JEM TOOLBOX

§ Outlines

JEM TOOLBOX adds functions to MATLAB (*1) for controlling JEOL's transmission electron microscopes (TEMs) and attachments. With more than 100 commands, JEM Toolbox allows you to control virtually all TEM functions including the electron gun, lens, and stage.

MATLAB is a numerical computing environment used by numerous researchers for its straightforward programming language and validation features as well as an abundant set of functions. Leveraging MATLAB's features makes it incredibly simple to create programs for controlling the TEM and CCD camera, and to perform various computations on acquired images. JEM Toolbox is an innovative software product enabling the user to perform full-scale program creation.

(%1)MATLAB is a registered trademark of The MathWorks, Inc.



§ Features

O TEM control commands

Features more than 100 commands for controlling high voltage, lenses, deflection coils, stages, and apertures.

O Attachment control commands

Provides commands for controlling various makes of cameras and STEM devices.

○ Programming

Enables TEM control using MATLAB's simple program creation and validation functions.

○ Remote control

PCs running the MATLAB environment are connected via a network to TEMs and their controlling PCs, thus enabling remote control.

○ Operating environments

Windows (XP, 7)+MATLAB



§ Configuration

TEM Server

To be installed on the PC controlling TEM (%2)

CCD Camera Server

To be installed on the PC controlling CCD (%2)

STEM Server

To be installed on the PC controlling STEM (%2)

JEM ToolBox Client

TEM ToolBox Client

No license key is required.

(It is possible to install on multiple machines.)

(%2) The license key is required to operate this.



§ Specifications

Controllable	JEM-1400, JEM-ARM200F, JEM-2100, JEM-2100F, JEM-2200FS,
electron microscope	JEM-2500SE, JEM-2800, JEM-3100F, JEM-3200FS, JEM-3000F(%3)
Controllable CCD camera	JEOL, GATAN, TVIPS, OLYMPUS SIS (AMT will be supported.)
Controllable Scan Controller	JEOL
Software	MATLAB R2007b or more (for Windows)

(%3) The specifications are partially different.

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Contact SYSTEM IN FRONTIER INC.

2-8-3 Shinsuzuharu Bldg.4F Akebono-cho Tachikawa-shi, Tokyo 190-0012 Tel.+81-42-526-4363 http://www.temography.com/