

Acuros[®]6 CQD[®] SWIR Camera Preliminary Product Sheet

SWIR imaging meets high resolution:

Introducing the world's first 6MP CQD SWIR camera

SWIR Vision Systems continues the tradition of lowest cost per megapixel with the Acuros[®] 6 SWIR machine vision camera. The compact, lightweight design delivers a spectral response from UV up to 2.1 μ m and is equipped with 7 μ m pixels featuring optically enhanced CQD technology for improved SNR performance. A single-stage TEC ensures stable performance over a wide range of operating conditions.

THE POWER OF 6 MP

Higher resolution is essential for imaging, capturing intricate details with wider fields of view.

This additional data is vital to precision-driven industries like medical, manufacturing, scientific research and defense and aerospace. The Acuros[®] 6, high-resolution sensor, enables post-processing flexibility with lower loss of quality, empowering users, and algorithms to extract insights, spot defects, and enhance images for more meaningful results.

Features:

- Compact form factor
- 10GigE and CoaXPress interface options
- Auto Exposure
- Dynamic Non-Uniformity Corrections (NUCs)
- GenICam Compliant
- TEC thermal stabilization (uncooled)
- Spectral range covering UV-2.1 μ m

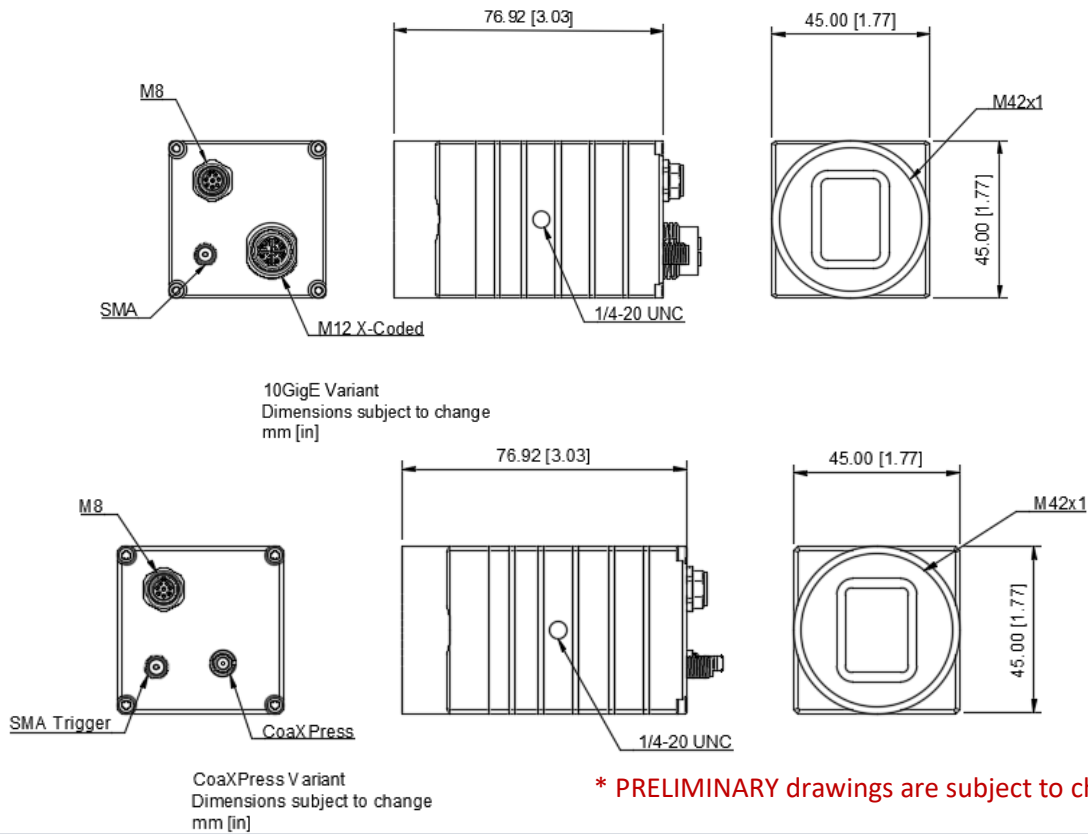
Applications:

- Machine vision
- Silicon inspection
- Laser beam profiling
- Automotive
- Surveillance
- Hyperspectral
- Chemical sensors
- Agricultural
- Medical imaging
- Thermography

Specifications:		
Sensor Features		
Type	Acuros® 6 CQD sensor	
Pixel Pitch	7 µm	
Format	3064 x 2040	
Array Size	21.50 mm x 14.34 mm	
Array Diagonal	25.84 mm	
Shutter	Global Shutter	
Max FPS (full frame)	100 Hz (8 bit), 50 Hz (12 bit),	
Min Exposure time	10 µs	
Detector Technology	Colloidal quantum dot photodiode	
Detector type	SWIR	eSWIR
Spectral Range	400-1700 nm	400-2100 nm
QE	>20% @ 1550 nm	>15% @ 1900 nm
Pixel operability	99.9% typical	
Dark noise (at 30C)	TBD (e/s)	TBD (e/s)
Dark noise doubling temp	20 C	18 C
Analog Gain Modes	Low Gain	High Gain
Read noise	125 e-	20 e-
Well-depth	350 Ke-	52 Ke-
Dynamic Range	68 db	63 db
ADC bit depth	8-bit or 12-bit	
Camera Features		
Trigger	External TTL via SMA	
Region of interest (ROIC)	Yes (8 row increments)	
ROI FPS scaling	Yes. FPS up to 10 KHz for 3064 x 8 pixel ROI	
Binning arrays	Yes	
Non-uniformity correction	2 pt	
Auto exposure control	Yes	
Environmental & power specifications, typical performance		
Sensor temperature stabilization	Single-stage TEC	
Operating case temperature	-40 °C to +85 °C	
Storage temperature	-40 °C to +125 °C	
Power consumption	<i>Data coming soon</i>	
Power supply voltage	<i>Data coming soon</i>	

Mechanical specifications	
Dimensions excluding lens	5 cm x 5 cm x 8 cm
Weight excluding lens	300 g
Lens mounts	C-mount, M42-C
Power connector	8-pin M8 connector
Trigger connector	SMA
Software and user interface	
Software development kit	Euresys eGrabber SDK
GenICam compliance	Yes
Interface	10GigE or CoaXPress (CXP-6)

Preliminary Mechanical Drawings*



Contact Us: For technical, pricing, and sales information, or to learn more about Acuros CQD imaging technology, please contact us at: sales@swirvisionsystems.com, 919.248.0032