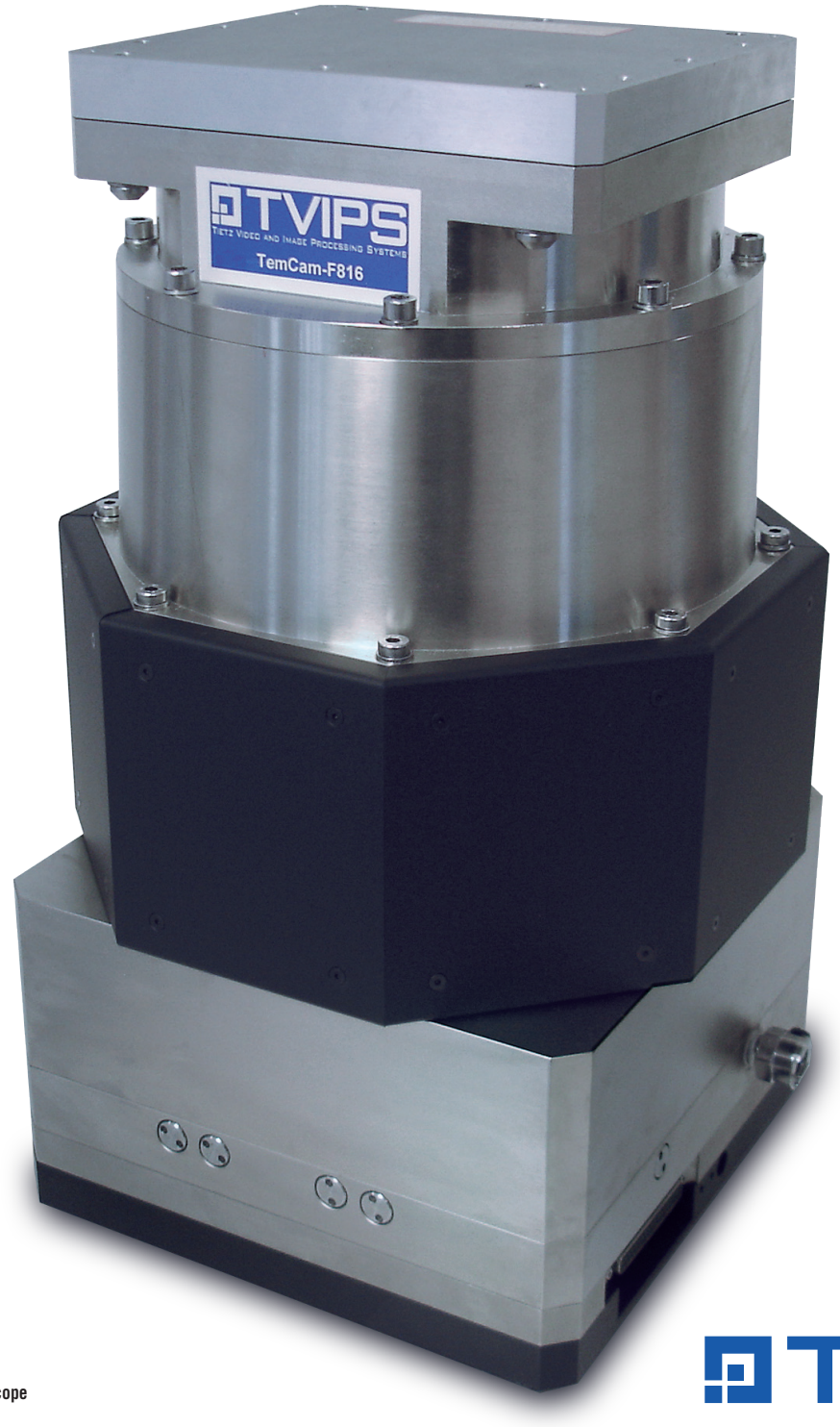
TemCam-F816

World's Highest Resolution Camera for TEMs (8k,16µm,14bit)

TemCam-F816 is the first digital camera with a larger recording area than film. With its impressive area of 128 x 128 mm² and ultra-high resolution of 8192 x 8192 pixels the F816 surpasses the performance of film. It is the ultimate solution for applications in materials and life science.



TemCam-F816 for JEOL Microscope

TVIPS

TemCam-F816 Features and Benefits

Large field of view
The active area of 128 x 128 mm² is about 2x larger than the standard film areas of 100 x 80 mm².

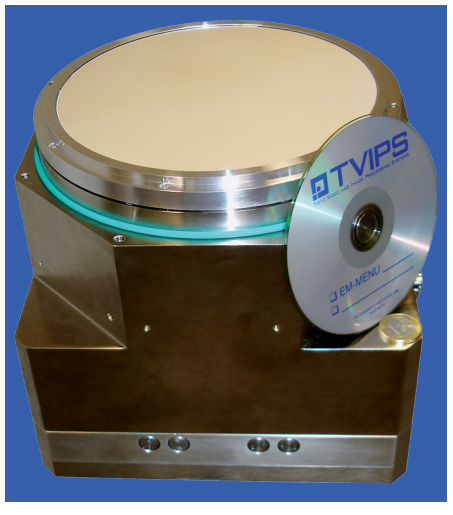
Fast readout
Eight readout ports, each sampling with 10 MPixel/sec, digitize the image information and transfer the data into the PC memory within 5 sec. With a subarea of 1k x 1k, a frame rate of 6.7 fps can be achieved.

Fiber optic coupling
Fiber optic coupling of the electron-sensitive layer (scintillator) with the sensor increases the amount of light collected in comparison with lens-optical coupling and, as a result, the sensitivity of the camera.

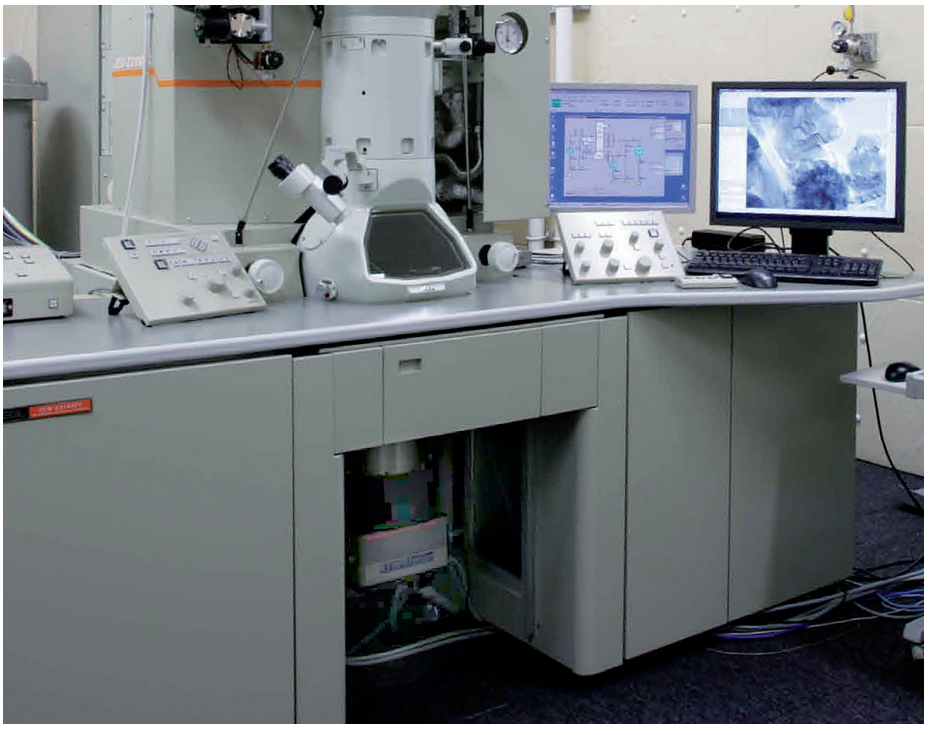
Optimized scintillators
TVIPS optimizes the scintillator for individual demands. Resolution and sensitivity can be customized for high tensions up to 400 kV.
Two standard types are available: optimized for high resolution (HR) or for high sensitivity (HS).

Format	8192 x 8192
Pixel size (µm²)	15.6 x 15.6
Field of view (mm²)	128 x 128
Readout rate @ digitization	8 x 10 MPixel/sec @ 14 bit
Frame rate @ full resolution	0.2 fps (5 sec)
Frame rate @ 8k x 8k (2x binning)	0.33 fps (3 sec)
Frame rate @ 2k x 2k	2.8 fps (0.36 sec)
Frame rate @ 2k x 1k	5.5 fps (0.18 sec)
Frame rate @ 1k x 1k	6.7 fps (0.15 sec)
Post-magnification	~ 1.6x
Electron-optical coupling	1:1 fiber-optics
Scintillator type	Polycrystalline phosphor
Binning factors	1x, 2x, 4x
Cooling	-10°C (regulated)
Dynamic range (maximum/noise)	10 000 : 1
Non-linearity (after flatfield correction)	< 1%
Sensitivity for primary 200 keV electrons	10 counts
SNR (for a single 200 keV electron)	8:1
Resolution (NTF at Nyquist freq.)	12%
Anti-blooming	yes
Bottom mounted	On-axis
System requirements	Windows XP, Intel DualCore CPU, 4 GB RAM, PCI and Firewire interfaces
Software	EM-Menu 4, Tomography, Single Particle Data Collection

Data in this brochure are typical and not binding.



TemCam-F816: 128 x 128 mm² Image Area, Pixel Size 15.6 µm
Right: TemCam-F816 on JEM-Z2100FC at AIST Tokyo Waterfront



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