

The TF20 microscope interfaces

The microscope console

Location: right in front of you on the desk

Role: It provides direct control of some of the most important microscope parts:

- Magnification
 - Electron dose: spot size (C1 lens) and beam spread (C2 lens)
 - Focus (objective lens current)
 - Stage position (with the joystick and Z buttons)
 - Beam position (with the trackball)
 - and many other actions through the programmable switches (L/R1-2-3) and Multifunction X/Y knobs.
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Gatan DigitalMicrograph User Interface (DM)

Location: On the left screen

Role: It controls the US10001 Camera.

- the user will use it to :
 - prepare Dark and gain references.
 - during screening, to acquire images in continuous mode.
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SerialEM User Interface (SEM)

Location: On the right screen

Role: It provides camera/microscope commands to allow the user to screen its grids and setup an automated data collection.

- **The beginner user will use it to:**
 - record the Atlases.
 - select squares and prepare the square maps at eucentric height.
 - select targets (position).
 - screen targets at higher magnification (as single image or montage).
 - center the different beam modes all together on the camera axis.
 - **The expert user will use it to:**
 - perform all the actions described above.
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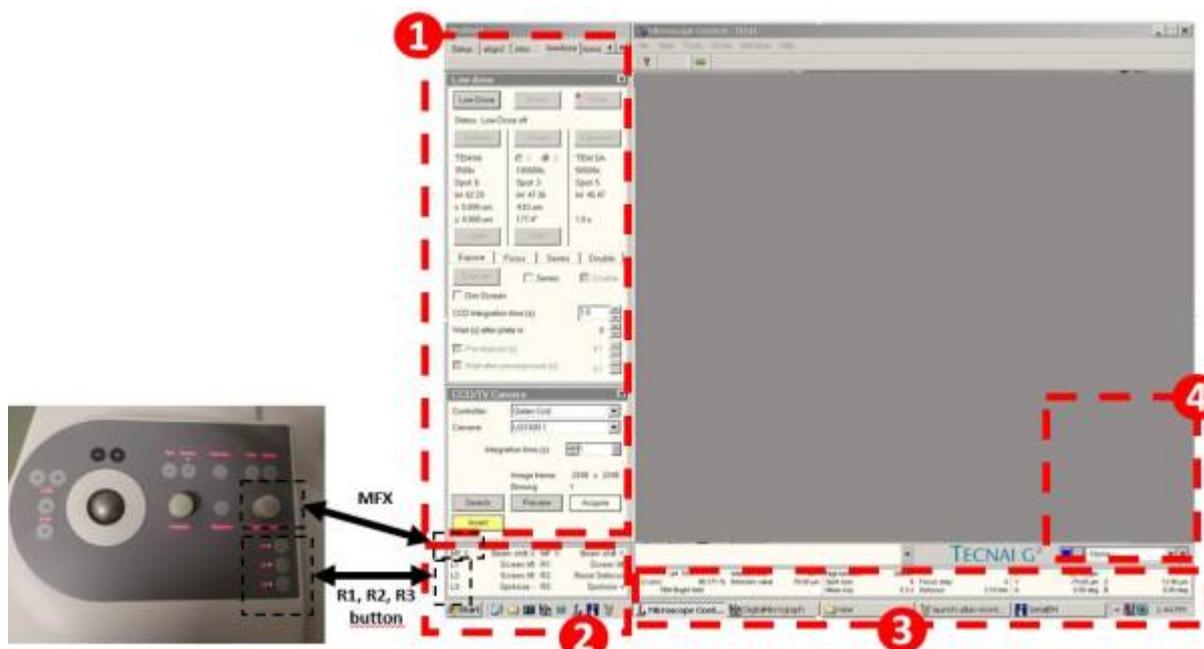
- perform beam corrections (astigmatism, coma-free).
- perform calibrations.

The TEM User Interface (TUI)

Location: On left screen

Role: It controls all the microscope systems.

- It is divided into 4 zones:
 - Zone1: TUI tabbed pages hosting different commands allowing to control the ME and to know its working state
 - Zone2: Window showing EM working state like HT value, stage position, magnification, etc
 - ...
 - Zone 3 : Additional TUI Tabbed page
 - Zone4 : Window defining functions of control panel button:



- The beginner user will use it to:
 - load/unload the grids in the column.
 - change and center the Condenser 2 and objective apertures.
 - control the turbo pump.
 - perform beam-shift adjustments.
 - manually set eucentric height.
- The expert user will use it to:
 - perform all the actions described above.
 - align the microscope.

- troubleshoot the system.
- perform cryo-cycle of the column/autoloader.

The FluCam User Interface (FC)

Location: On the right screen

Role: It allows the visualization of the electron beam and the sample image.

- **The beginner user will use it to:**
 - record the Atlases.
 - select squares and prepare the square maps at eucentric height.
 - select targets (position).
 - screen targets at higher magnification (as single image or montage).
 - center the different beam modes all together on the camera axis.

- **The expert user will use it to:**
 - record the Atlases.

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<https://bsi.inscog.eu/> - **BSI wiki**

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