

Hyperspectral Camera FS1X Series (Line Scan)



Visible spectrum/NIR:

- Spectral range: 400-1000nm, wavelength resolution better than 2.5nm, up to 1200 spectral channels.
- Acquisition speed: up to 128FPS across the whole spectrum, up to 3300Hz after band selection (support multi-region band selection)
- Widely used in printing, textile and other industrial products surface color, texture detection. The repeatability of color measurement single pixel is up to $dE^* AB < 0.1$

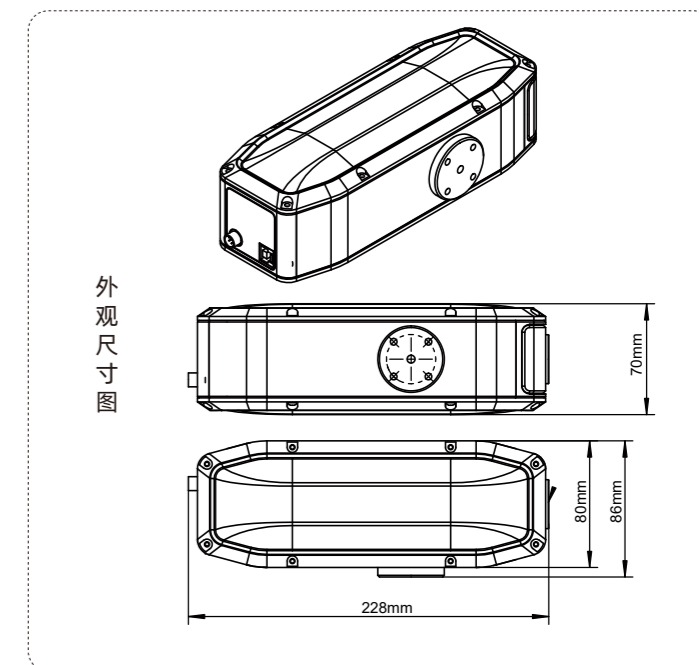
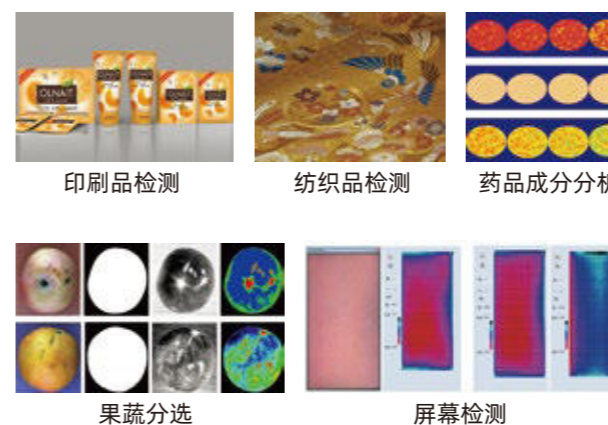
SW-NIR:

- Spectral range: 900-1700nm, wavelength resolution better than 8nm, up to 254 spectral channels
- Acquisition speed: up to 200FPS across the whole spectrum
- Widely used in composition identification, material identification, machine vision, agricultural product quality and other fields

Measurement principle



Typical application



Parameters

Model	FS-10	FS-12	FS-13	FS-15
Spectroscopic method	Grating	Grating	Grating	Grating
Spectral region	400-700nm	400-1000nm	400-1000nm	900-1700nm
Spectral band	600	1200	1200	254
Spectral FWHM	2.5nm	2.5nm	2.5nm	8nm
Slit width	25um	25um	25um	25um
Transmission efficiency	> 50%	> 60%	> 60%	> 60%
Stray light	< 0.5%	< 0.5%	< 0.5%	< 0.5%
Spatial pixel number	1920	1920	1920	320
Pixel size	5.86um	5.86um	5.86um	30um
Imaging speed	Full band 41Hz 390Hz can be achieved after ROI	Full band 41Hz 390Hz can be achieved after ROI	Full band 128Hz 3300Hz can be achieved after ROI	200Hz
Detector	CMOS	CMOS	CMOS	InGaAs
SNR(Peak)	500/1	600/1	600/1	600/1
Camera output	USB3.0	USB3.0	USB3.0	Gigabit network
Camera interface	C-Mount	C-Mount	C-Mount	C-Mount
Accessories	USB3.0 transmission line	USB3.0 transmission line	USB3.0 transmission line	Gigabit transmission network
ROI	Single area	Single area	Multiple area	Single area
Dimension	Length x width x height: 22.8 cmx7cmx8.6 cm	Length x width x height: 22.8 cmx7cmx8.6 cm	Length x width x height: 22.8 cmx7cmx8.6 cm	Length x width x height: 31.3cmx8.7cmx9.6cm
Weight	1250g	1250g	1250g	2630g
Power dissipation	5W	5W	5W	5W

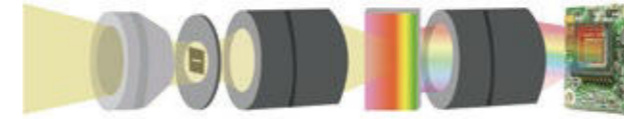
Hyperspectral camera FS-17



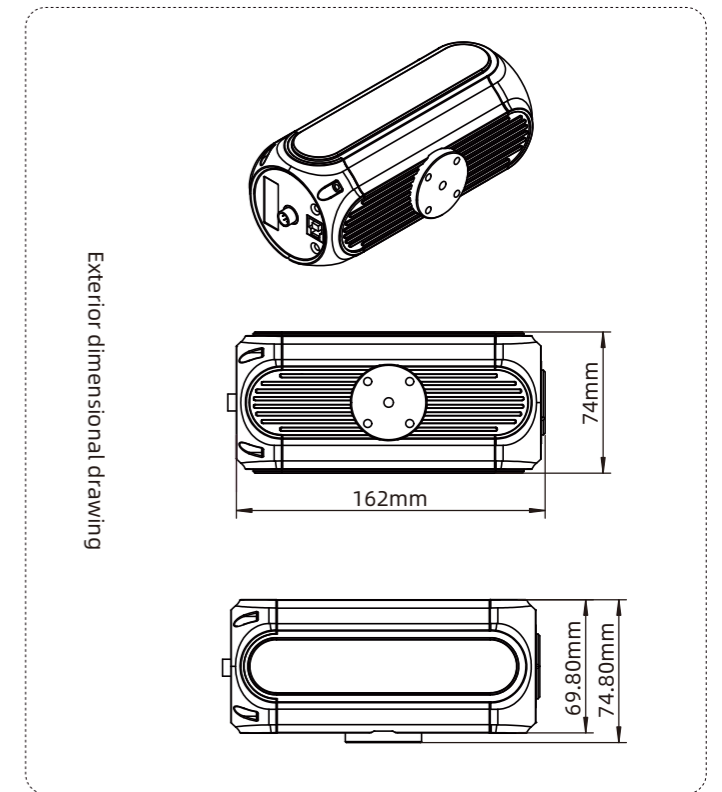
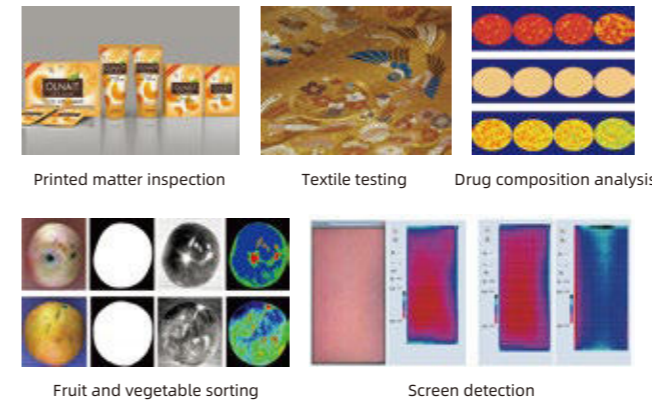
FS-17 is a 900-1700nm near-infrared hyperspectral camera launched by CHNSpec Technology, which is an advanced hyperspectral imaging equipment. InGaAs matrix image sensor with high sensitivity, with excellent spectral resolution and spatial resolution, can be widely used in agriculture, food, pharmaceutical, environment and other fields; Support for USB3.0 interface, compatible with standard C-Mount lenses, flexibility and ease of use, easy to integrate into the device for real-time hyperspectral imaging; Using a unique optimization algorithm to achieve high-speed acquisition and processing, with high efficiency and stability, it is a reliable hyperspectral imaging equipment.

- Spectral method: transmission grating
- Spectral range: 900-1700nm
- Spectral channel: 1024
- Spectral resolution: 8nm
- Number of space pixels: 1280
- Imaging speed: up to 1800fps after ROI
- Slit width: 25um
- Camera interface: C-Mount

Measurement principle



Typical application



Parameters

Model number	FS-17
Spectroscopic method	grating
Spectral range	900-1700nm
Spectral channel	1024
Spectral resolution (FWHM)	6nm
Slit width	25um
Transmission efficiency	> 60%
Stray light	< 0.5%
Number of spatial pixels	1280
Pixel size	5um
Imaging speed	8bit/1024 bands 132 frames/SEC, 12bit/1024 bands 70 frames/SEC, 8bit/512 bands 253fps, up to 1800fps after ROI
probe	InGaAs
SNR(Peak)	600/1
Camera output	start
Camera interface	C-Mount
attachment	Lens, USB cable, power supply
ROI	Multiple regions
dimension	Length x width x height :16.6cmx7.5cmx7.4cm
weight	625g
Power dissipation	5W

High speed hyperspectral sorting system FS-18/19

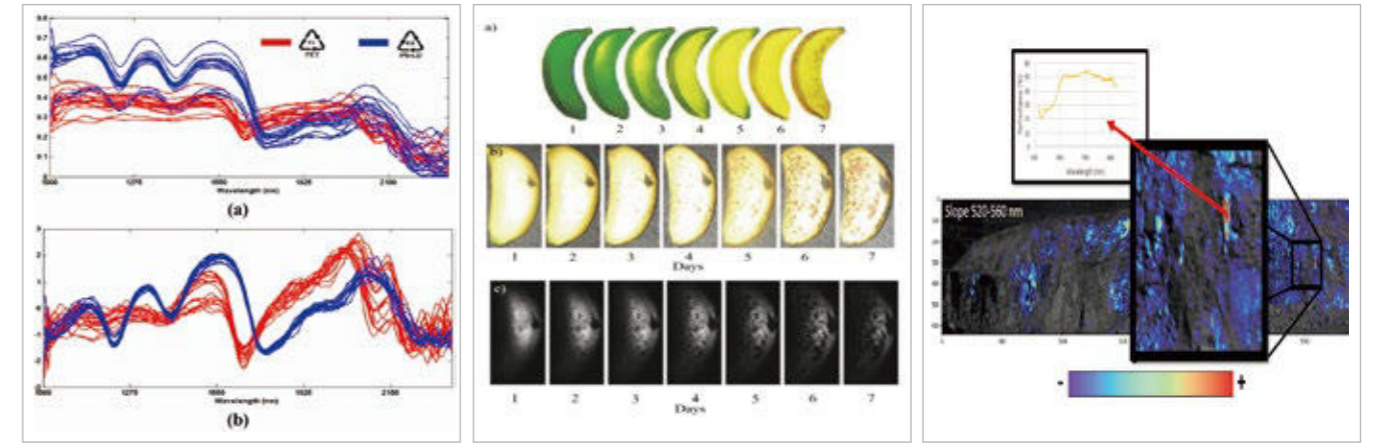


The FS-18/19 is a line scan hyperspectral camera from CHN Spec designed for industrial sorting applications. Its high frequency features meet the scanning speed requirements of industrial applications, and its robust construction and compact body also make it more flexible in installation scenarios.

- Spectral range: 900-1700nm
- Imaging speed: up to 1480fps
- Spectral resolution: 6nm
- Suitable for all environments
- Multiple regional ROIs can be achieved
- Hyperspectral image processing software is provided



Application fields



Plastic sorting

Fruit and vegetable sorting

Ore sorting

Parameters

Product number	FS-18 (short wave infrared SWIR)	FS-19M (short wave infrared SWIR)	FS-19X (short wave infrared SWIR)
lighting method	Passive lighting (excluding light source)		
Spectral method	Transmission grating		
Spectral range	900-1700nm		
Number of spectral bands	512	150	100
Spectral resolution	< 6nm	~9nm	< 13nm
slit width	25um		
Transmission efficiency	>60%		
stray light	<0.5%		
number of spatial pixels	640		
Pixel size	15um		
Lens focal length	Standard 8mm (optional 6mm, 12mm, 25mm, 35mm lenses)		
field of view	62°(8mm focal length lens), 77°(6mm lens)		
Imaging speed	740fps	2400fps	3500fps
detector	InGaAs		
SNR(Peak)	600/1		
camera output	Cameralink		
camera interface	C-Mount		
Accessories	Lens, data cable, power supply, data acquisition card		
Technical Support	SDK can be provided to support secondary development		
ROI	single area		