



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
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PR No. 100023399 (Rfx No. 6100001523)

Detailed Technical Specifications for EMSIS Camera

Sr. No	Parameter	Description
1	Operating Voltage	200kV (Compatible with Jeol FEGTEM 200kV Model: JEM 2100F)
2	Camera Mount	Bottom Mounted on Axis
3	Sensor Type	CCD sensor or the latest one
4	Image Size	6 Mpixel or Higher
5	Effective pixel Size	16.5 x 16.5 μm^2 or better
6	Data Interface	USB 3 or Higher version
7	Operating System	Windows 10(64 Bit) or higher version
8	Imaging Software	<p>The Imaging software should be able to interface with the Camera with above specifications and Should be capable with the basic and advanced specifications below</p> <p>Smart Averaging: instead of taking a single snapshot, the software controls the camera taking a few snapshots and making an average. In this way the signal-to-noise ratio is improved significantly because the noise is random. It works especially well when the electron beam is weak. Smart averaging is a further development of image averaging. In Radius we are able to use imaging averaging for both snapshot and live imaging. Smart averaging means the function of live image averaging is disabled automatically when the user is moving the sample stage in order to avoid image smearing.</p> <p>Live Measurements: A user should be able to measure directly on the live image without capturing.</p> <p>HDRI: High Dynamic Range Imaging) If one part of the sample is very bright and another part is very dark, this mode helps getting good exposure on both parts of image.</p> <p>Movie Recording: Should be able to take the video to show the change or movement of the sample over time. We should be able to save the video in AVI format. The frames in the video should also be retrieved.</p> <p>Drift Correction: Sample drifting is a common problem During TEM Imaging. It is due to the vibration of the sample. At high magnification, one can see the sample keep drifting. It is hard to get a sharp high-resolution image when drifting is present. 'Drift correction' option helps a lot to resolve this problem.</p> <p>Click to Centre option: By double-clicking on any feature in the live image, the sample stage will move so that this option makes the feature become the center of the image.</p>
9	Camera Mount Interface Bracket	The Camera with the above specification should be supplied with the connecting Interface with respect to the TEM 200kV Model: JEM 2100 F
10	X-Ray Shielding	The camera with the above specifications should be provided with compatible X-Ray Shielding and Should prove the admissible X-ray leakage levels after installing.
11	Jeol Certification	The Quoted camera compatibility should be certified by the TEM Manufacturer JEOL
12	Warranty	1-year standard warranty