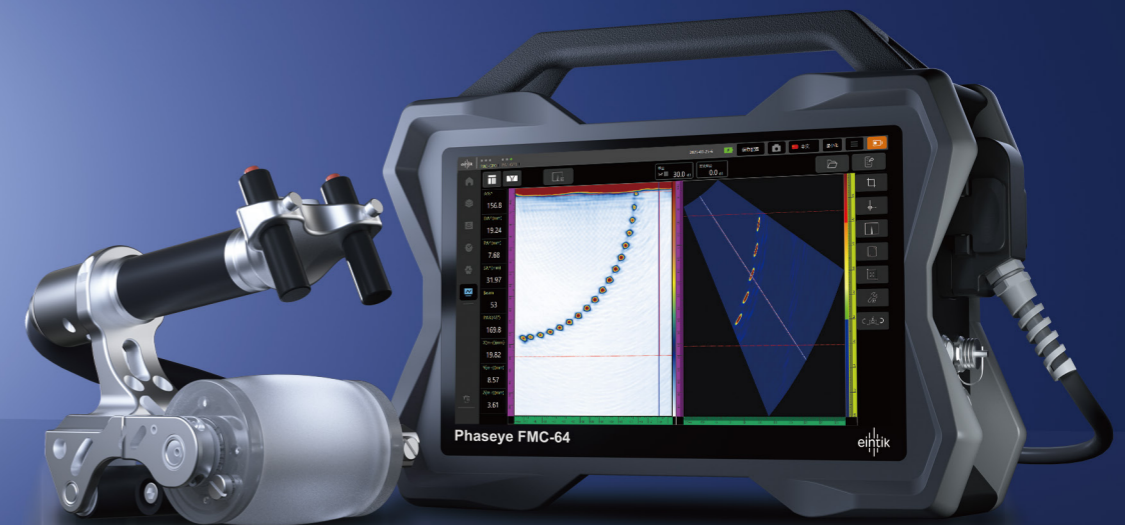
### UT

Number of regular UT channels	Supports conventional UT and TOFD modes
Number of TOFD groups supported	2 groups
Excitation voltage	Up to 300V
Voltage adjustment step	1V
Pulse shape	Negative square wave
Pulse Width	20ns to 1250ns
Pulse width modulation step	1ns
Pulse repetition frequency	30KHz
bandwidth	0.4 MHz to 25 MHz
UT gain range	0-120 dB
show	A/Sideview(TOFD)/C

# PHASEYE

A new generation of full matrix acquisition (FMC),total focusing (TFM)

## Ultrasonic phased array flaw detector



Watching closely, seeing clearly at a glance



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# PHASEYE

## New Generation of high performance ultrasonic phased array flaw detector

### New Generation Phased Array Flaw Detector Full focus/phased array on-screen display

FMC/TFM and PA technologies come together to quickly realize 3D functions. Whether it is conventional ultrasound technology, whether it is single beam or multiple PA groups, the functions are even more powerful. Multi-axis encoder synchronization linkage allows automatic and semi-automatic Motion detection is more efficient.

- ✓ Full Matrix Capture (FMC) - Capture speed up to 2GB/S
- ✓ Total Focusing Method (TFM) - Real Time High Efficiency High Resolution Display
- ✓ Built-in focal law calculator (FLC) - 3D simulation technology predicts echo response distribution
- ✓ Support FMC/TFM, FMC/PCI, PWI/TFM, PWI/PCI

### Pay attention to details, born for professional work

The body is made of high-strength aluminum alloy shell, which is sturdy, durable and well-shielded; large-size industrial capacitive screen; supports up to 1TB storage capacity; 2 hot-swappable lithium batteries can meet about 5 hours of working time per day.

### Multi-channel full focus, unlocking more detection potential

Complete TFM toolbox, including TCG calibration, high-resolution TFM imaging, support for dual-line and dual-surface Array probe TFM imaging. Supports multiple groups of TFM imaging.

### Better Function

- ✓ Focal Law Number 8192
- ✓ Pulse voltage (PA)  $\pm 100$  V
- ✓ Maximum data collection speed 2 GB/s
- ✓ 256 GB SSD hard drive, up to 1TB expansion
- ✓ Digitization frequency 200 MHz
- ✓ Communication supports WIFI, 3.0 USB, Gigabit Ethernet, MiniDP, Bluetooth connection
- ✓ Number of bits: 16



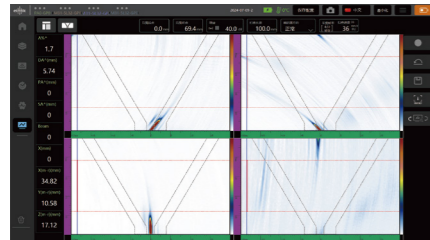
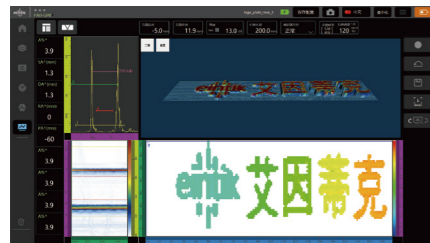
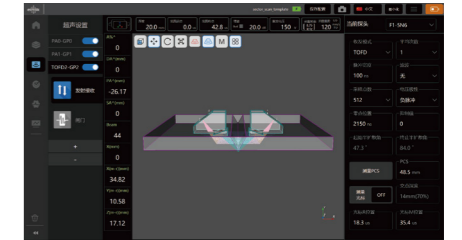
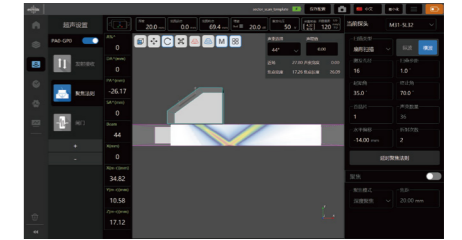
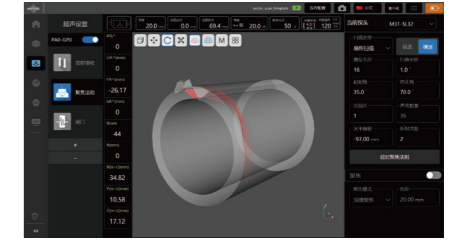
# PHASEYE onboard software

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

PHASEYE PA32-64PR-TFM is a powerful flaw detection instrument with both FMC/TFM and PA. The onboard software fully embodies the efficiency and capability 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 can be easily obtained. Let the defects nowhere to hide! 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, 32 channels can be received, which can realize a variety of special application requirements such as face array and 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 PHASEYE FMC phased array system with no equal. Einteck 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!



### Program Application scenarios



Wind turbine blades, glass carbon fiber inspection



Composite material (carbon fiber) inspection



Aluminum plate and aluminum honeycomb inspection



Bolt detection



Plane detection



Aircraft Skin Bonding Inspection



HDPE pipe resistance welding workpiece inspection



Gear detection



Weld inspection

### Program Overall Highlights

- ✓ From system hardware to core algorithms and sensor technology, all have independent intellectual property rights
- ✓ High performance FMC/TFM and PA system
- ✓ Built-in new focal law calculator for fast 3D function
- ✓ Built-in accurate probe and wedge data sets for automatic matching and fast detection
- ✓ Supports 8 groups of simultaneous scanning, 8192 focal laws
- ✓ Software functions are platformized to achieve rapid application according to functional modules
- ✓ Detection function classification application to achieve quick calibration and quick wizard functions
- ✓ It has the capability to realize TFM and PA functions simultaneously, ensuring high coverage and high-sensitivity detection of key areas.