OLYMPUS

Power You Can Carry

OmniScan™ X3 64 Phased Array and TFM Flaw Detector

Work More Efficiently and Confidently

Improved Agility and Mobility

When on the job site, you need equipment that is compact and easy to transport. Smaller and less cumbersome than other typical 64-channel devices, the OmniScan™ X3 64 flaw detector offers true portability, providing increased convenience and flexibility for jobs where space is limited.

Feel Supported, Wherever You Go

Offering proven reliability, the OmniScan X3 64 unit is built tough to withstand harsh environments and challenging inspection demands. Backed by our global customer support, geolocation, and wireless connectivity, you can be productive and efficient in the field.

- IP65 certified rain and dust proof
- User-replaceable cooling fan
- Onboard GPS*
- Software updates via the Olympus Scientific Cloud™ (OSC)

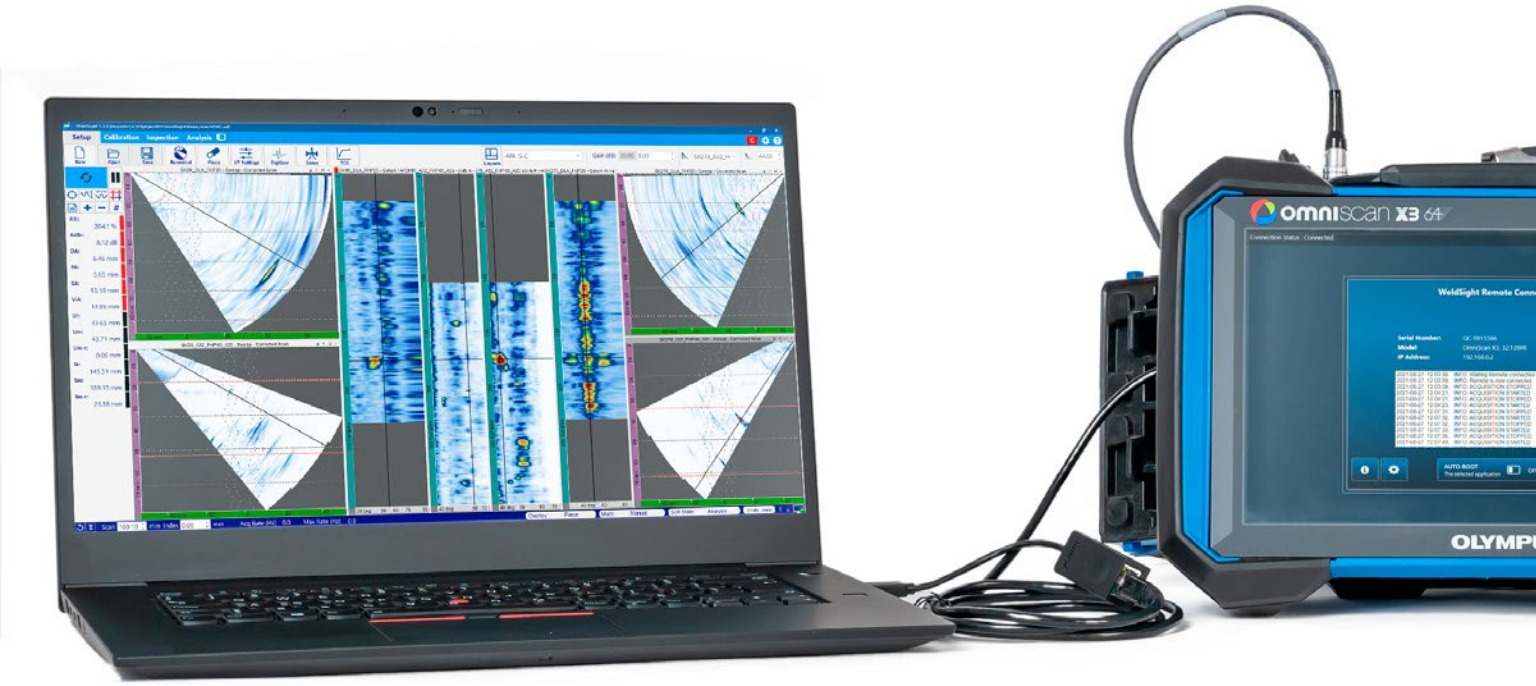
Minimize the Learning Curve

This OmniScan unit has the same user-friendly interface and streamlined, intuitive menu structure of the OmniScan X3 flaw detector. Compatible with OmniScan setup files, it can load your parameters from other OmniScan X3 models so you can reuse your preset configurations.

Accomplish More in Less Time

The OmniScan X3 64 internal storage holds larger amounts of inspection data (up to 1 TB), enabling you to perform bigger scanning jobs and stay on site longer without needing to transfer your files.

Maximize Your Productivity

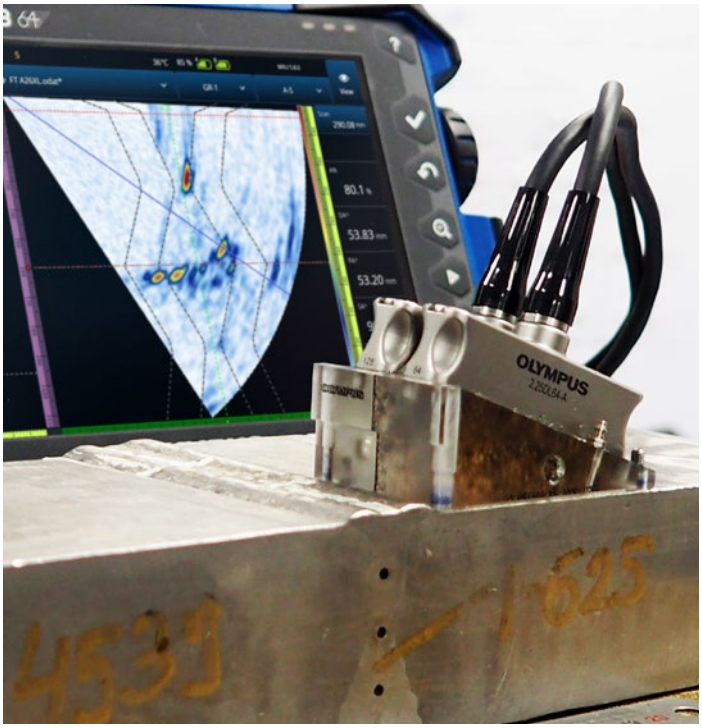


Thoroughly Examine Thicker Welds and Wall Thicknesses

Improved phased array focusing capabilities supported by the larger active aperture enables imaging deeper into thick welds and thick-walled material.

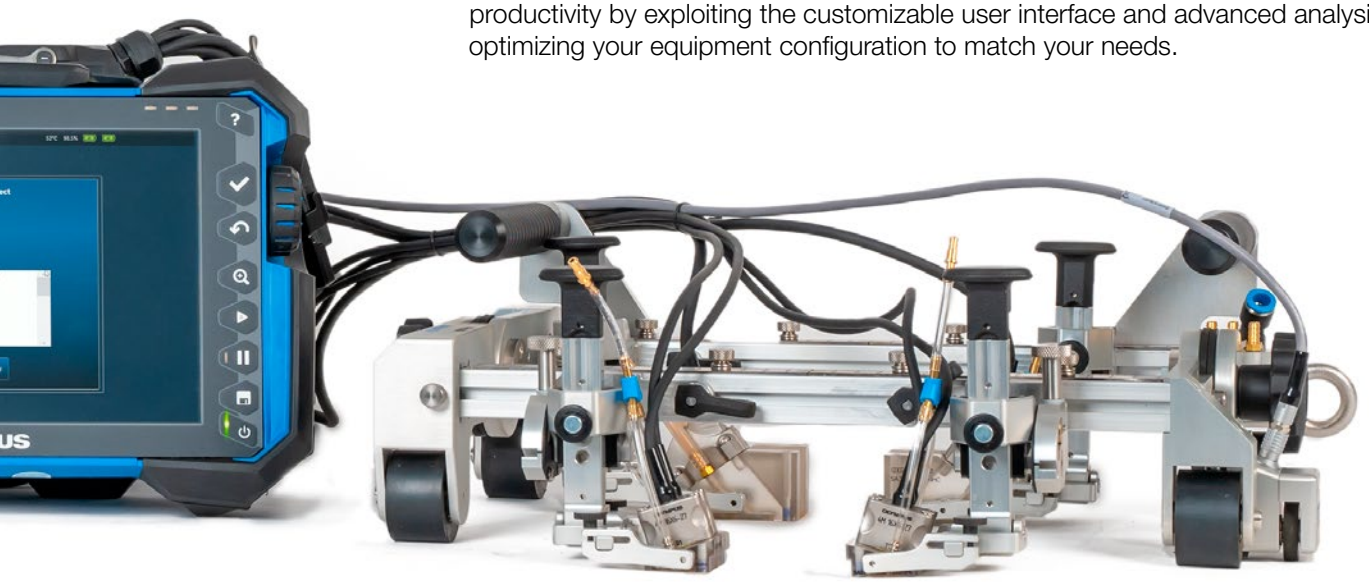
Expand Your Capabilities in Coarse-Grained Materials

Increase your potential to meet the challenges of your customers and develop new procedures for a wider range of applications. Gain the power to drive advanced PA probes such as our Dual Linear Array™ or Dual Matrix Array™ probes or customized probes to achieve higher-quality imaging of acoustically challenging materials, such as dissimilar metal welds.



Optimized Inspection Workflow

Facilitate complex and specialized inspection procedures, such as new-fabrication welds in pressure vessels, using Olympus' WeldSight™ software in tandem with the OmniScan™ X3 64 unit. Installing the WeldSight Remote Connect app on the flaw detector enables you to control the acquisition and instantly view your phased array (PA) data on a PC. Increase your productivity by exploiting the customizable user interface and advanced analysis tools and optimizing your equipment configuration to match your needs.



Ease Challenging Applications

Detect and distinguish smaller defects, using the high-quality imaging supported by the instrument's 64-channel capacity. Using larger, more powerful PA probes, you can attain a better resolution deeper in the part and clearly see minute flaws such as high-temperature hydrogen attack (HTHA) before they reach the critical phase.

Total Focusing Method (TFM) Made Accessible

Perform Faster TFM

The improved speed and efficiency of the OmniScan™ X3 64 model's TFM makes it more feasible to incorporate as a regular part of your inspection process. Using a full 64-element aperture increases the acquisition speed of TFM, which is further optimized by the system's sparse firing algorithm.

Offering exponentially faster acquisition rates, our improved TFM provides you with vital data for your analysis:

Up to
4x Faster
Using 64-Element Probes**

Up to
2x Faster
with a 32-Element Aperture**

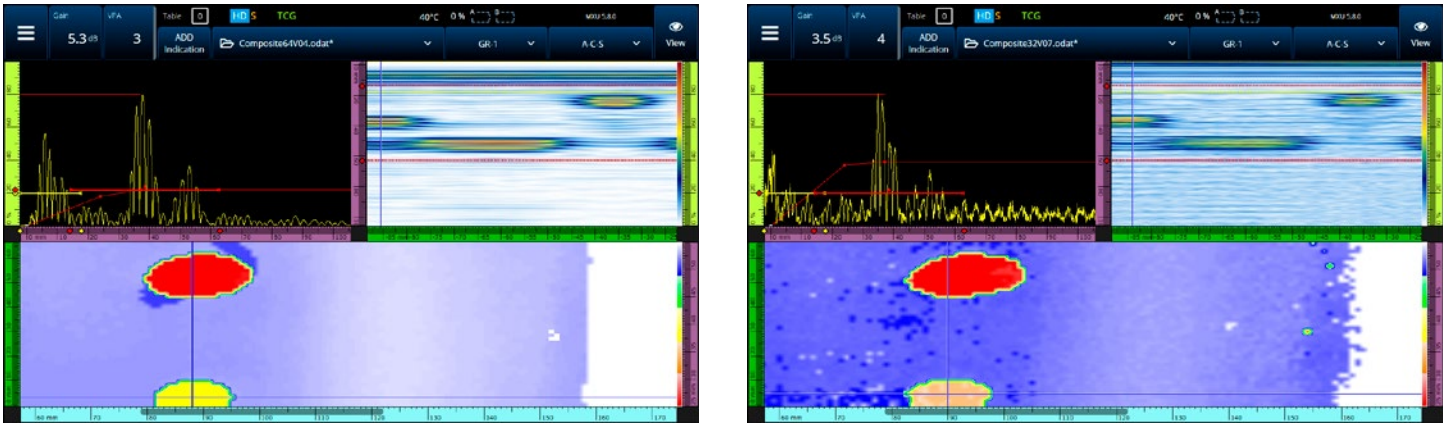
Reach Your Peak Potential

Use the clear, crisp imaging provided by 64- channel TFM to achieve more precise sizing and flaw positioning.

Expand your potential for specialized applications using the unit's up to 128-element aperture capacity to meet challenging inspection demands.

Improved Performance in Attenuative Materials

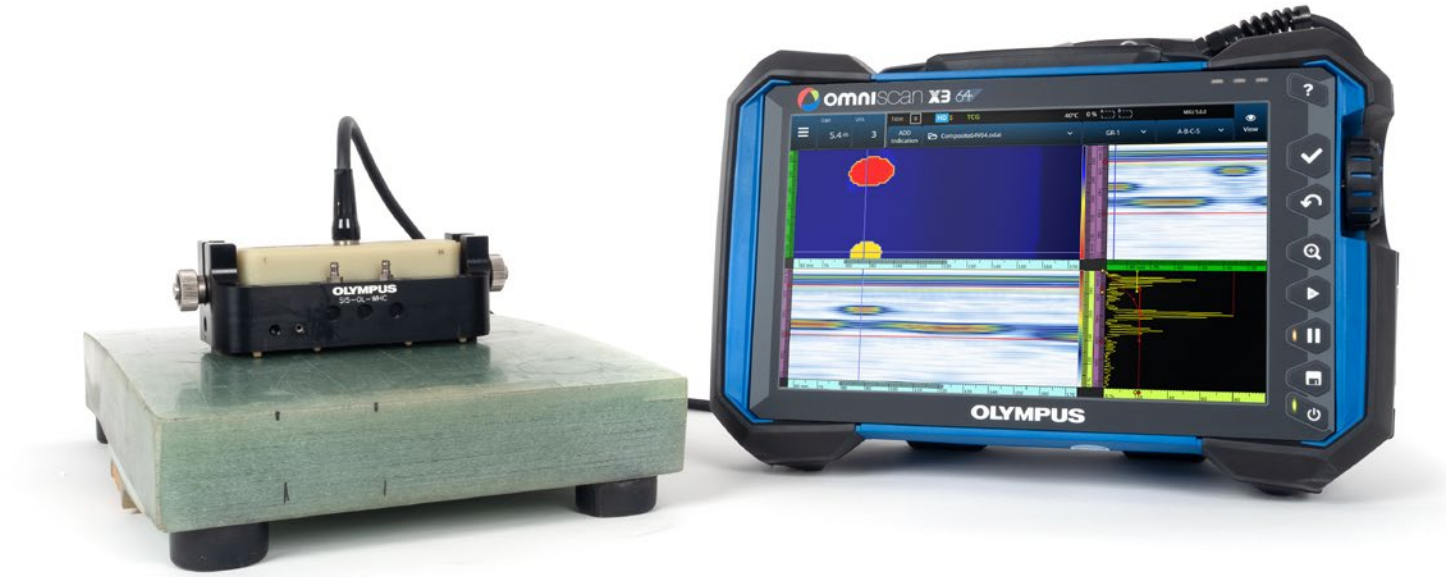
The OmniScan™ X3 64 flaw detector offers better sound penetration in materials with high attenuation. Its 1000 ns pulse width frequency capacity and lower 0.2 MHz bandwidth enables you to use lower frequency probes, improving your ability to scan the entire volume of highly attenuative materials, such as fiberglass and other composites.



Obtain images in composites with increased clarity and a high signal-to-noise ratio: OmniScan X3 64 instrument image obtained by optimizing the low-bandwidth limit (left), versus a standard OmniScan X3 unit (right)

Achieve Precision in Fiberglass and Composites

Offering lower pulse voltage limit options, the OmniScan X3 64 flaw detector enables you to eliminate front wall echo saturation and see complete echo waveforms. Use this capability to exploit all detection options, including the peak and edge, making your analysis more reliable.



Specifications

Scan this code for the complete OmniScan X3 64 specfications

Housing and General		
Size (W × H × D)	335 mm × 221 mm × 151 mm (13.2 in. × 8.7 in. × 5.9 in.)	
Weight	5.7 kg (12.6 lb) (with 1 battery)	
Onboard Storage	1 TB internal SSD storage, extendable as needed with an external USB drive; 25 GB maximum file size	
Storage Devices	SDHC™ and SDXC™ cards or most standard USB storage devices	
GPS	Yes (unless specified otherwise for some regions)	
Wireless Connection	Yes (USB dongle sold separately as an accessory)	
Connectors	1 PA connector, 2x UT channels (2 P/R connectors each)	
Number of Groups	8 groups	
Certifications	ISO 18563-1:2015 ISO 22232-1:2020	
Display	TFT LCD with resistive touch screen, 269 mm (10.6 in.), 1280 × 768 pixels	
Battery	2 lithium-ion battery (only 1 included at purchase), 93 Wh	
Battery Life	5 hours using 2 batteries (hot-swap capable)	
Inputs and Outputs		
Ports	2 USB ports (one hidden behind the battery), 1 USB 3.0, HDMI video output, SDHC memory card, and Ethernet communication port	
Encoders	2-axis encoder line (quadrature or clock/direction), 3rd encoder ready	
Digital Input and outputs	6 digital inputs, TTL (enabling acquisition ON/OFF) and 5 digital outputs, TTL	
PA/UT Configuration		
Frequency	Effective Digitizing Frequency	Up to 100 MHz
	Max PRF	20 kHz
Data Specifications		
Processing	Maximum Number of A-Scan Data Points	Up to 16,384
Rectification	RF, full wave, half wave+, half wave-	
Filtering	Selection of low-pass (UT only), band-pass, and high-pass filters, and averaging	
Video Filtering	Smoothing (adjusted to the probe frequency range)	
TCG Range	PA (standard): 40 dB per step of 0.1 dB UT: 100 dB per step of 0.1 dB	
TCG Maximum Slope	PA (standard): 40 dB/10 ns UT: 40 dB/10 ns	

Acoustic Specifications			
		PA Channel	UT Channels
Pulser	Voltage	10 Vpp, 20 Vpp, 40 Vpp, 80 Vpp, 120 Vpp, and 160 Vpp	85 V, 155 V, and 295 V
	Pulse Shape	Bipolar square pulse	Negative square pulse
	Pulse Width	Adjustable from 30 ns to 1000 ns; resolution of 2.5 ns	Adjustable from 30 ns to 1,000 ns; resolution of 2.5 ns
Receiver	Gain Range	0 dB to 80 dB maximum input signal; 900 mVpp (full-screen height)	0 dB to 120 dB maximum input signal; 30 Vpp (full-screen height)
	System Bandwidth	0.2 MHz to 26.5 MHz	0.25 MHz to 28.5 MHz
Beam Formation	Scan Type	Single, linear, sectorial, compound, and TFM	
	Maximum Aperture	64 elements	
	Number of Focal Laws	Up to 1024 total (512 per group maximum)	
TFM/FMC			
Supported Wave Sets	Pulse echo: L-L, TT, and TT-TT Self-Tandem: TT-T, LL-L, LT-T, TL-T, TT-L, TTT-TT, and TL-L		
Parallel Multimode TFM	4 simultaneous TFM groups (wave sets)		
Live Envelope Processing	Yes		
Maximum Aperture	128-element extended aperture		
Image Resolution	Up to 1024 × 1024 (1 MM points) (for each TFM wave set)		
Operating Environment			
Ingress Protection Rating	IP65 certified (completely protected against dust and water jets from all directions (6.3 mm nozzle))		
Shockproof Rating	Drop tested according to MIL-STD-810G		
Operating Temperature	–10°C to 45° C (14 °F to 113°F)		

Standard Inclusions
OmniScan X3 64 phased array instrument including FMC/TFM functionality and 2 UT channels, and regionally configured power cord with printed instructions. Includes the latest version of OmniScan MXU software, a rigid transport case, calibration certificate, 93 Wh lithium-ion battery, spare screen protector, DC charger with power cord, USB key with MXU Software and User's Manuals, empty USB key for file transfer purposes, and our complimentary OmniPC analysis software. GPS functionality restricted in some regions. Wireless dongle sold separately. Contact your Olympus representative for more details.

Recommended Accessories

Olympus offers software and hardware options to expand and protect the performance of your OmniScan X3 64 unit. When our WeldSight™ Remote Connect app is installed on your unit, you can acquire and analyze your data using the advanced tools of WeldSight software, maximizing your productivity for specialized applications.

To explore the various software packages we offer, visit www.Olympus-IMS.com/WeldSight/ for more details.

To protect the instrument against foreign-object ingress when connected to a WeldSight PC, we offer this optional special-purpose door, OMNI-A-X3-SPDOOR [Q1000230].

OLYMPUS SCIENTIFIC SOLUTIONS AMERICAS CORP.
is certified to ISO 9001, ISO 14001, and OHSAS 18001.

*GPS not available in all regions. Consult your local Olympus representative for details.
**Results obtained using a 64-element probe, compared with an OmniScan X3 32:128 model.

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www.olympus-ims.com

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