

News Release

FOR IMMEDIATE RELEASE

**Announcement of the New Scanning Electron Microscope, FlexSEM 1000
–So compact that it fits on a tabletop, while enhancing the resolution and usability drastically–**

TOKYO, Japan, April 15, 2016 – Hitachi High-Technologies Corporation (TSE: 8036, Hitachi High-Tech) has announced the worldwide release of a new scanning electron microscope (SEM), Model FlexSEM 1000. The FlexSEM 1000 has been developed as a compact SEM system with a minimized, lab-friendly footprint, while offering the resolution equal to that of conventional, full-sized SEM models', as well as superior ease of use for users of all levels.

SEMs support high-magnification and high-resolution analyses of elements and are utilized for observation of the surface structures of materials for R&D, quality assurance and other many purposes in various industrial fields such as nanotechnology and biotechnology fields. In recent years, the demand for fine surface structure observation has increased and expanded the usage of SEMs to production sites, inspection sites, and offices. This in turn has created a need for a compact instrument which fits in a limited space.

The Main unit of the newly released FlexSEM 1000 has dimensions of 450 mm(W) x 640 mm(D), and is 52% more compact, 45% lighter, and 50% more energy-efficient than the existing model, the SU1510. Also, it only requires a standard wall outlet for power (AC100V 3P). The Main unit can be separated from the Power Supply unit for additional space-saving and flexible system placement.

The FlexSEM 1000 achieves 4 nm resolution by employing a newly designed electrical optical system and a high-sensitivity detector, which high-end models has already employed so that its reliability has been proven.

The user interface is easy to operate even by novice users, and with the various automated functions, high-quality and quick data acquisition can be accomplished regardless of user experience level. Specifically, the new and enhanced navigation function, SEM MAP, helps locate the regions of interest quickly, and delivers accurate correlated optical and SEM images using only one click.



**Compact Variable-Pressure SEM FlexSEM 1000
(Main unit and Power Supply unit are separable)**

Main Features

- Compact design (45 cm wide) with 4 nm resolution
- Intuitive user interface enables high-quality, high-throughput imaging regardless of user experience level
- Novel navigation function, SEM MAP, for searching an entire field of view and locating regions of interest
- Large Area (30mm²) Silicon Drift Detector EDS System for high speed data acquisition *1
- Through speeding up automated brightness and focus functions, wait time becomes 1/3 shorter comparing to the conventional products

*1 Optional

Main Specifications

Resolution *2	4.0 nm at 20 kV (SE: High vacuum mode) 15.0 nm at 1 kV (SE: High vacuum mode) 5.0 nm at 20 kV (BSE: Low vacuum mode)
Accelerating voltage	0.3 to 20 kV
Magnification	6 x to 300,000 x (on photo *3) 16 x to 800,000 x (on display *4)
Variable pressure range	6 to 100 Pa
Specimen stage	3-Axis Motorized stage X: 0 to 40 mm, Y: 0 to 50 mm, Z: 5 to 15 mm R: 360°, T: -15° to +90°
Dimensions & Weight	
Main unit	450 (W) x 640 (D) x 670 (H) mm
Power Supply unit	450 (W) x 640 (D) x 450 (H) mm

*2: applicable when Main unit and Power Supply unit are connected

*3: at 127 mm x 95 mm (4" x 5" Picture size)

*4: at 509.8 mm x 286.7 mm (1,920 x 1,080, pixels)

Web site

http://www.hitachi-hightech.com/global/product_detail/?pn=em-flexsem1000

About Hitachi High-Technologies Corporation

Hitachi High-Technologies Corporation, headquartered in Tokyo, Japan, is engaged in activities in a broad range of fields, including Electronic Device Systems, Fine Technology Systems, Science & Medical Systems, Industrial & IT Systems, and Advanced Industrial Products. The company's consolidated revenues for FY 2014 were ¥620billion [approx. USD 5.4 billion]. For further information, visit <http://www.hitachi-hightech.com/global/>.

Contact

Shinya Takaoka, Kenichi Sato
Marketing Dept., Science Systems Sales & Marketing Div., CSR & Corporate Communications Dept.,
Science & Medical Systems Business Group
Tel: +81-3-3504-3913

For Media Inquiries

Shota Sano, Aiko Matsumoto
CSR Div.,
Tel: +81-3-3504-3933