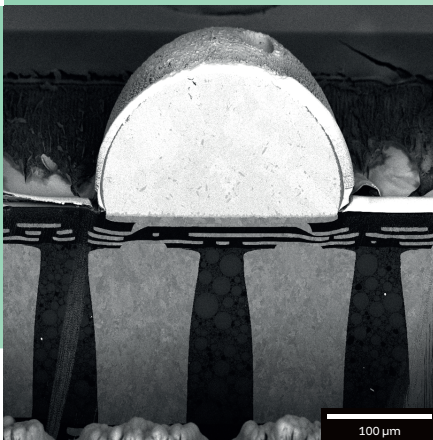
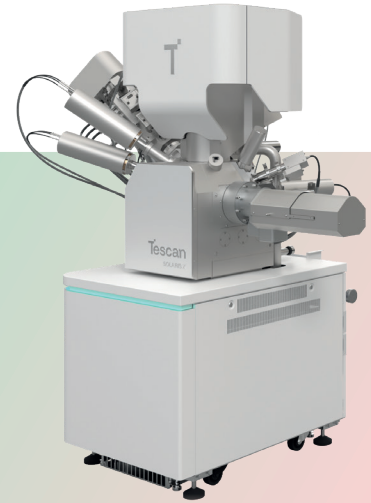


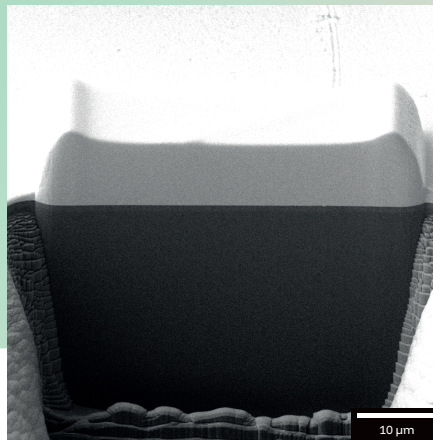
# Tescan SOLARIS X 2

## for Semiconductors

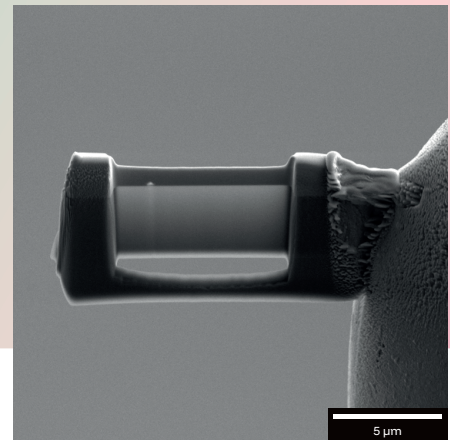
**A Plasma FIB-SEM platform for deep sectioning and the highest resolution end-pointing for package level failure analysis**



Overview of cross-section of a solder ball only with Pt deposition (no mask) and rocking polishing at 1 μA for 20 minutes; trench size: 750 x 336 μm², 500 μm depth.



50 μm wide SiC cross-section after final polishing with Mistral™ Plasma FIB column without any terrace artefacts. Prepared in 34 minutes.



12 μm wide TEM lamella from silicon sample prepared with Mistral™ Plasma FIB column in less than 1 hour, including low keV polishing at 5 keV; final thickness 50 nm.

## Key Benefits

**Perform highly localized sub-mm scale physical failure analysis** by taking advantage of the fast material removal characteristics inherent in the Mistral™ Xe Plasma FIB ion beam column which delivers maximum ion beam currents up to 3.3 μA

**Achieve precise end-pointing at specific regions of interest or on defects in your devices (cracks, voids, delaminations, etc.) during milling or cross-sectioning** using the high-resolution imaging capabilities of Triglav™ SEM column at FIB-SEM coincidence point

**Prepare high-quality Ga<sup>+</sup> free TEM lamellae from semiconductor samples** with higher quality and greater efficiency using Mistral's improved ion beam profile with significantly reduced ion beam tails at both high and low keV, thus allowing operators to use ~3x larger ion beam currents without milling away the protection layer

**Produce cross sections free of curtaining and terrace artifacts, even on challenging materials such as polyimide, SiC, ceramics, glass etc.** using our patented and fully integrated Rocking Stage to vary milling angles, and our TRUE X-sectioning masking approach to suppress the ion beam tail

**Maximize sample processing throughput and system readiness with** fully automated electron column and Xe Plasma FIB column alignments to ensure consistent results and reduce set-up times

**Ensure productivity for all users** by utilizing advanced workflows and guided wizards in the Tescan Essence™ graphical user interface