

**ADVANTEST**®

**WAFER MVM-SEM**®

# E3310

Multi Vision Metrology SEM supports next-generation wafers



The E3310 is a WAFER MVM-SEM\* for next generation wafers, supporting 1Xnm node process development and volume production at the 22nm node and beyond. With its high-speed carrier system employing a dual arm vacuum robot, and low-vibration platform to improve measurement accuracy, the E3310 delivers high throughput and performance for wafer measurements. Its multi detector configuration and unique 3D measurement algorithm also enable stable, high-accuracy measurement of 3D transistor technologies such as FinFET. The E3310 makes a significant contribution to reducing process development turnaround time and improves productivity for next-generation devices.

\*Multi Vision Metrology Scanning Electron Microscope

### Support for diverse wafer types

- Silicon wafer
- AlTiC wafer
- Quartz wafer
- Silicon carbide wafer

Wafer size supported: 150mm - 300mm (depends on wafer type)

### Advanced electron-optical column design

The E3310 inherits the proprietary column design and unique electron beam scanning technology employed by the E3630, which has a large installed base in the photomask sector. Advantest's unique architecture achieves high resolution by maintaining a high voltage inside the column, and a newly developed object lens significantly reduces chromatic aberration and further improves resolution in the low acceleration range.

### Accurate, high-precision positioning technology

A new stage positioning system, charge control function, and contamination reduction technology enable the stable positioning of objects for measurement even at high SEM magnification, allowing high throughput and easy observation.

### Supports evolving wafer processes

The E3310's multi-detector configuration allows it to achieve stable, highly accurate measurements at the 1Xnm node. It also features a proprietary detection algorithm, enabling measurement of 3D FinFET architectures, and contributes to reducing process development turnaround time by providing new process control information.

### Rich range of applications

- Large field-of-view SEM image enables automatic multipoint measurement function
- Pattern contour detection/GDS output function from SEM image
- Displays 3D images generated by multi-detector system
- SECS/GEM function for factory automation

*MVM-SEM is either a registered trademark or a trademark of Advantest Corporation in Japan, the United States and other countries.*



*Please refer to product manual for complete system specifications.*

*Specifications may change without notification.*

**ADVANTEST®**

<http://www.advantest.co.jp>

Enquiries about this system should be directed to:

#### Nanotechnology Business Division

1-5, Shin-tone, Kazo-shi, Saitama 349-1158  
Saitama R&D Center  
Phone: +81-480-72-6300  
E-mail:  
[info\\_nano@ml.advantest.com](mailto:info_nano@ml.advantest.com)

#### ADVANTEST CORPORATION

Shin-Marunouchi Center Building,  
1-6-2 Marunouchi, Chiyoda-ku,  
Tokyo 100-0005, Japan  
Phone: +81-3-3214-7500  
Fax: +81-3-3214-7705

#### Advantest America, Inc.

3061 Zanker Rd., San Jose,  
CA 95134, U.S.A.  
Phone: +1-408-456-3600  
Fax: +1-408-456-5174

#### Advantest Europe GmbH

Stefan-George-Ring 2,  
D-81929 Munich, Germany  
Phone: +49-89-99312-0  
Fax: +49-89-99312-101

#### Advantest (Singapore) Pte. Ltd.

1 Yishun Avenue 7  
Singapore 768923  
Phone: +65-6755-2033  
Fax: +65-6754-3946

#### Advantest Taiwan Inc.

No.15, Guangfu Rd.,  
Hsinchu Industrial Park,  
Hukou Township, Hsinchu County  
30351, Taiwan (R.O.C.)  
Phone: +886-3-597-5888  
Fax: +886-3-598-1133

#### Advantest Korea Co., Ltd.

22BF, Kyobo KangNam Tower,  
1303-22, Seocho-Dong, Seocho-Ku,  
Seoul #137-070, Korea  
Phone: +82-2-3478-9400  
Fax: +82-2-532-7132

#### Advantest (China) Co., Ltd

C Block,Bldg.3, 168 HuaTuo Road  
Zhangjiang Hi-Tech Park,  
Shanghai, 201203 China (P.R.C.)  
Phone: +86-21-6163-2600  
Fax: +86-21-2028-7600