Hyperspectral camera **FX17**

Features

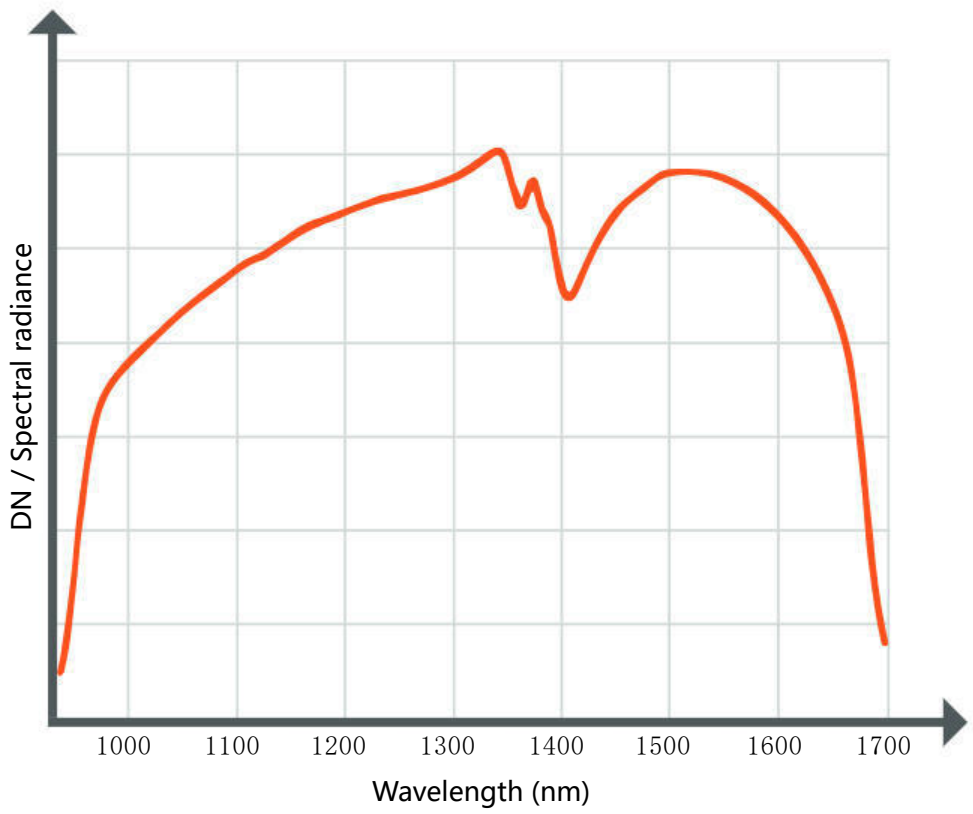
- Spectral range: 900-1700 nm
- High spatial resolution: 640 pixels
- High image speed

  527 FPS (full range) for GigE version

  670 FPS (full range) for CameraLink version
- From 224 bands within the camera's coverage range

  Selective wavelength choice
- Built-in image correction function
- Spectral calibration between different units
- GigE or CameraLink standard interface
- Easy to install in industrial environments
- Certification: CE, RoHS

Spectral Response



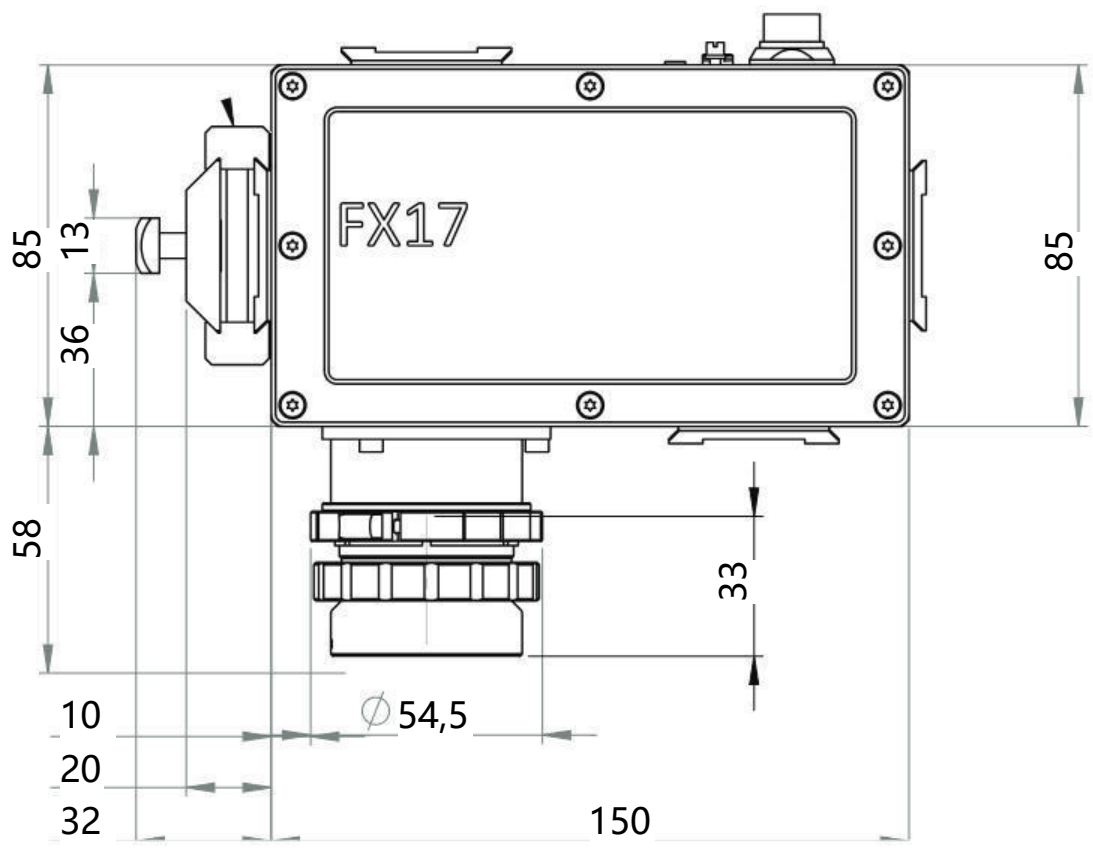
Improved accuracy and reduced cost

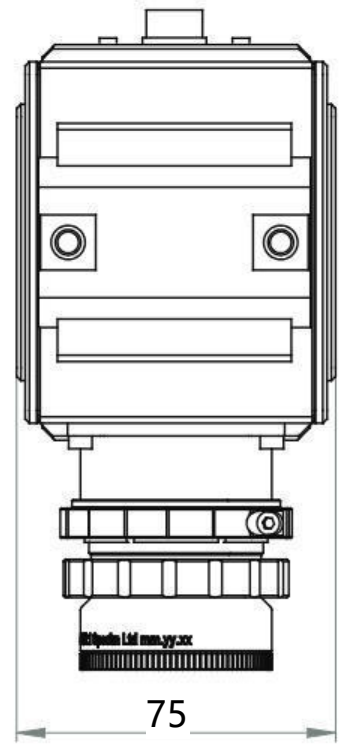
The FX17 camera is designed for industrial and laboratory use and operates in a line-scan mode to collect hyperspectral data in the near-infrared (NIR) region (900 to 1700 nm).

FX17 is very suitable for the following

- Food and feed quality assessment
- Waste sorting
- Resource recycling
- Humidity measurement
- Threat detection and security inspection

Size





Spectral range	900-1700 nm	
Spectral resolution (FWHM)	8 nm (average)	
Spectral sampling/pixel	3.5 nm	
Number of spectral bands	224	Use default pixel merging
Numerical aperture	1.7	Use default lens
Optical magnification	0.80	
Effective pixel size	18.7 μm	On the front lens image plane
Effective slit width	Physical width is 42 μm. Projection on the sensor is 32 μm (M=1.3)	On the front lens image plane
Effective slit length	12.0 mm	On the front lens image plane
Signal-to-noise ratio at maximum signal	1000:1	
Bit depth	12	
Maximum frame rate	670 (FX17) 527 (FX17e) Full range FPS	
Pixel binning	1、2、4 Spectral and Spatial	Default Value: 1 Spectral x 1 Spatial
Region of Interest (ROI)	Multiple bands can be freely selected as needed	The minimum height of ROI is two unmerged rows. The maximum frame rate is determined by the total number of lines between the first line of the first mROI and the last line of the last mROI, as well as the total number of lines contained in the mMROI.
Pixel operability	99.5% Allowed Clusters: Size 2-6 pixels: Not applicable Size 7-12 pixels: ≤ 6 Size 13-19 pixels: ≤ 2 Size 20-35 pixels: ≤ 1 Size > 35: 0	
Image correction	Non-uniformity correction Bad pixel replacement Automatic image enhancement (AIE)	Single Point NUC AIE: Uniform spectral calibration + smile and trapezoidal distortion correction
Sensor Material	InGaAs	
Sensor cooling	TEC	
Well Capacity	1.44 Me-	
Readout mode	IWR/ITR	
Optical Temperature	Passive	Default 20°C
Lens mount	Custom installation	
Front lens FOV options	12° 38° (default) 53° 66° 75° 90°	Only the default lens is designed specifically for FX17. For other lens accessories, the optical parameters may be different.
Camera Digital Data Output/Control Interface	GigE Vision、CameraLink	
Camera Control Protocol	GenICam、ASCII	
Power Input	12 V DC (+-10%)	
Power Consumption	Maximum 24 W	
Interface	Industrial Ethernet or CameraLink (Standard MDR 26 pin) Power – Fischer 12 core DBPLU1031Z012|130G	
IP Rating	IP52	
Dimensions (L x W x H)	150 x 75 x 85 mm	Installation surface options are provided on all three sides. The installation kit adds 24 mm of distance to the installation side.
Weight	1.56 kg	
Storage Temperature	-20 ...+50°C (no condensation)	
Operating Temperature	+5 ...+40°C (no condensation)	
Relative humidity	5% – 95% (no condensation)	