

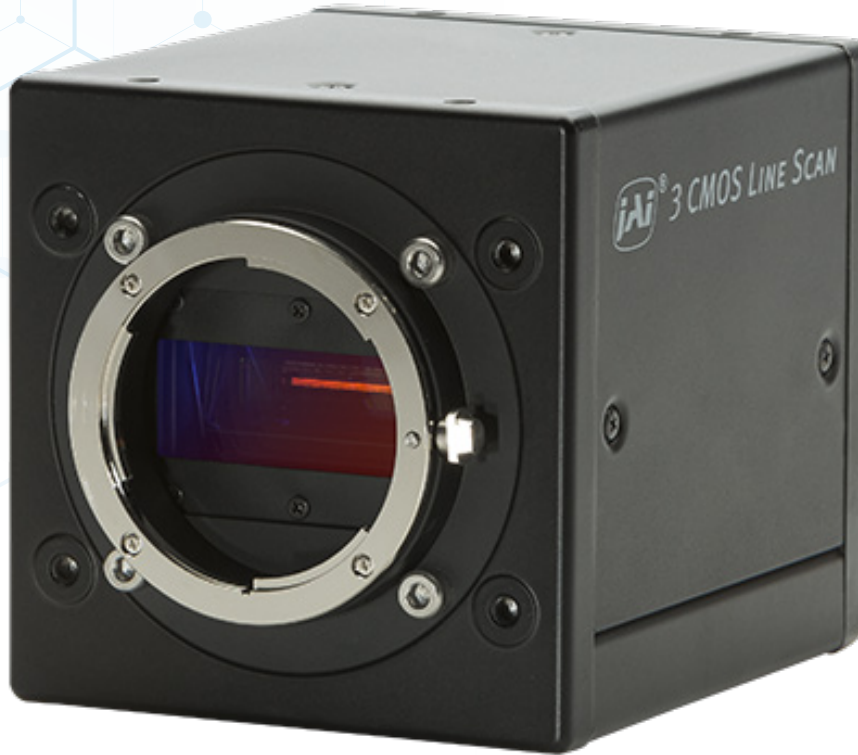
SW-4000T-SFP

Technical Datasheet

Custom



See the possibilities



Apex Series



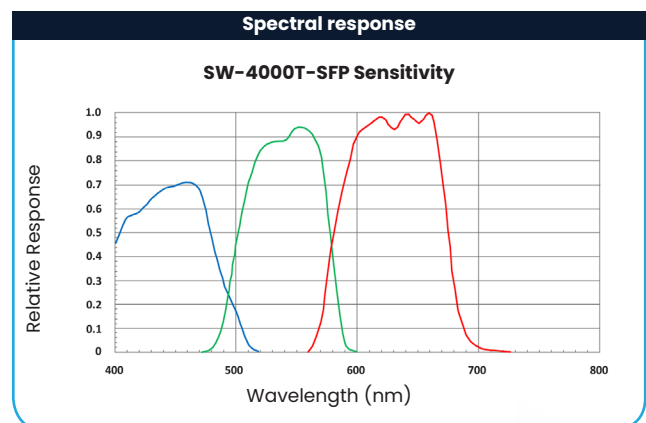
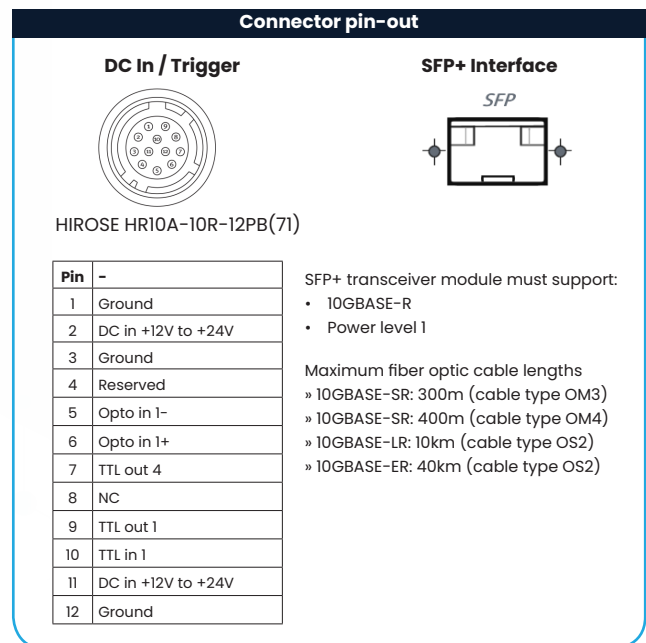
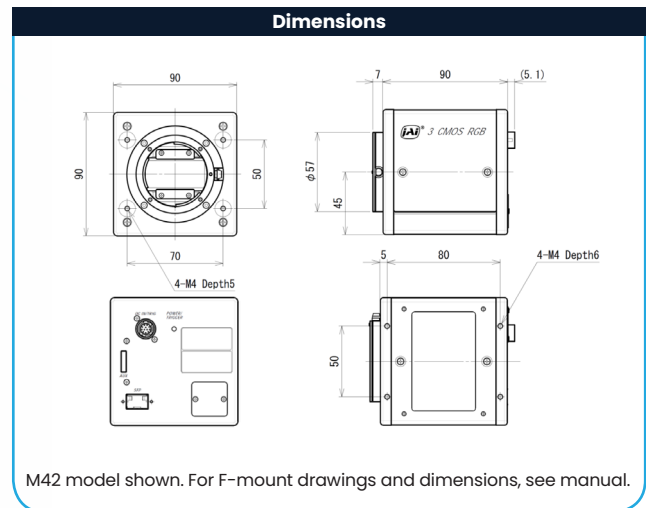
The Sweep+ Series comprises 3-sensor R-G-B and 4-sensor R-G-B-NIR or R-G-B-SWIR line scan cameras for industrial machine vision applications.

They features state-off-the-art prism technology providing the best possible performance, precision, and versatility for line scan imaging in continuous production flows.

Specification Highlights

SENSOR:	Custom	SHUTTER:	Global Shutter
FORMAT:	30.72 mm	FRAME RATE:	97 kHz
PIXEL SIZE:	7.5 x 7.5 μm / 25.0 x 25.0 μm	INTERFACE:	SFP+ over 10 Gigabit Ethernet
LENS MOUNT:	F-Mount	RESOLUTION MP:	N/A MP
SPECTRUM:	Color (Visible)	RESOLUTION WxH:	4100 x 1 px

Specifications		SW-4000T-SFP
Scanning system	3 high-speed CMOS line sensors, prism-mounted	
Active pixels	3 x 4096 pixels (R, G, B)	
Line rate	Up to 97 kHz (variable) Faster line rates possible with YUV compression	
Sensor width	30.72 mm	
Pixel size	Mode A: 7.5 µm x 7.5 µm Mode B: 7.5 µm x 10.5 µm	
Ethernet speeds	10GBASE-SR / 10GBASE-LR / 10GBASE-ER	
Video output	RGB8, RGB10VIPacked, RGB10p32, YUV422_8_UVYV, YUV422_8	
Object illuminance (min.)	220 lx @ 7800 K, Mode A (Gain 18 dB, 525 µs exp., 50% video, RGB8)	
Responsivity	123 DN/nJ/cm ² (G channel, Mode A, 10-bit @ 550 nm, 0 dB gain)	
S/N ratio	>55 dB on green, 10-bit with 0 dB gain	
Inputs	Trigger (1 Opto In + 1 TTL via 12-pin, 2 TTL via 10-pin), Pulse Generator (4), NAND Out (2), Action (4)	
Outputs	2 TTL via 12-pin, 2 TTL via 10-pin	
Gain	Analog Base Gain: 0 dB / 6 dB / 12 dB Digital Master: 0 to +18 dB, R/B: -7.96 to +12 dB Digital Individual: 0 to +24 dB	
White balance	Manual/one-push auto by gain or exposure	
Gamma	0.45 to 1.0 (9 steps) or 257-point LUT	
Image processing	PRNU/DSNU, black level, flat shading and color shading correction, chromatic aberration adjustment, horizontal mirroring	
Color space conversion	RGB to HSI, RGB to XYZ (CIE), sRGB, Adobe RGB, or User Custom RGB	
Exposure modes	No shutter, timed, and trigger width control	
Electronic shutter	3 µs to 10.3 µs in 10 ns increments at fastest line rate. Exposure time can be longer at slower line rates.	
Pulse width control	1.8 µs to ~1 sec	
Time synchronization	Support for Precision Time Protocol (IEEE 1588)	
Lens mount	M52 mount or Nikon F-mount (46.5 mm flange back for both mounts)	
Storage temp. (ambient)	-5°C to +45°C (20 to 80% non-condensing)	
Storage temp. (ambient)	-25°C to +60°C (20 to 80% non condensing)	
Vibration	3G (20 Hz to 200 Hz, XYZ directions)	
Shock	50G	
Regulations	CE (EN61000-6-2, EN61000-6-3) FCC Part 15 Class B, RoHS/WEEE	
Power	12-pin PoE	+10V DC to +25V DC. 11.5 W typical @ 12V Not supported
Power consumption	8.0 W typical @ +12V	
Dimensions (H x W x L)	(without connector and lens mount protrusions) 90 mm x 90 mm x 90 mm	
Weight	830 g	
Ordering Information		
SW-4000T-SFP-F		3-CMOS prism line scan camera with F-mount
SW-4000T-SFP-M52		3-CMOS prism line scan camera with M52 mount



*M42 x 1 with 16 mm flange back distance

Product Highlights

- 3 x 4096 pixel prism-based line scan camera
- Provides 10GBASE-R (fiber optic) output over SFP+ interface
- Max. line rate of 97 kHz for RGB8 output, 147 kHz for YUV422 (8-bit) output
- Prism technology for superior color quality and better color differentiation
- Optimized for applications with fixed and varying object speeds
- Newly developed "state of the art" CMOS sensors
- Selectable pixel size - 7.5 x 7.5 μm or 7.5 x 10.5 μm
- Supports vertical dual-line binning, 2x horizontal binning, or both
- Flat field correction and color shading correction
- HSI and XYZ color space conversion
- Supports direct connection to rotary encoders plus large variety of trigger options
- GigE Vision 2.0 interface with selectable YUV, 3 x 8-bit RGB, or 3 x 10-bit RGB
- Excellent shock and vibration resistance

Additional Product Images



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