WA-1000D-CL
Technical Datasheet

Custom

JAI®

See the possibilities

CAMERA Link®

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:**	150 fps
PIXEL SIZE:	3.75 x 5.78 µm		**INTERFACE:**	10 Gbps GigE Vision
LENS MOUNT:	M52-Mount		**RESOLUTION MP:**	N/A
SPECTRUM:	Multispectral (4-Bands R-G-B + NIR)		**RESOLUTION WxH:**	8192 x 1 px

Specifications

| Specifications	WA-1000D CL
Sensor	2 InGaAs Line sensors
Active pixels	1024 pixels x 2
Cell size	25.0 μm x 25.0 μm
Pixel clock	6.67 MHz
Line rate (max)	39kHz (39,230 line/sec)
Sensor sensitivity	280nV/e- (conversion gain)
Sensor width	25.6 mm
Synchronization	Internal X-tal or external trigger
S/N ratio	>50 dB on green with gain = 0 dB
Digital video output	Dual Base Configuration: 2x8-bit, 2x10-bit, 2x12-bit 2-Tap Medium Configuration: 2x8-bit, 2x10-bit, 2x12-bit
Input signal	Trigger (Camera Link, TTL/75 Ω)
Output signal	Camera Link: LVAL - DVAL - EEN Hirose 12-pin: XEEN
Gain	Master mode: 1ch: 0dB to +11dB, 2ch: -3dB to +3dB Individual mode: 1ch/2ch: 0dB to +11dB
Correction	Pixel gain correction, Flat shading correction, LUT/Gamma correction
Trigger modes	Pulse width control, No-Shutter, Shutter select
Programmable exposure	20.38 μs to 1.995ms in 149.9ns increments
Pulse width control	20.38μs to 1 s (Camera Link) 50μs to 1 s (12-Pin connector)
Lens mount	M52 Mount
Operating temperature	-5oC to +45oC
Operating humidity	+20 to +80% non-condensing
Vibration	3G (20Hz to 200Hz, XYZ direction)
Shock	50G
Regulations	CE (EN61000-6-2, EN61000-6-3), RoHS/WEEE, IEC/EN61000-4-3 FCC Part15 Class B IEC61000-4-2 Level 4 (contact discharge = 8 kV, air discharge = 15 kV)
Power	DC+12V to 24V ± 10% 820 mA ±10% +12V
Dimensions (H x W x D)	90 mm x 90 mm x 117 mm (without connector and lens mount protrusion)
Weight	910 g

Spectral response
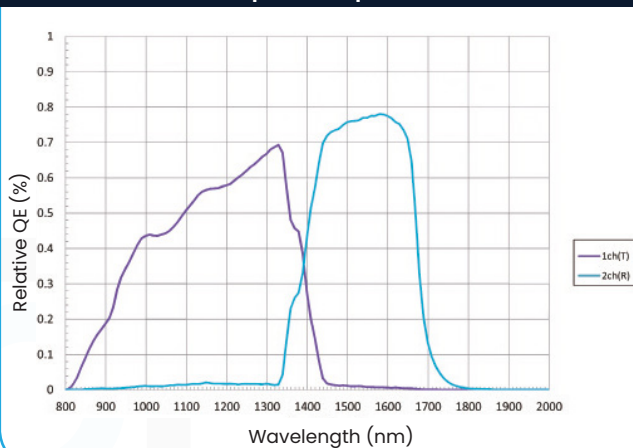
Connection Pin-out

DC In / Trigger
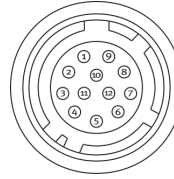
12-pin Connector

Pin	-
1	Ground
2	+12V DC in
3	Ground
4	Reserved
5	Ground
6	RXD in RS232C*
7	TXD out RS232C*
8	Ground
9	XEEN out
10	Trigger IN (TTL)*
11	+12V DC IN
12	Ground

*) In Camera Link or 12 pin Hirose

Camera Link Interface

Camera Link Interface
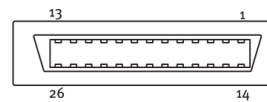
Port 1 (24bit, 30bit)

| Pin No In/Out	Name	Note
1,14	Shield	GND
2(-),15(+) O	TxOUT0	Data out
3(-),16(+) O	TxOUT1	-
4(-),17(+) O	TxOUT2	-
5(-),18(+) O	TxClk	CL clock
6(-),19(+) O	TxOUT3	Data out
7(-),20(+) I	SerTC (RxD)	LVDS Serial Control
8(-),21(+) O	SerTFG (TxD)	-
9(-),22(+) I	CC1 (Trigger)	Trigger
10(-),23(+) I	CC2 (Reserved)	-
11,24	N.C	-
12,25	N.C	-
13,26	Shield	GND

Note:
Camera Link base configuration shown. For medium configuration refer to Camera Link specifications or operation manual.
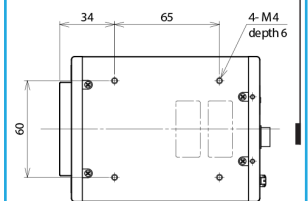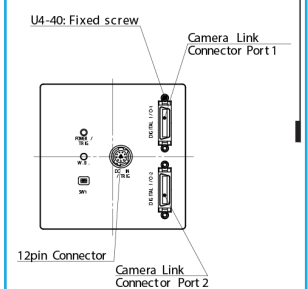
Dimensions

Front view   M52 Mount
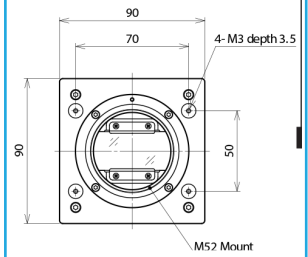
Side view
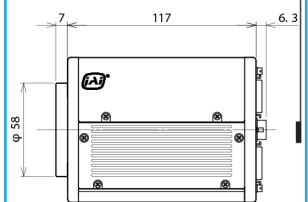
Bottom view

Rear view

Product Highlights

- Simultaneous dual-band imaging in the Short Wave InfraRed (SWIR) light spectrum
- Wavelength band : 900 nm to 1700 nm
- Enables you to acquire images that R-G-B and NIR will not be able to identify
- Active pixels : 1024 pixels x 2
- Line rate : 39 kHz (39,230 line/second)
- Cell size : 25.0 μm x 25.0 μm
- Video output : 2 x 8-bit, 2 x 10-bit, 2 x 12-bit through Camera Link interface (available with Dual-Base configuration or 2-tap Medium configuration)
- Pixel gain correction, Flat-field correction, LUT/Gamma function
- M52 lens mount

Additional Product Images