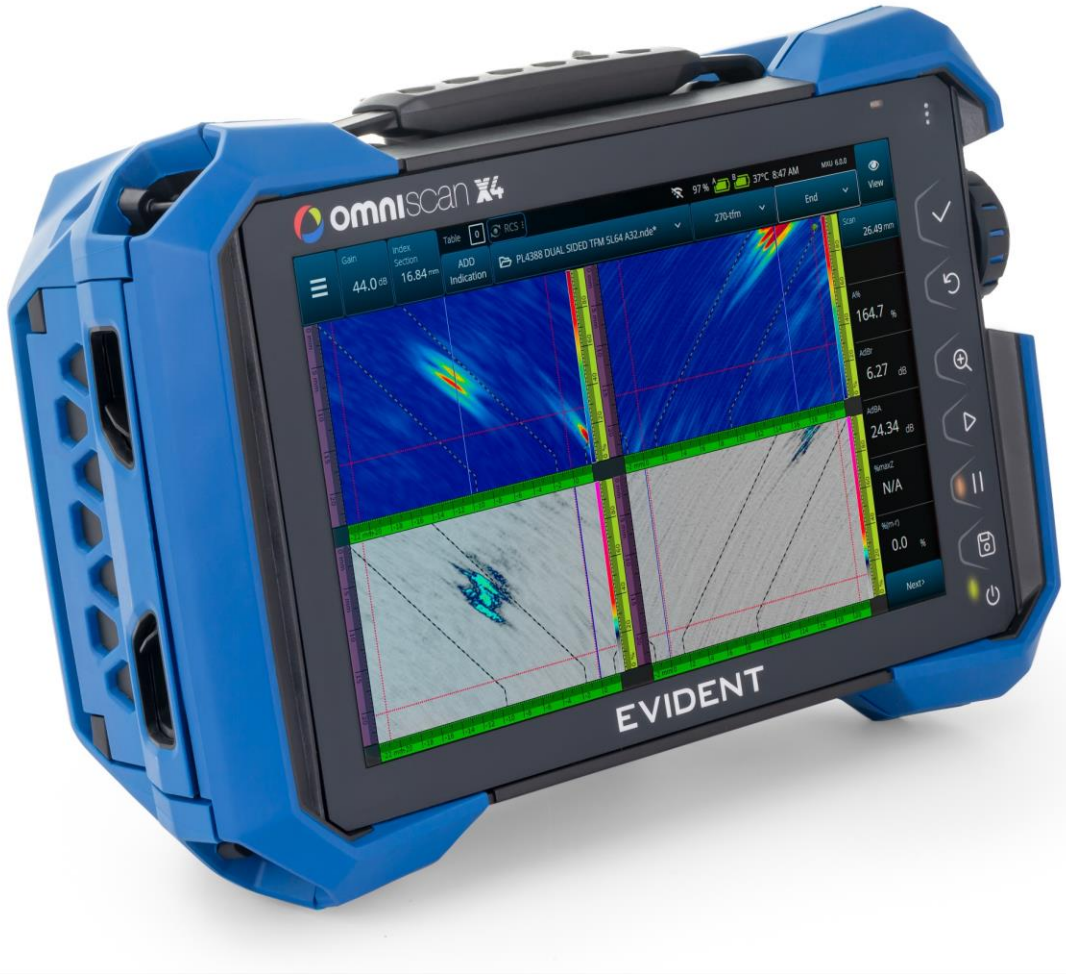
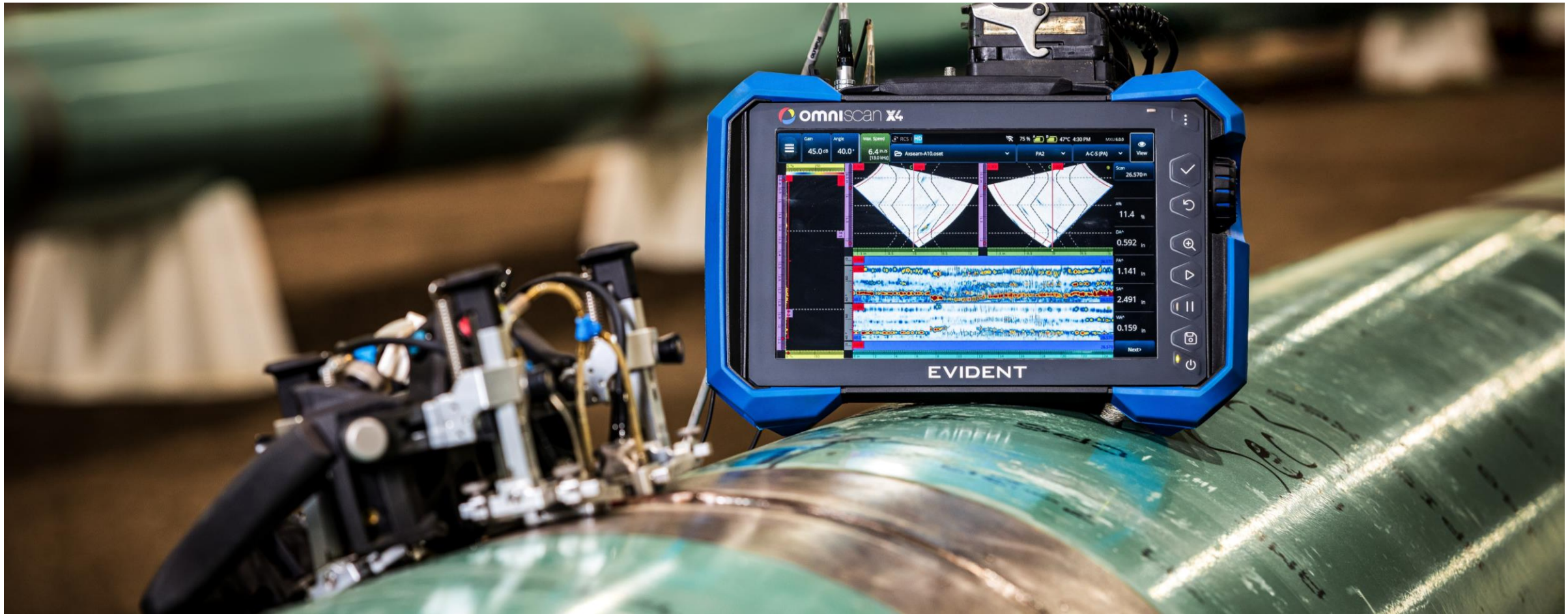
EVIDENT



OmniScan ™ X4新品介绍

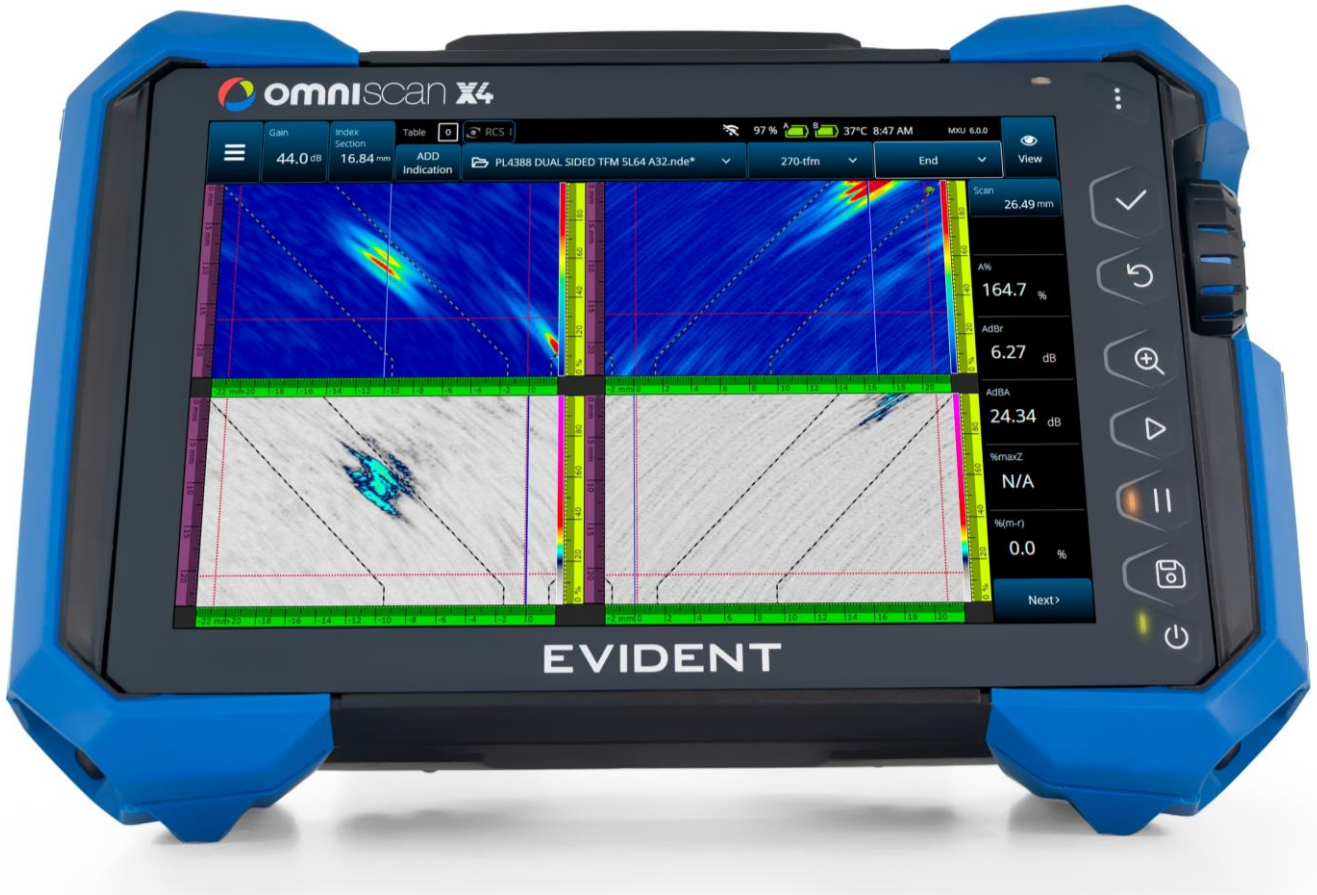
整装待发



整装待发

OmniScan™ X4

全型号标配搭载相位相干成像（PCI）功能



自MXU系统升级到5.10之后，仅OmniScan X3 64探伤仪提供了最先进的相位相干成像（PCI）功能。

OmniScan X4系列的**所有型号**，从16:64PR到64:128PR均标配搭载PCI功能。

相位相干成像（PCI）提供了迄今为止钩状缺陷和钩状裂纹的最清晰显示，使检测人员能够更准确地判断缺陷。

TFM成像速度提高至3倍

数据吞吐量曾经是限制OmniScan X3系列TFM数据采集速度的最大因素。

OmniScan X4改进了更大的数据吞吐量，允许更快的TFM机载数据采集速度。

OmniSCan X4（64:128PR）可以实现高达3倍的TFM采集速度（与之前的OmniSCan X3 64相比）！

双探头TFM / PCI

先进的成像技术能够扩展您的检测手段，大大提高您的生产力。

X4支持使用两个探头同时采集TFM/PCI数据，因此检测人员可以通过一次单面双侧扫查检测整道焊缝，节省从焊缝两侧分别扫查、分析或融合报告数据的时间。

FMC原始数据保存 – X4 64:128PR

NDT专家可以从收集的FMC数据中提取原始A扫描，用于重建TFM成像或重建其他模式图像，对数据进行二次开发及实验，以应对更加高级和新颖的应用。

具有编程专业知识的高级用户可以通过对FMC数据的访问来不断扩展和开发他们的检测能力，解决更具有挑战性的应用并取得更好的结果。

应用预设置

帮助新手更快的上手检测工作，提高不同检测人员操作检测结果的可靠性和一致性。

应用预设置功能可以让检测人员基于Evident的探头、扫查器（包括RollerFORM™、FlexoFORM™和HydroFORM™扫查器）以及解决方案更快地创建设置文件。

预设置仅需几步就能配置完成。

01

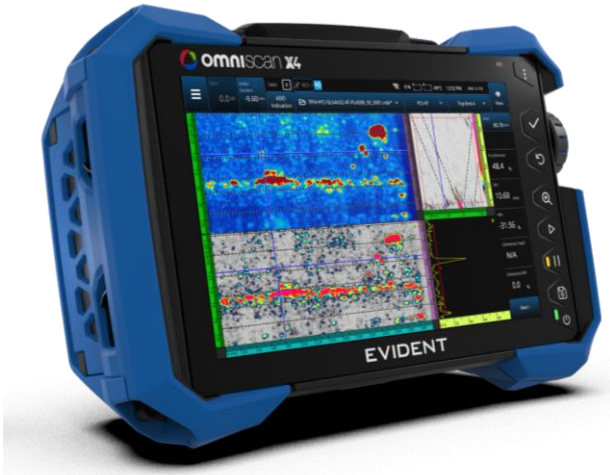
仪器参数配置

OmniScan X4 机型一览

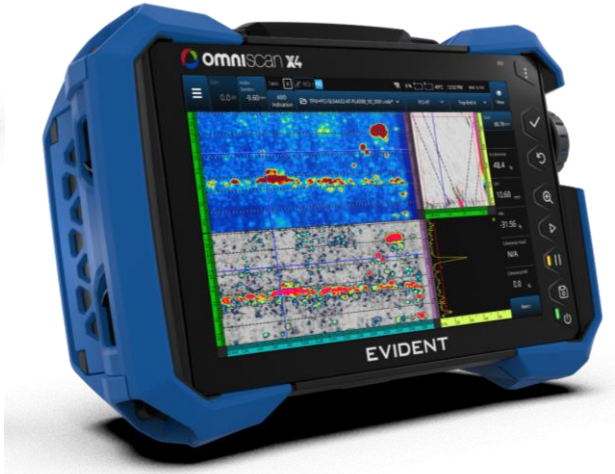
NEW

所有 OmniScan X4
机型均标配2块电池！

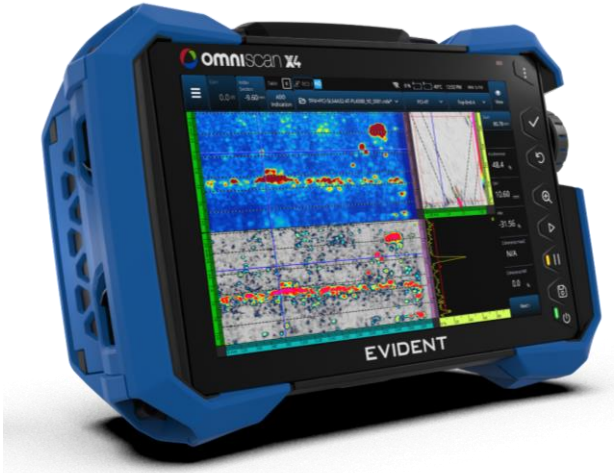
- 低配置机型可付费升级到高配置机型（当地售后）
- 所有机型拥有相同的外观和配件



16:64PR



16:128PR



32:128PR

64:128PR

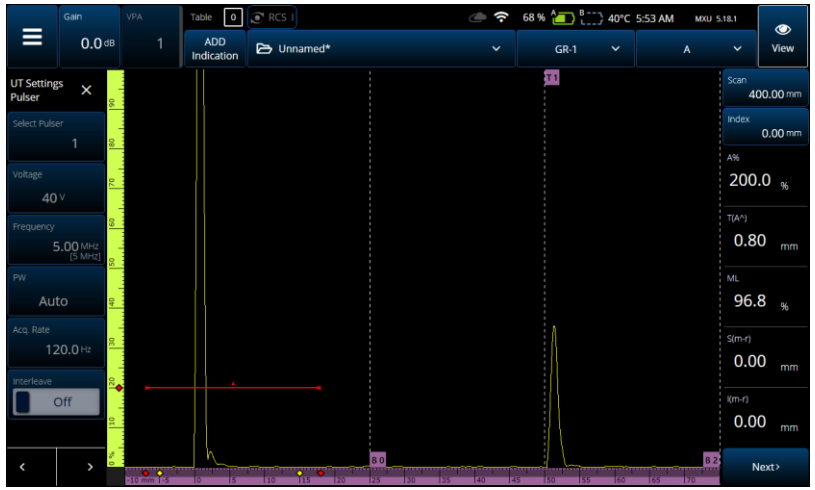
参数对比

性能指标	OmniScan X4 16:64PR	OmniScan X4 16:128PR	OmniScan X4 32:128PR	OmniScan X4 64:128PR
重量，尺寸，外型，MXU软件，设备测试证书，接收通道数	完全相同			
激发通道数	16	16	32	64
TFM最大孔径	32 (最大扩展孔径)		64 (最大扩展孔径)	128 (最大扩展孔径)
接收器输入带宽	0.2 MHz to 26.5 MHz NEW			
最大激发脉冲宽度	1000 ns (完美匹配 0.5 MHz) NEW			
激发脉冲电压 (PA通道)	5Vpp , 10 Vpp, 20 Vpp, 40 Vpp, 80 Vpp, 120 Vpp, 160 Vpp (双极方波脉冲) NEW			
内置存储容量	1 (TB) NEW			
组数	2 PA or 2TFM 2PA + 1UT (TOFD)	8 PA + UT 4 TFM		

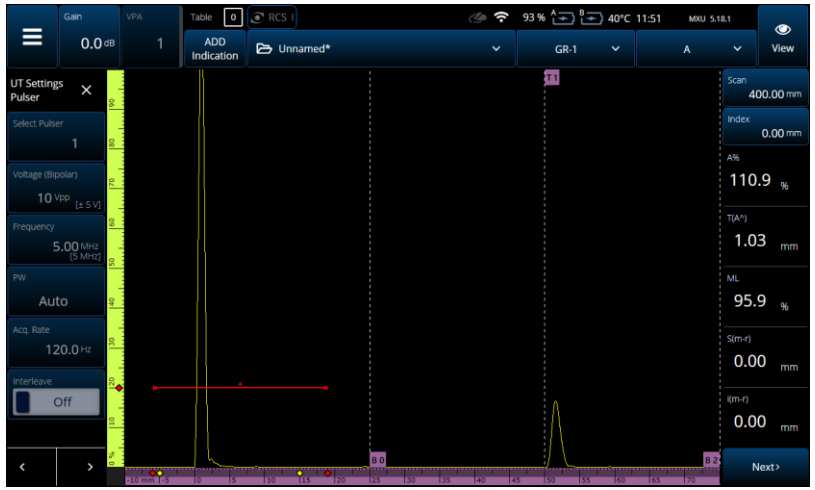
降低电压有助于减弱始脉冲的影响

OmniScan X4 目前可调至最低 5Vpp (双极脉冲)。

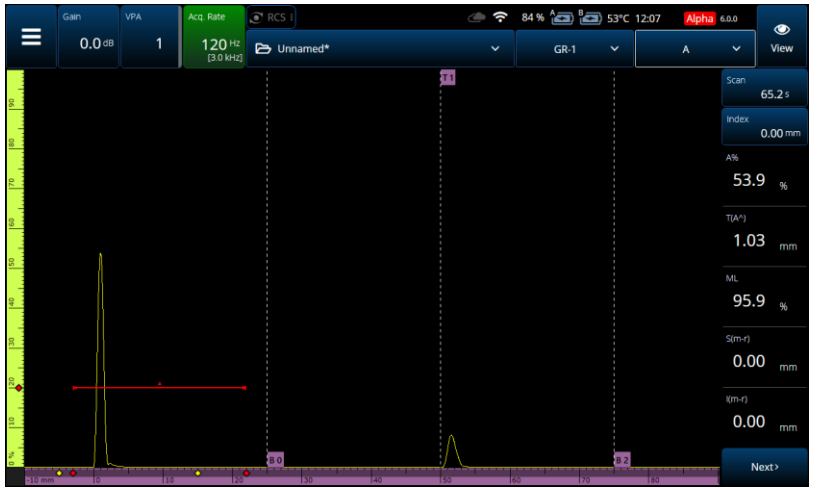
较低的激发电压可以有效地防止始脉冲饱和，降低近表面盲区和提高渡越时间的测量精度。



OmniScan X3 最低增益和最低电压 (40 V)



OmniScan X3-64最低增益和最低电压 (10 Vpp)



OmniScan X4最低增益和最低电压 (5 Vpp)

02

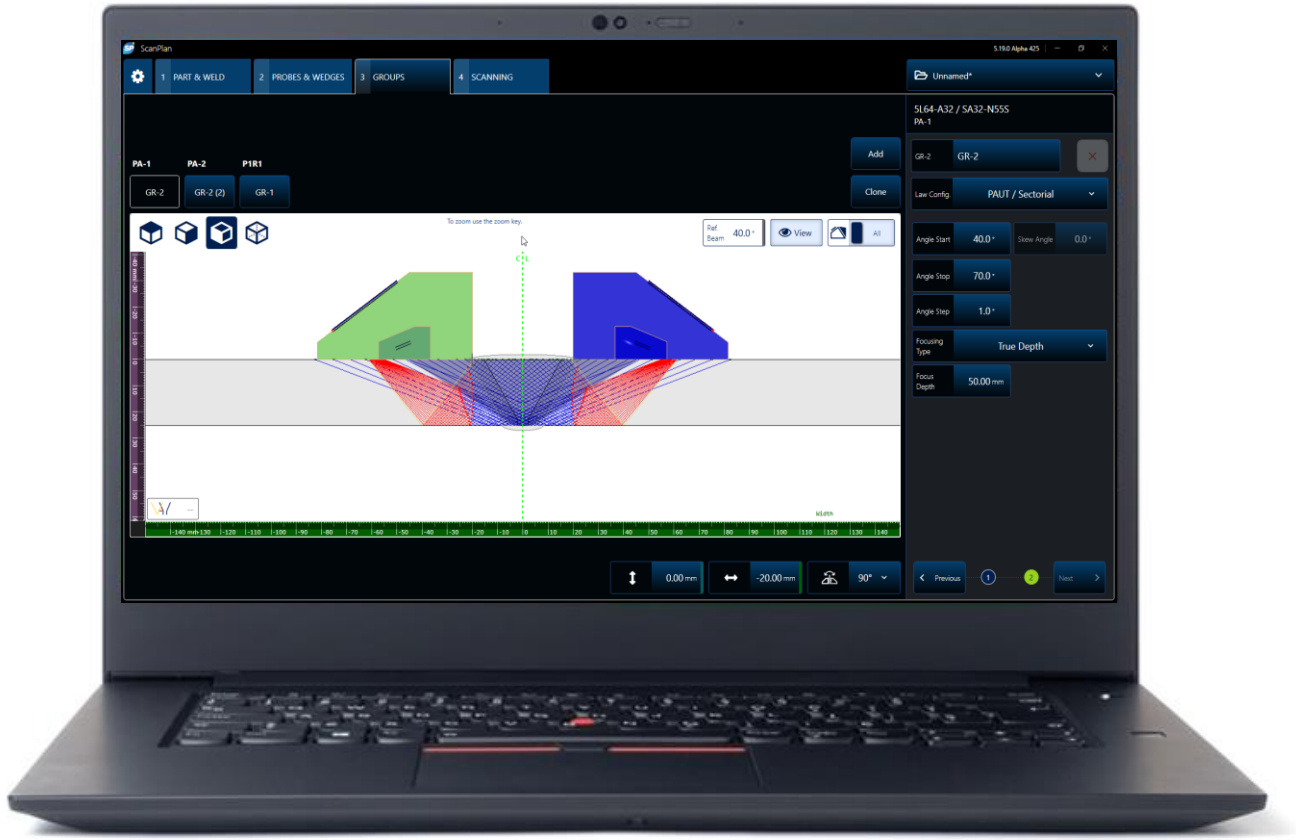
功能性软件

PC端离线设置软件 - ScanPlan

ScanPlan离线软件能够为OmniScan X4探伤仪创建基本的设置文件，然后可以将其导入到仪器中。

ScanPlan的界面及菜单和X4 MXU软件几乎完全一致。

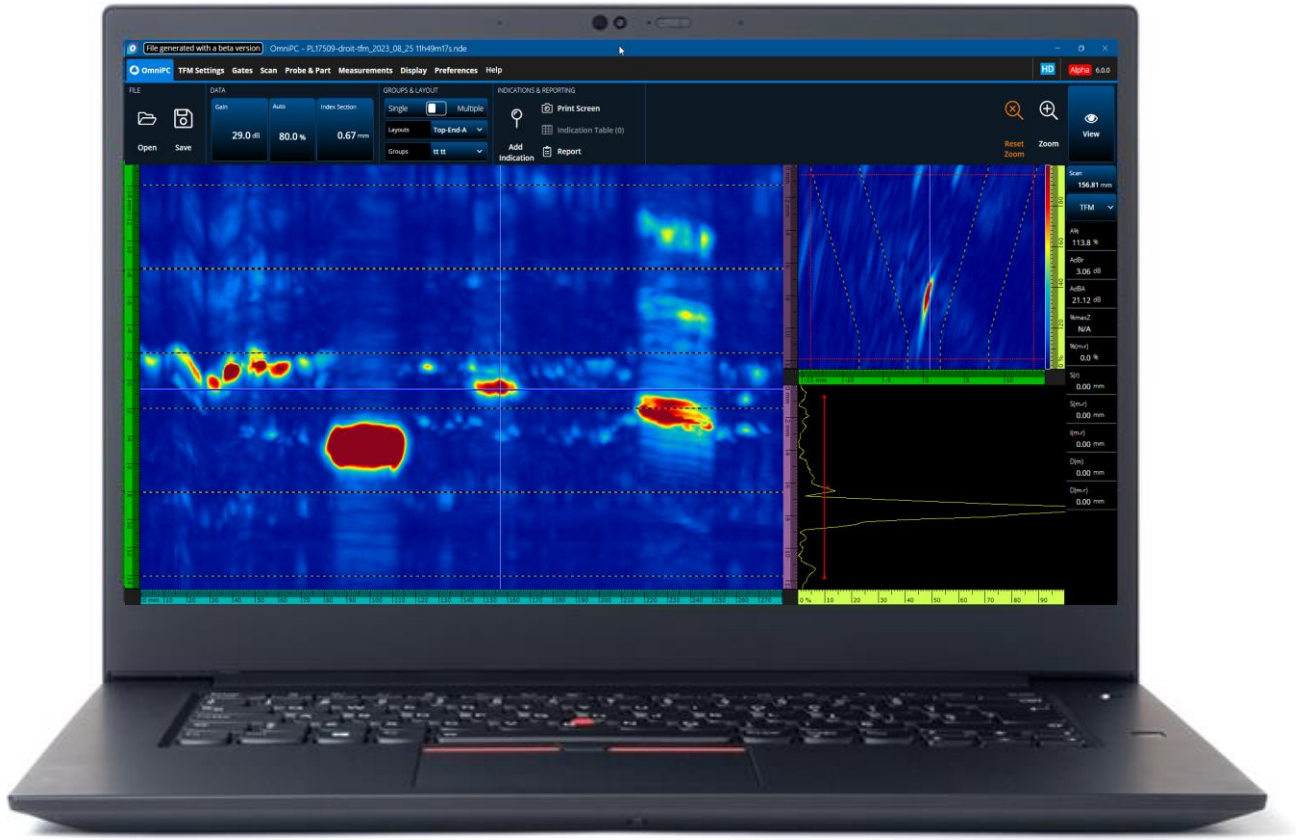
利用更大的电脑屏幕显示和ScanPlan软件中的2D和3D视图，可以帮助检测人员轻松地创建扫描计划和制作检测工艺规程。



PC端离线数据分析软件 - OmniPC™ 6.*n*

OmniPC™分析软件是OmniScan X4系列探伤仪的计算机配套软件。

OmniPC软件由检测人员分析数据的有力工具，它具有直观熟悉的用户界面（与X4机载操作软件界面几乎一致），数据分析功能和报告整理功能。



PC端离线数据分析软件 - OmniPC™ 6.*n*

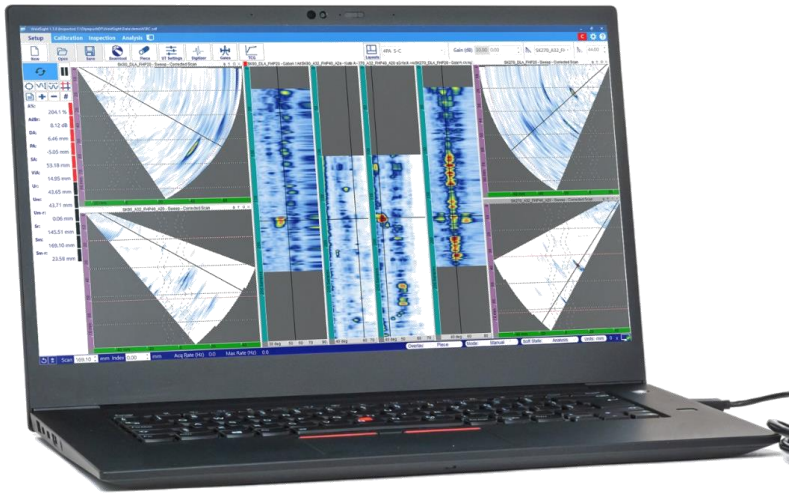
OmniPC™6.n软件可在Evident官网免费下载及更新。

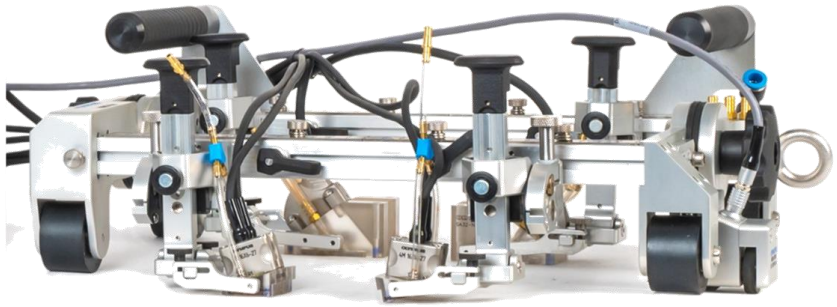
OmniPC 6.n软件与Omniscan X4、Omniscan X3、Omniscan X364、Omniscan MX2和Omniscan SX数据文件（.opd）兼容，因此您可以使用最新版本的OmniPC软件随时查看之前的检测结果。

- 无硬件密码狗
- 无软件密码狗
- 无任何后续费用

高级软件 - WeldSight

在OmniScan X4设备上可以安装OmniScan黑匣子应用程序，由计算机或笔记本电脑上的WeldSight™检测软件远程驱动X4获取检测数据文件。





WeldSight检测软件可驱动所有OmniScan X4型号进行实时PAUT数据采集

高级软件 - AeroView

在OmniScan X4设备上可以安装OmniScan黑匣子应用程序，由计算机或笔记本电脑上的AeroView检测软件远程驱动X4获取检测数据文件。

- 仅支持0°线扫
- 优化了布局和众多功能（布局管理器、调色板编辑器等），以适应更高端需求，例如，“信噪比分析”等工具

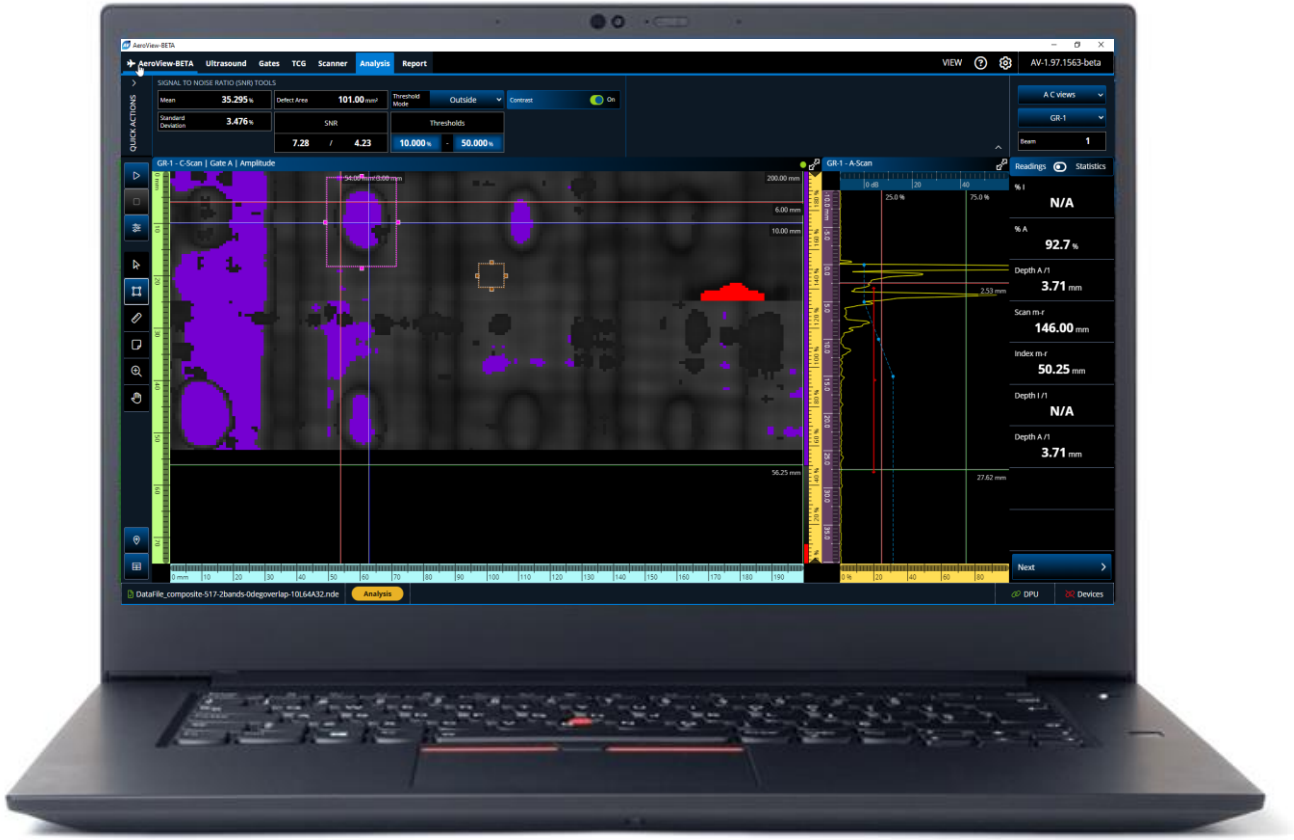
AeroView检测软件可驱动所有OmniScan X4型号进行实时0°线扫数据采集

AeroView数据分析软件

- 使用该软件能够分析由OmniScan X4或AeroView检测软件采集的所有数据（仅0°线扫）。

- 优化了布局和众多功能（布局管理器、调色板编辑器等），以适应更高端需求。

例如，“信噪比分析”等工具。



03

FAQ

General

Q**. **Is the new OmniScan X4 flaw detector a direct replacement for the OmniScan X3 flaw detector?

***A**: In fact, the four OmniScan X4 configuration options (16:64PR, 16:128PR, 32:128PR, 64:128PR) replace not only all the OmniScan X3 models but also the OmniScan X4 64 model, what we refer to collectively as the "OmniScan X3 series." Note that we've integrated all the advanced technology of the high-end OmniScan X3 64, including phase coherence imaging (PCI), into every OmniScan X4 model, from the 16:64PR to the 64:128PR.*

Q**. **Does the OmniScan X4 flaw detector offer all functionalities and perform all the applications that the OmniScan X3 models can?

***A**: Yes! In many cases, the OmniScan X4 models offer either enhanced performance or expanded capabilities compared with the OmniScan X3 series. The only exception is that they don't offer GPS positioning, but they are equipped with Wi-Fi® 6 and Bluetooth® technology.*

General

Q. When will the OmniScan X3 series be discontinued?

***A**: The OmniScan X3 series (OmniScan X3 and OmniScan X3 64) are still available today. A detailed discontinuation memo will be sent at a later time.*

Q. Is it possible to get an equivalent letter between OmniScan Series and OmniScan X4?

***A**: Absolutely! OmniScan X4 phased array ultrasonic instrument is equivalent in capabilities and performance to the predecessor OmniScan X3 series. Please refer to the equivalency statement part of the NPI package.*

Batteries & accessories

Q. Will the batteries that I used in previous OmniScan models also work in the new OmniScan X4 unit?

***A**: Yes. We use the same battery model for all flaw detectors in the OmniScan family.*

Q. How many batteries are included when I purchase an OmniScan X4 unit?

***A**: Two. We now offer the second battery as a standard inclusion. A third battery must be purchased separately.*

Q. What is the battery life with the new OmniScan X4 flaw detector?

***A**: Similar to OmniScan X3 models, an OmniScan X4 unit can operate continuously for 5 hours with 2 fully charged batteries installed.*

Q. Do my OmniScan X3 accessories, adapters and scanners also work on the new OmniScan X4 unit?

***A**: Absolutely!*

Compatibility

Q. Does the OmniScan X3 MXU 5.n onboard software also work on the new OmniScan X4 model?

***A**: No. OmniScan X4 units run on MXU version 6, and the last update for OmniScan X3 series is MXU 5.19.*

Q. Can I reuse my OmniScan X3, MX2, and SX setup and data files with the new OmniScan X4 flaw detector?

***A**: Yes, you can. Setup files will load directly on OmniScan X4 instrument. Please keep in mind that setup may need to be adapted to the instrument's capabilities. For example, a setup file using 64 pulsers will be adjusted to 32 pulsers if loaded on a 32-pulser instrument.*

Q. Can I use a data file I created on another OmniScan X3 model (32:128PR, for example) and load it onto the new OmniScan X4 flaw detector?

***A**: Definitely! Data files will load using MXU 6 on OmniScan X4 units as well as on computers using OmniPC 6 software.*

Advanced Topics

Q**. **Can an OmniScan X4 unit be remotely operated using WeldSight or AeroView software?

***A**: Yes! We encourage users to optimize this remote-control capability. WeldSight-inspection sofware and AeroView-Inspection software support any OmniScan X4 model when using the Inspection license along with the OmniScan Black Box app, which is available for download for free from our website .*

Q**. **Why do the new OmniScan X4 models offer a lower maximum pulse voltage than the OmniScan X3 models, 80 V instead of 115 V?

***A**: In reality, it's not lower. Like the OmniScan X3 64 unit, OmniScan X4 units feature a bipolar pulse, which is when a negative voltage pulse is followed by an equally strong positive voltage pulse. Both the negative and positive pulses combine to form a maximum 160 V peak-to-peak voltage. OmniScan X4 units have the same PA/UT board as the OmniScan X3 64 and it pulses at 80 V and sends 160 V to the probe. In practice, after the energy is transferred to the probe, the resulting sound pressure from the OmniScan X4 unit's 80 V bipolar pulse is in fact very similar to the resulting sound pressure generated by the OmniScan X3 models' 115 V negative-only pulse.*

Upgrades and Updates

Q**. **Can I upgrade my current OmniScan X3 model to an OmniScan X4 model?

***A**: Unfortunately, no. Please discuss trade-in options with your local Evident representative if you're interested.*

Q**. **Can I update the onboard MXU software on the new OmniScan X4 flaw detector?

***A**: Yes! The procedure is the same for all OmniScan X3 series and X4 instruments. Please go to https://www.olympus-ims.com/en/service-and-support/downloads/, download the latest MXU software (MXU 6.x for the X4), and follow the on-screen instructions. Or, better yet, get software updates directly via the OmniScan General Settings and cloud solutions.*

Q**. **How can I get information about the new protocol NDT DEVICE API to create my own software for analysis or inspection?

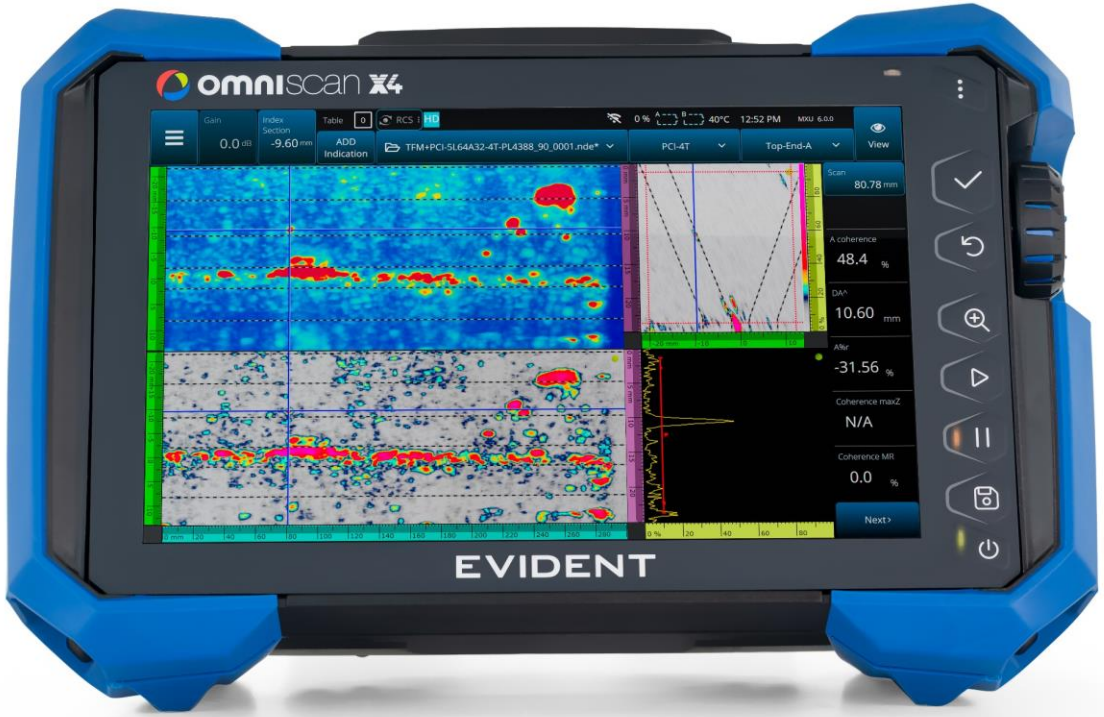
***A**: This API allows you to communicate between a third-party software and our device. Please contact factory via nde_support@evidentscientific.com to get more information.*

Online Resources

Learn more about the OmniScan X4 flaw detector and download the training package: https://www.olympus-ims.com/phasedarray/omniscan-x3/

Learn more about WeldSight software: https://www.olympus-ims.com/weldsight/

Download the latest MXU 6 onboard software for the OmniScan X4, OmniPC 6 software, WeldSight software, AeroView software or the OmniScan Black Box app: https://www.olympus-ims.com/service-and-support/downloads/



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