

## Acuros<sup>®</sup> 6 CQD<sup>®</sup> 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<sup>®</sup> 6 SWIR machine vision camera. The compact, lightweight design delivers a spectral response from UV up to 2.1 $\mu$ m and is equipped with 7 $\mu$ 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<sup>®</sup> 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 $\mu$ m

#### Applications:

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

**Specifications:**
**Sensor Features**

Type	Acuros <sup>®</sup> 6 CQD sensor	
Pixel Pitch	7 $\mu$ m	
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 $\mu$ s	
Detector Technology	Colloidal quantum dot photodiode	
Detector type	<b>SWIR</b>	<b>eSWIR</b>
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	<b>Low Gain</b>	<b>High Gain</b>
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**

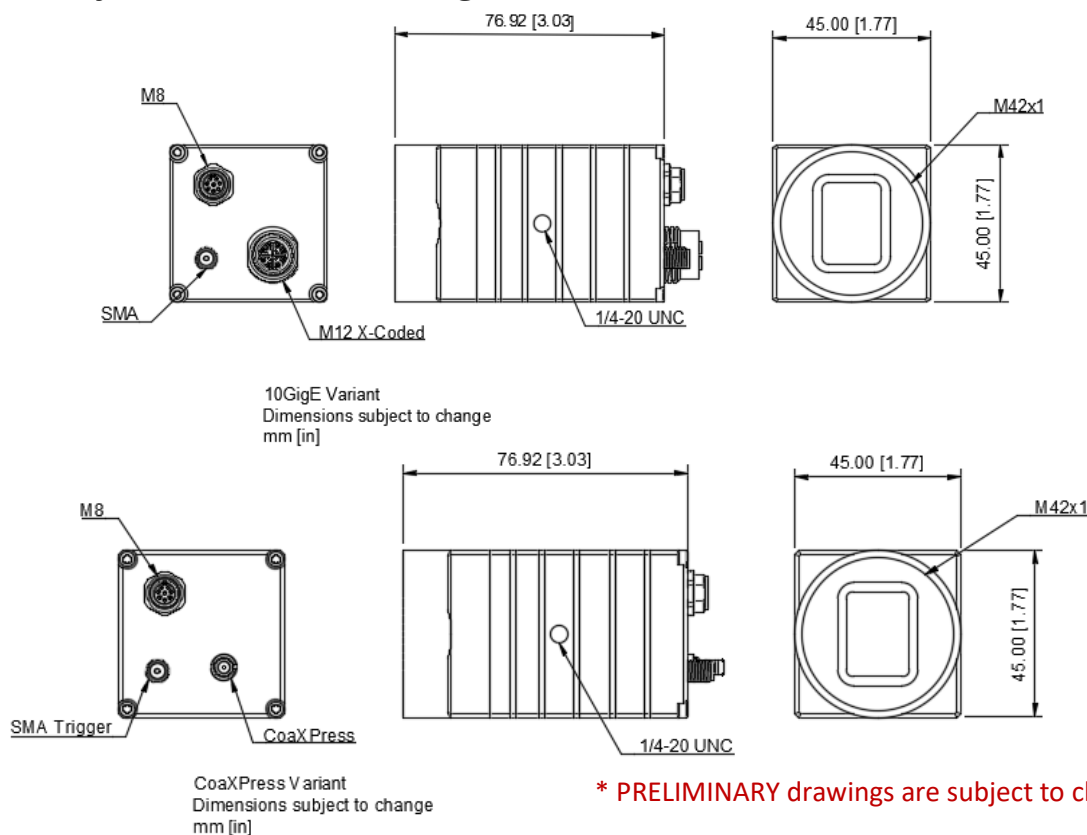
Trigger	External TTL via SMA
Region of interest (ROIC)	Yes (8 row increments)
ROI FPS scaling	Yes. FPS up to 10 KHz for 3064 x 8 pixel ROI
Binning arrays	Yes
Non-uniformity correction	2 pt
Auto exposure control	Yes

**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](mailto:sales@swirvisionsystems.com), 919.248.0032