

Hyperspectral Camera

Hyperspectral camera equipped with Sony's IMX992

Hyperspectral imaging camera

AHS-052VIR

Equipped with Sony's proprietary "IMX992" sensor, this high-definition industrial hyperspectral camera is built with the industry's highest resolution* image sensor.

With a 2560-pixel line sensor, it performs spectral separation across a broad range from the visible light region (450nm) to the short-wave infrared region (1700nm), capturing complete spectral data in 1680 wavelength bands.

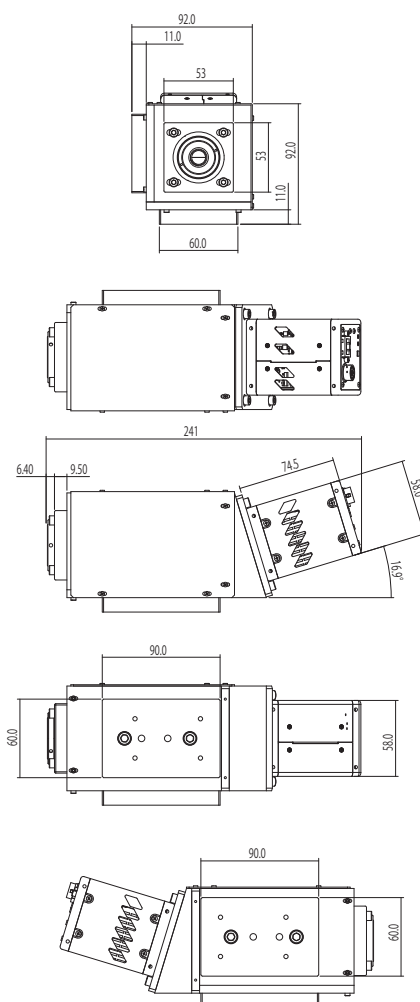
※ According to Sony's research (as of November 2023), this resolution is the highest in the industry among industrial SWIR image sensors made using the compound semiconductor InGaAs (Indium Gallium Arsenide).



■ AHS-052VIR Specification

Model	AHS-052VIR-GE	
Image sensor	Effective pixel : 2560H (Spatial)×1680V (Spectral) Pixel size : 3.45μm×3.45μm InGaAs sensor, 1-stage electronic cooling	
Interface	10Gigabit Ethernet (10GBASE-T)	
Sensitivity wavelength	450nm~1700nm	
Number of detection bands	1680bands	
Wavelength resolution	4.66nm ※Theoretical value	
Imaging method	Push-broom method (line scan method)	
Frame rate	8bit 145.99FPS (max) 10bit 104.63FPS (max) 12bit 85.68FPS (max)	
Exposure time	8bit	8μsec~10msec (Adjustable range : 8μsec~9.99sec)
	10bit	8μsec~10msec (Adjustable range : 8μsec~9.99sec)
	12bit	13μsec~10msec (Adjustable range : 13μsec~9.99sec)
Pixel clock cycle	74.25MHz	
S/N	47dB	
Gain	0dB~+12dB (Configurable range : 0dB~30dB)	
Black level	Adjustable from 0 LSB to 127 LSB (in 10 bit mode)	
Main functions	Status LED, internal cooling mechanism, external trigger, various corrections (DSNU, PRNU, pixel defects, shading), ROI, field upgrade function, wavelength selection, binning	
Image output	8 / 10 / 12bit	
Lens mount	C-mount 2/3 inch	
Peltier set temperature	-30℃~+60℃ set to 15℃ at shipment (However, it should be used within the operating temperature range)	
Operating temp / humidity	+0℃~+45℃ 20~80% (non-condensing)	
Storage temp / humidity	-15℃~+65℃ 20~80% (non-condensing)	
Power	Input voltage range : DC +12V to +24V ±1V Power consumption : 13W (typ) ※When using external power DC +24V	
Dimensions	92 (W) x 92 (H) x 241 (D) mm (Excluding mount and protruding parts)	
Weight	2.0kg (typ.)	
Compliance	RoHS2	
Standard	GigE Vision®, GenICam™, GenICam™ GenTL	
Camera update tool	SightCam	
Cable (video output)	LAN cable compatible with CAT6A and CAT7 (optional)	
SDK	For imaging / communication : SDK-AcapLib2 (Model : AZP-ACAP-02) Hysight : Viewer for hyperspectral cameras	

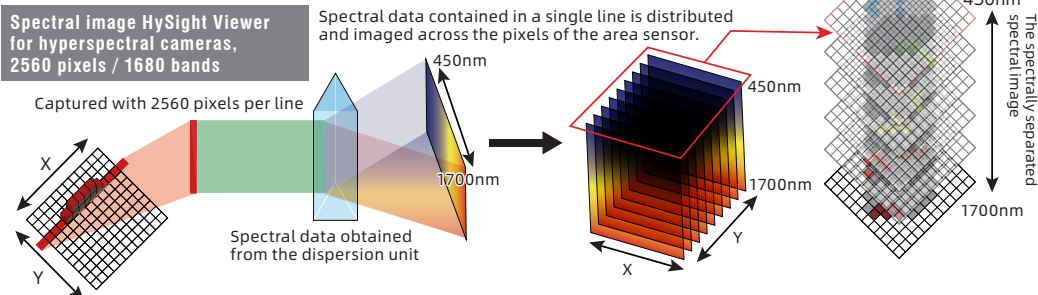
External dimensions



Viewer for hyperspectral cameras



Spectral image HySight Viewer for hyperspectral cameras, 2560 pixels / 1680 bands



Hyperspectral Camera Equipped with Sony's IMX991

Hyperspectral Imaging Camera

AHS-003VIR

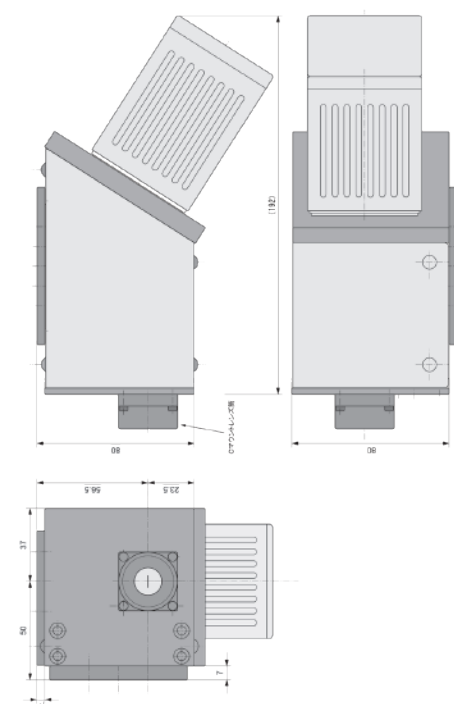
A hyperspectral camera is a device capable of simultaneously acquiring two-dimensional spatial data (XY coordinates) and spectral data (wavelength information). The AHS-003VIR separates light in the 450nm to 1700nm range using a 640-pixel line sensor and captures spectral information across 512 wavelength bands.



■ AHS-003VIR Specification

Model	AHS-003VIR-CL	AHS-003VIR-GE
Image sensor	Effective pixel : 640 (Spatial)×512 (Spectral) Pixel size : 5μm×5μm InGaAs : Cooled InGaAs Sensor	
Sensitivity wavelength	450nm~1700nm	
Spectral resolution	18.8nm	
Interface	Camera Link (SDR)	Gigabit Ethernet (1000BASE-T)
Operating method	Push broom type (line scan)	
Lens mount	C-mount 1/4 inch	
Line rate	Max Line rate 220.00FPS ※Full band @GiGE / 8bit 240.61FPS ※Full band @Camera Link / 8bit 2767.00FPS ※8bands @Camera Link / 8bit	
Exposure time	6μsec~10msec (Setting range : 6μsec to 9.99sec)	
Gain	X1 to x4 (approximately 0dB to +12dB)	
Black level	0LSB~127LSB Reversible (10bit)	
Main function	Status LED, External trigger, Correction function (DSNU, PRNU, Defect pixel, Shading), field upgrade, band option	
PRNU	Brightness correction for pixel-level non-uniformity	
DSNU	Darkness correction for pixel-level non-uniformity	
Pixel defect correction	Black pixel, White pixel correction, mask function	
Shading correction	Flat shading correction ON-OFF	
Interface	GiGE Vision / Camera Link	
Synchronous mode	Internal / External synchronous mode	
Image output	8 / 10 / 12bit	
Power	Input voltage : DC+12V~+24±1V Power consumption : DC +12V , 7W(typ)	
Operating temp/humidity	0℃~45℃ / 20~80% (Non-Condensing)	
Storage temp/humidity	-15℃~+65℃ / 20~80% (Non-Condensing)	
Dimension (DxWxH)	87mm×120mm×192mm (Connector part not included)	
Weight	1250g (typ.)	
Compliance	RoHS2	
Standard	Hyper terminal or standard software	GiGE Vision®, GenICam™, GenICam™ GenTL
Camera update tool Cable (video output)	Camera Link SDR Cable	LAN cable compatible with CAT5E and CAT6
SDK	For imaging / communication : SDK-AcapLib2 (Model name : AZP-ACAP-02) HySight : Viewer for hyperspectral cameras	

External dimensions



Quantum efficiency

