



Electronics and photonics innovation centre extends partnership with Nikon Metrology



The upgraded JEOL JCM-6000Plus NeoScope scanning electron microscope from Nikon Metrology in use at EPIC, Paignton.

Located in Paignton, in the so-called Silicon Valley of south-west England that is home to a world-leading telecommunications, microelectronics and photonics cluster, EPIC (Electronics & Photonics Innovation Centre - www.epic-centre.co.uk) is an £8 million, purpose-built facility dedicated to providing its tenants with modern equipment to assist research and development into new products. All sizes of high-technology company are supported, from spin-offs and start-ups to large multinationals.

The centre has recently extended its long standing partnership with Nikon Metrology by upgrading the JEOL JCM-6000Plus NeoScope benchtop scanning electron microscope (SEM) installed last year by adding an EDS system for elemental analysis, a tilt and rotation motor drive for the stage and an automated gold sputter coater.

The upgrade was part the centre's commitment to offer the high-end technical capabilities needed to grow businesses involved in the microelectronics and photonics sectors. The Paignton facility incorporates a prototyping suite, laboratories and ISO class 7 clean rooms, provides access to equipment worth in excess of £2 million, and includes administrative offices, a reception and 24/7 access.

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Wayne Loschi, EPIC's director

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A pair of Nikon Metrology microscopes has also been supplied to the EPIC facility.

EPIC's director Wayne Loschi enthused, "We have listened to the needs of the businesses here and continue to grow our technical capability accordingly, especially in the area of semiconductor production with the installation of bonding, encapsulation and test equipment."

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EPIC and Nikon Metrology began working together in the summer of 2019, even before the centre opened in the October of that year. Instruments worth £100,000 were supplied for use with effect from early 2020. The metrology and microscopy equipment supplier was chosen because it was the most accommodating, helpful and enthusiastic of all the potential partners that were approached. The upgrade to the JCM-6000Plus SEM was actually requested by EPIC's tenants due to the enhanced inspection capabilities that were offered.

The JCM-6000Plus benchtop SEM has up to x 60,000 magnification. It is compact at 325 mm wide x 490 mm deep x 430 mm high, a profile that did not change following the installation of EDS. Easy-to-understand operational controls and touch screens result in intuitive operation. Standard features include length measurement functions and one-touch switching between high and low vacuum modes. Images can be displayed within three minutes of the instrument being started.

In addition to the SEM, a pair of Nikon Metrology optical microscopes have also been supplied, models LV100ND and a SMZ745T. The former is a motorised compound microscope and has episcopic and diasopic illumination for inspecting samples up to 150 mm square, while the latter is a trinocular stereo microscope featuring a zoom ratio of 7.5x to 7.5:1, with a long working distance of 115 mm completed with a camera port.