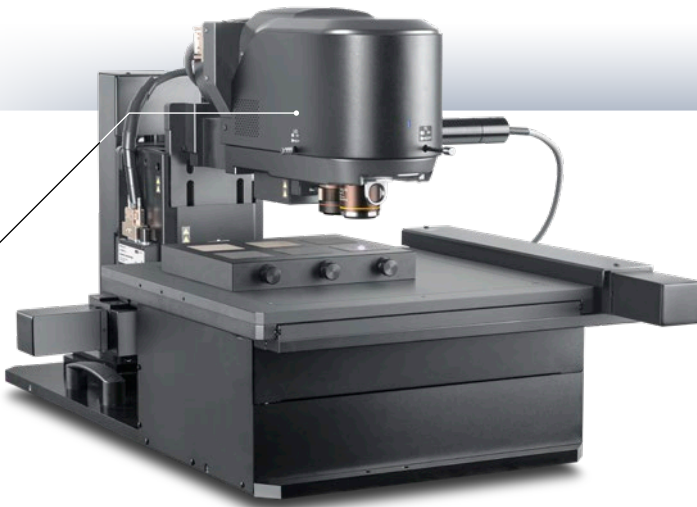# Customized DSX1000 Digital Microscope Models
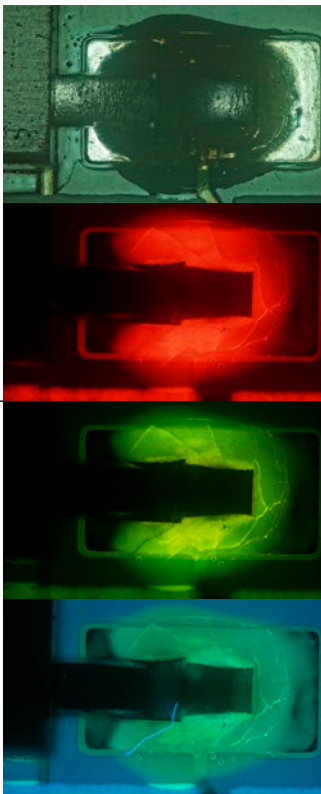
Customize the DSX1000 to Suit Your Needs

Upright frame – For high magnification up to 50x

Tilting frame – Observe from ±90

· **Large motorized stages**

· **Extended focus for tall samples**

· **Transmitted illumination**

· **Fluorescence observation**

· **Motorized sliding nosepiece**

Fluorescence zoom head

DSX1000 Digital Microscope Models

Customize the DSX1000 to Suit Your Needs

	Upright frame system			Tilting frame system		
Overview	Stable frame for high-magnification observation			Flexible frame with tilting of ±90 degrees (left-right)		
Zoom head	Universal zoom head Standard zoom head Fluorescence zoom head			Universal zoom head Standard zoom head		
Height adjustment Z stroke	95 mm	Motorized (fine focus)	95 mm	295 mm	Motorized (fine focus)	95 mm
		No manual focus			Manual (coarse focus)	200 mm
Objective magnification	1X–50X			1X–10X (recommended)		

Sample height	**Upright observation**	Objective	Sample Height	Objective	Sample Height
		UIS2	0–235 mm	UIS2	0–295 mm
		DSX-XLOB	0–205 mm	DSX-XLOB	0–265 mm
		DSX-SXLOB	0–140 mm	DSX-SXLOB	0–200 mm
		Refer to delivery specification document for height with raising blocks			
	Tilting observation	–		0–200 mm	

| **Applications**	Semiconductors, flat panel displays (FPDs), thin films, MEMS, LED devices	Automotive parts, semiconductors, mounted electronic boards
Other features	· Mirror cubes for UV, blue, and green excitation (fluorescence zoom head) · Customized mirror cubes available on request (fluorescence zoom head) · Transmitted light observation (depends on stage) · Motorized sliding nosepiece (only for upright frame)	

Typical Applications
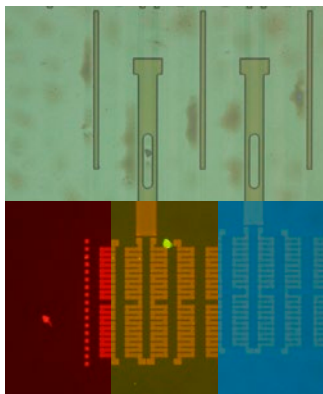
Wafer inspection

Inspection of large automotive parts
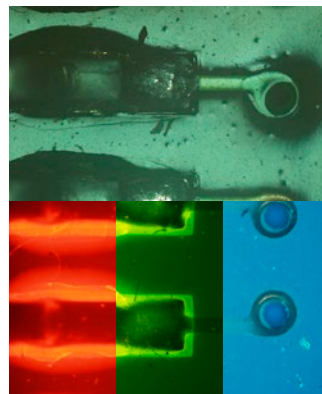
Circuit board inspection
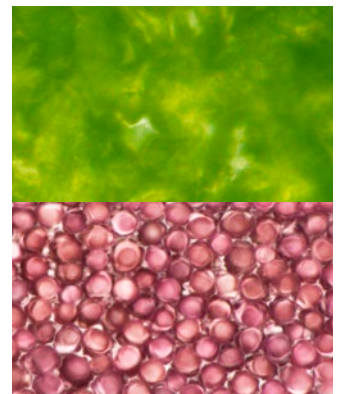
Life science inspection (flowers, leaves, insects)

Customize Your DSX1000 Digital Microscope

The versatile DSX1000 digital microscope can easily be customized to better suit your inspection needs.

Inspect Samples of All Sizes

The customized DSX1000 digital microscope is available with a range of large motorized and manual stages—for example, 200 mm and 300 mm stages—and an XY range that varies from 150 to 300 mm. These stages enable inspection of large samples, such as 12-inch wafers, heavy automotive parts, glass specimens, large circuit boards, and other electronic components. Heavy-duty stages are also available for samples of up to 30 kg (66 lb).

A Clear View of Tall Samples

Inspection of tall samples with heights of up to 295 mm—for example, automotive parts such as crankshafts or surgical equipment such as endoscope probes—is easy with the customized DSX1000 microscope. Both the tilting and upright frames have a motorized focus of 95 mm, and the tilting frame also has a manual focus of 200 mm. To observe even taller samples, the customized DSX1000 digital microscope can also be used without a stage to observe samples up to 475 mm in height.

Sharp Images with Transmitted Illumination

The customized DSX1000 digital microscope is available with an advanced transmitted light condenser. This condenser provides a higher contrast and a sharper image compared to the standard DSX1000 microscope.

Standard DSX1000   CUS DSX1000   Standard DSX1000   CUS DSX1000
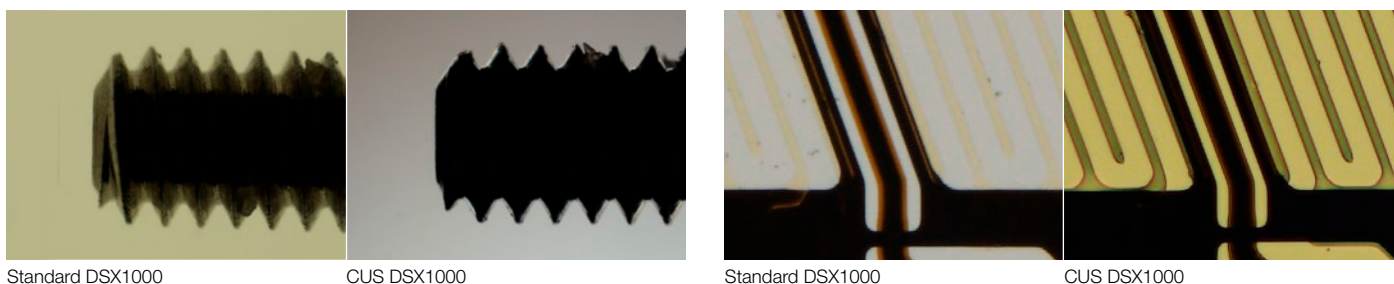
See More with Fluorescence

Combine the advantages of digital microscopy and fluorescence observation for enhanced inspection of silicon wafers, circuit boards, and resins, as well as many life science applications. The customized DSX1000 microscope's fluorescence zoom head is normally used with three standard filter cubes (UV, blue, and green excitation), but other filter cubes are also available.

Brightfield image   G excitation   B excitation   U excitation
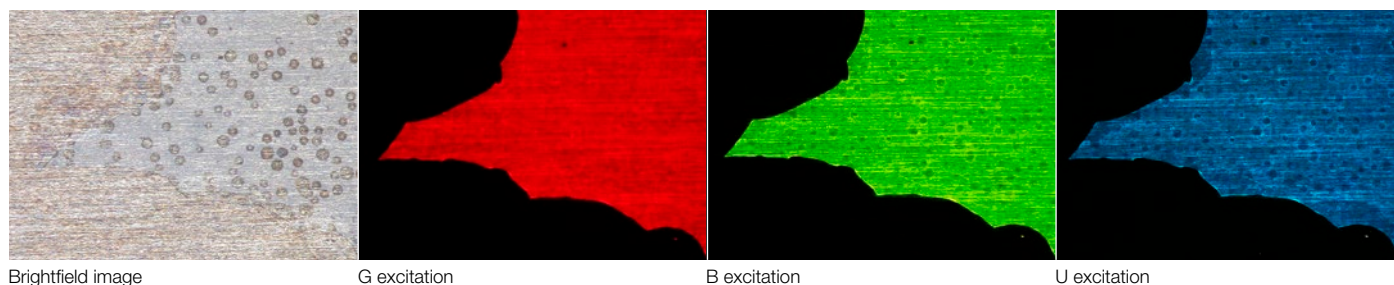
Motorized Nosepiece for Easy Operation

For easy operation, especially useful when working long hours at the microscope, a motorized sliding nosepiece can be added. With this setup, it becomes easier to switch between objectives without interrupting the observation workflow.

DSX1000 Configurations

Upright Frame Configurations

		Universal Zoom Head		Standard Zoom Head			Fluorescent Zoom Head		
		Standard	Transmitted Light	Standard	Transmitted Light	Motorized Sliding NP	Standard	Transmitted Light	Motorized Sliding NP
Zoom Head	**DSX10C-UZH (N9050184)** Universal zoom head for DSX1000-AC	•	•	–	–	–	–	–	–
	DSX10C-SZH (N9050186) Standard zoom head for DSX1000-AC	–	–	•	•	–	–	–	–
	DSX10C-SZH-A (N9050187) Standard zoom head + mot. sliding NP	–	–	–	–	•	–	–	–
	DSX10C-RF (N9050182) Fluorescence zoom head	–	–	–	–	–	•	•	–
	DSX10C-RF-A (N9050183) Fluorescence zoom head + mot. sliding NP	–	–	–	–	–	–	–	•
Frame	**DSX10C-UF (N9050189)** Upright frame	•	•	•	•	•	•	•	•
Converter	**DSX10C-PRCV-1 (N9050196)** Protocol converter	•	•	•	•	–	•	•	–
	DSX10C-PRCV-1-A (N9050197) Protocol converter for mot. sliding NP	–	–	–	–	•	–	–	•
Stage	**DSX10C-MH150 (N9050192)** Stage adapter for 150 mm stage **M-MS-MX51-4 (E0430766**) 150 mm motorized stage	•	•	•	•	•	•	•	•
	DSX10C-MH200 (N9050193) Stage adapter for 200 mm stage **M-MS-MX61-4-2 (E0438244)** 200 mm motorized stage	•	•	•	•	•	•	•	•
	DSX10C-MH300 (N9050194) Stage adapter for 300 mm stage **M-MS-CUS-300x300-4 (E0433706)** 300 mm motorized stage	•	–	•	–	•	•	–	•
Add-On Components	**DSX10C-LAXL (N9050198)** Lens adapter for mot. sliding NP	–	–	–	–	•	–	–	•
	DSX10C-LAUIS (N9050199) Lens adapter for mot. sliding NP	–	–	–	–	•	–	–	•
	MX-TILLK (N1562200) Transmitted light adapter	–	•	–	•	–	–	•	–
	LG-SF (38363) Transmitted light adapter	–	•	–	•	–	–	•	–
	KL1600LED-2 (E0433314) Transmitted light adapter	–	•	–	•	–	–	•	–
	U-HGLGPS (N4224900) **U-LLG150 (N4226700)** FL light source + Fiber	–	–	–	–	–	•	•	•

Please refer to the CUS catalogue in SharePoint for manual stages, latest products, and configurations.

Required Components

DSX10-CB (N5736800) Control box	**DP74-PCIE-1-2 PCI board (N5739900)** Control board	**DSX10-BSW (N5737000)** Basic software	**HW-WORKSTATION-HP-Z2G4-DSX1000 (E9701478)** PC

Group	Objective	Upright Frame	Tilting Frame	Fl. Zoom Head
SXL Series Super long working distance	DSX10-SXLOB1X	•	•	–
	DSX10-SXLOB3X	•	•	–
	DSX10-SXLOB10X	•	•	–
XL Series High resolution / long working distance	DSX10-XLOB3X	•	•	*
	DSX10-XLOB10X	•	•	*
	DSX10-XLOB20X	•	–	*
	DSX10-XLOB40X	•	–	*

• available   – not available   * special cases

Tilting Frame Configurations

		Universal Zoom Head		Standard Zoom Head	
		Standard	Transmitted Light	Standard	Transmitted Light
Zoom Head	**DSX10C-UZH (N9050184)** Universal zoom head for DSX1000-AC	•	•	–	–
	DSX10C-SZH (N9050186) Standard zoom head for DSX1000-AC	–	–	•	•
	DSX10C-SZH-A (N9050187) Standard zoom head + mot. sliding NP	–	–	–	–
Frame	**DSX10C-TF (N9050188)** Tilting frame	•	•	•	•
Converter	**DSX10C-PRCV-1 (N9050196)** Protocol converter	•	•	•	•
Stage	**DSX10C-MH150 (N9050192)** Stage adapter for 150 mm stage **+** **M-MS-MX51-4 (E0430766)** 150 mm motorized stage	•	•	•	•
	DSX10C-MH200 (N9050193) Stage Adapter for 200 mm stage **+** **M-MS-MX61-4-2 (E0438244)** 200 mm motorized stage	•	•	•	•
	DSX10C-MH300 (N9050194) Stage adapter for 300 mm stage **+** **M-MS-CUS-300x300-4 (E0433706)** 300 mm motorized stage	•	–	•	–
Add-On Components	**MX-TILLK (N1562200)** Transmitted light adapter	–	•	–	•
	LG-SF (38363) Transmitted light adapter	–	•	–	•
	KL1600LED-2 (E0433314) Transmitted light adapter	–	•	–	•

Please refer to the CUS catalogue in SharePoint for manual stages, latest products, and configurations.

HW-TFT-23-DELL-P2319H (E9701492) Monitor	**UYCP (35425)** Power cord	**M-CBL200AP-2 (E0433870)** Motor cable	**M-CU-DT-2 (E0438472)** Tango 2-axis desktop control unit	**M-HID-JS-2 (E0438481)** Joystick

Group	Objective	Upright Frame	Tilting Frame	Fl. Zoom Head
UIS Series High performance / high numerical aperture	MPLFLN5XBDP	•	•	•
	MPLFLN10XBDP	•	•	•
	MPLFLN20XBDP	•	–	•
	MPLFLN50XBDP	•	–	•
	MPLAPON50X	–	–	–
	LMPLFLN10XBDP	•	•	•
	LMPLFLN20XBDP	•	–	•
	LMPLFLN50XBDP	•	–	•

Customize the DSX1000 to Suit Your Needs

DSX1000 System Diagram

Zoom Head

DSX10C-UZH*
Universal zoom head

DSX10C-SZH(-A)*
Universal zoom head

DSX10C-RF(-A)*
Fluor. zoom head

DSX10C-SRF2*
Fluor. zoom head

U-LLG150
Liquid light guide (1.5 m)

U-HGLGPS
Light source

Basic software
DSX10-BSW

Monitor   PC

(Optional software)
Edge detecting
measurement
software
DSX10-ASW-EDM
Particle analysis
software
DSX10-ASW-PAM

Frame

DSX10C-TF*
Tilting frame for AC

DSX10C-UF*
Upright frame for AC

DSX10C-BLK*
Raising-block (Up to 2)

DSX10-UF

Optional

Calibration sample
DSX-CALS-HR

Transmitted Illumination

Stage adapter*
DSX10C-SIC-MSS*
DSX10C-MH300*
DSX10C-MH200*
DSX10C-MH150*

DSX10C-TLEG*
Pole for MX-TILLK

MX-TILLK
Transmitted illumination
module

LG-SF
Light guide

KL1600LED
LED light source

Stage

8"x8" stage
MX-SIC8R

14"x12" stage
MX-SIC1412R2

DSX10-CB
Control box

Console
DSX 10-CSL

8–6 in. rotatable
wafer holder
plate and plate
MX-WHPR86

Stage glass plate
BH3-SPG6

6 in. stage plate
BH3-SP6

12–8 in. rotatable
wafer holder
plate and plate
MX-WHPR128

Stage glass plate
MX-SPG1412

14 in. × 12 in.
Stage plate
SP12-S*

DSX10C-PRCV-1*
Protocol converter

TANGO2
2-axis stage
controller

Joystick
For 2-axis stage

SCAN 150 × 150
E0430766
motorized stage

Stage Accessories
Glass plate
Metal plate
5–6 in. Wafer holder

SCAN 200 × 200
E0438244
motorized stage

Stage Accessories
Metal plate
Glass plate
5–6–8 in. Wafer holder
6–8–12 in. Wafer holder

SCAN 300 × 300
E0433706
motorized stage

Stage Accessories
8 in., 12 in. Wafer holder

FESTO300mm*
300 × 300 mm
For heavy loading stage

Objective

(Zoom Head)

Super long working
distance objective lens

DSX10-SXLOB1X
DSX10-SXLOB3X
DSX10-SXLOB10X

High-resolution, long working
distance objective lens

DSX10-XLOB3X
DSX10-XLOB10X
DSX10-XLOB20X
DSX10-XLOB40X

UIS2 objective lens

MPLFLN5XBDP
MPLFLN10XBDP
MPLFLN20XBDP
MPLFLN50XBDP
MPLAPON50X
LMPLFLN10XBDP
LMPLFLN20XBDP
LMPLFLN50XBDP

· The "zoom head" with "-A" indicates the option of "motorized sliding nosepiece"
· "Motorized sliding nosepiece" is not available for "DSX10C-TF"
· It is recommended to use objective lenses of 10X or less for "DSX10C-TF"
· Only select objective lenses support fluorescence observation

(Product Name): Standard product; (Product Name)*: Customize product

Specifications, design and accessories are subject to change without any notice or obligation on the part of the manufacturer.