SW-4000T-10GE 3-CMOS prism line scan camera







- World's first 3 x 4096 pixel prism-based 10GBASE-T line scan camera
- Max. line rate of 97 kHz for RGB8 output
- Prism technology for superior color quality and better color differentiation
- Backwards compatible to NBASE-T (5GBASE-T/2.5GBASE-T) and standard GigE (1000BASE-T)
- 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
- GiqE Vision 2.0 interface with selectable YUV, 3 x 8-bit RGB, or 3 x 10-bit RGB output
- Excellent shock and vibration resistance



Specifications SW-4000T-10GE 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-T, 5GBASE-T, 2.5GBASE-T, 1000BASE-T Full backwards compatibility RGB8, RGB10V1Packed, RGB10p32, Video output 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/cm² (G channel, Mode A, 10-bit @ 550 nm, o dB gain) S/N ratio >55 dB on green, 10-bit with o 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: o dB / 6 dB / 12 dB Digital Master: o to +30 dB, R/B: -7.96 to +12 dB Digital Individual: o to +36 dB White balance Manual/one-push auto by gain or exposure Gamma 0.45 to 1.0 (9 steps) or 257-point LUT PRNU/DSNU, black level, flat shading and Image processing color shading correction, chromatic aberration adjustment, horizontal mirroring RGB to HSI, RGB to XYZ (CIE), Color space conversion 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 us 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) Operating 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 +10V to +25V DC. 13.7 W typical @ 12V 42V to 57V DC. 15.3 W typical @ 48V 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

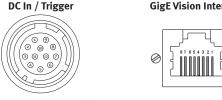
SW-4000T-10GE-F 3-CMOS prism line scan camera with F-mount SW-4000T-10GE-M52 3-CMOS prism line scan camera with M52 mount

4-M4 Depth5 4-M4 Depth6

F-mount model shown. For M52 drawings and dimensions, see manual.

Connector pin-out

Dimensions (F-mount)



HIROSE HR10A-10R-12PB(71)

- 1 Ground
 - DC in +12V to +24V
 - 3 Ground
 - Reserved
 - Opto in 1-5
 - 6 Opto in 1+ TTL out 4
 - 8 NC
 - TTL out 1
 - 10 TTL in 1 DC in +12V to +24V
 - Ground

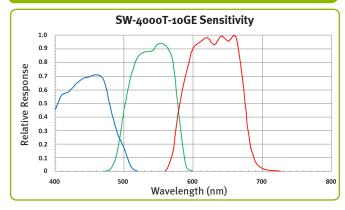
GigE Vision Interface



RJ-45 with locking screws

Pin	Signal
1	TRD+ (o)
2	TRD- (o)
3	TRD+ (1)
4	TRD+ (2)
5	TRD- (2)
6	TRD- (1)
7	TRD+ (3)
8	TRD- (3)

Spectral response



Europe, Middle East & Africa Phone +45 4457 8888 Fax +45 4491 8880

Asia Pacific Phone +81 45 440 0154 Fax +81 45 440 0166

Phone (Toll-Free) 1 800 445 5444 Phone +1 408 383 0300

