SWIR® VISION SYSTEMS

High Definition. SWIR Vision.



Acuros® CQD® 1280 GigE eSWIR Camera

The Acuros® CQD® extended SWIR (eSWIR) cameras have sensitivity from 350nm to 2000nm. This novel wide bandwidth capability opens up new applications for chemical sensing, surveillance imaging, plastic sorting, thermal imaging and more. All Acuros cameras are GeniCam compliant and designated EAR-99 for requiring no license for lawful export. Acuros cameras have up to 10db higher SNR than competitive 5µm pitch InGaAs cameras.

Specifications:

Electro-Optical Specifications:	
Sensor	Acuros® CQD® sensor
Temperature stabilization	Single-stage thermo-electric cooler
Sensor array format	1280 x 1024
Resolution	1.31 megapixels
Spectral band	350 nm - 2000 nm
Array size	19.2mm x 15.4 mm, 24.6 mm diagonal
Pixel pitch	15 µm x 15µm
Max frame rate at full resolution	88 fps (8 bit), 45fps (10, 12, 14 bit)
Pixel operability	99.9% typical, 99.75% min
Bit depth	8, 10, 12, 14 bit selectable
Integration type	Snapshot global shutter
Trigger	External TTL
Integration time	10 µsec to 4 sec
Dynamic range	65 dB typical
Windowing	Array centered
Windowing frame rate	Scales inversely with window size
Binning arrays	2 x 2, 4 x 4
Non-uniformity correction	2-point non-uniformity correction
Temporal dark noise	65e^- typical (high gain)
Detectivity	See typical detectivity curve.

Features:

- HD resolution
- TEC cooling
- Low noise
- Fast frame rate
- Visible-eSWIR
- GigE Vision
- EAR-99

Applications:

- Hydrocarbon detection
- Chemical sensing
- Medical imaging
- Plastic sorting
- Hyperspectral
- High resolution
- Thermal imaging
- Surveillance
- Machine vision
- Silicon inspection
- Instrumentation

SWIR® VISION SYSTEMS

High Definition. SWIR Vision.

Specifications:

Environmental & power specifications, typical performance	
Operating case temperature	-20 °C to +55 °C
Power consumption	6.5 - 12 W depending on TEC settings
Power supply voltage	6-16 VDC. POE not supported
Regulatory compliance	CE mark
Mechanical specifications	
Dimensions excluding lens	6.1 x 6.1 x 10.3 cm (C-Mount)
Weight excluding lens	508 grams with C-mount adaptor, 594g (F-mount)
Lens mounts	C-, F-Mount, M42 (C-Mount flange-back distance)
Power connector	Hirose 12-pin, HR10A-10R-12PB (71)
Trigger connector	BNC
Software and user interface	
Software development kit	Windows GUI & Pleora eBUS SDK (Linux, Windows, MacOS)
GenICam compliance	Yes
Interface	GigE Vision
Export compliance	
US export designation	EAR-99. No license required for lawful export
Ordering	
Part numbers	Acuros-1280-GigE-002



C-mount, F-mount, and M-42 Lens Mounts



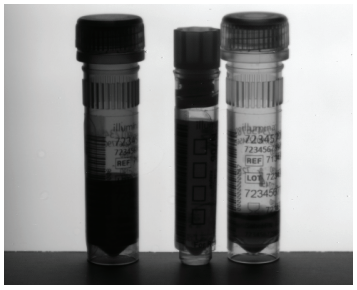
GigE Vision Interface

Acuros CQD SWIR camera images

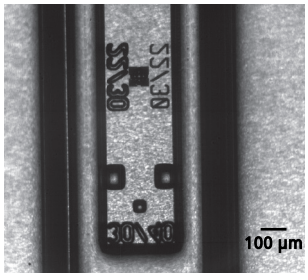
a.



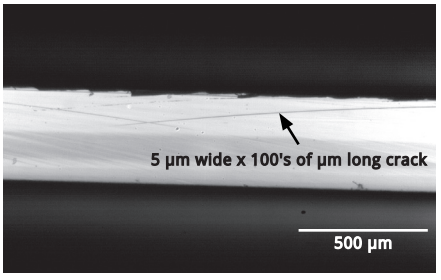
b.



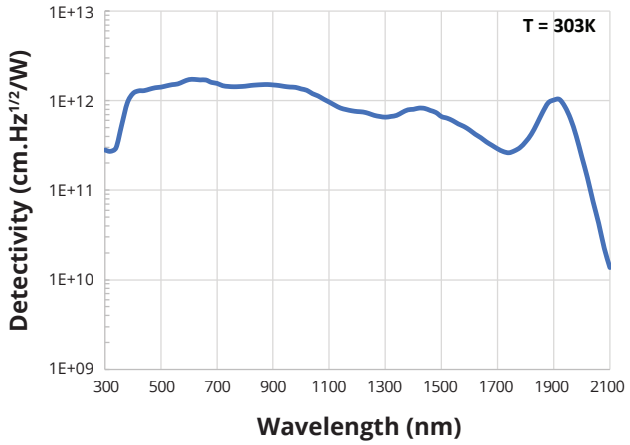
c.



d.



Typical Detectivity Performance



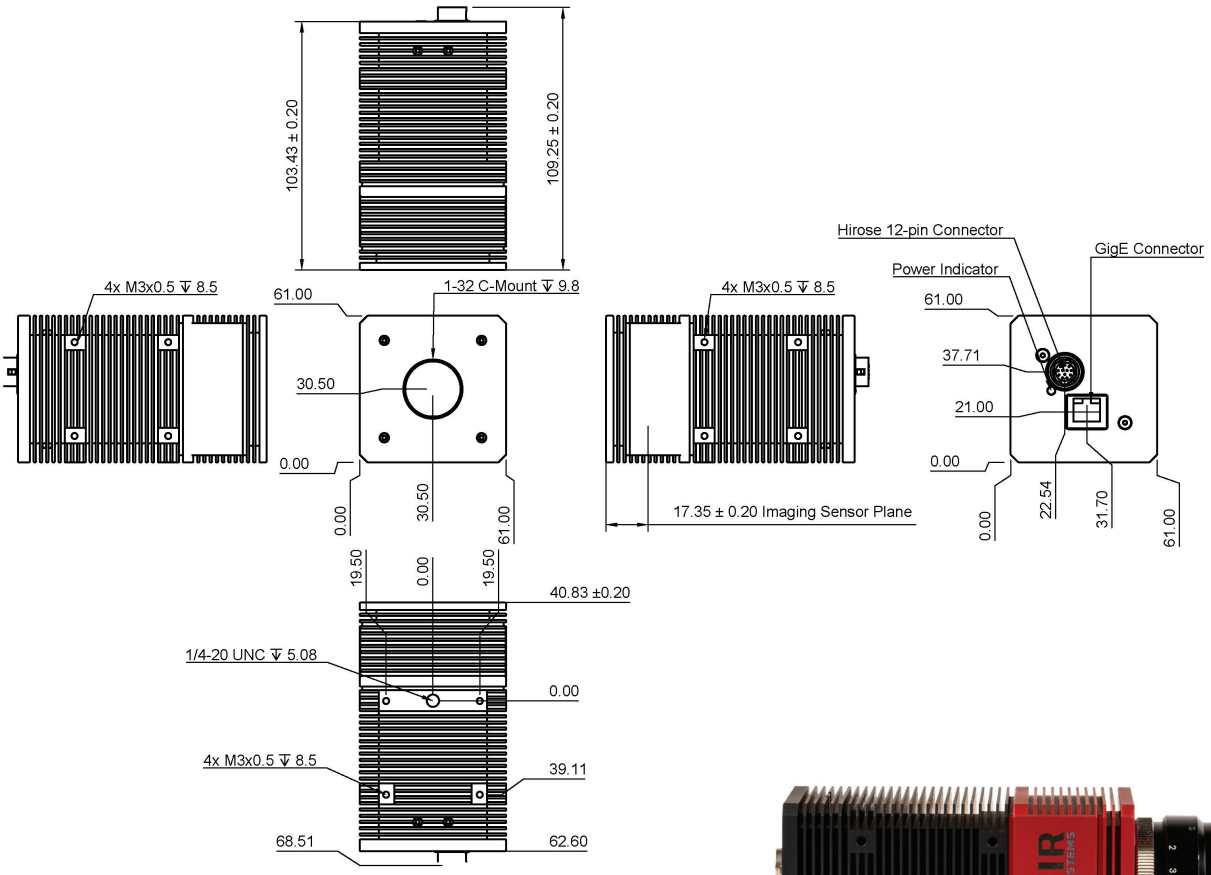
a. Acuros 640: imaging through maritime rain event
b. Acuros 640: imaging through pharmaceutical vial labels
c. Acuros 1280: alignment mark in bonded wafers
d. Acuros 1920: mag image of semiconductor chip edge

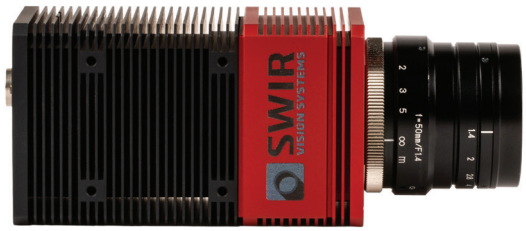
SWIR®
VISION SYSTEMS

High Definition. SWIR Vision.

Mechanical Drawings

C Mount





Contact Us:

For technical, pricing, and sales information, or to learn more about Acuros cameras or CQD sensor technology, please contact us at:



sales@swirvisionsystems.com

+1 919.248.0032

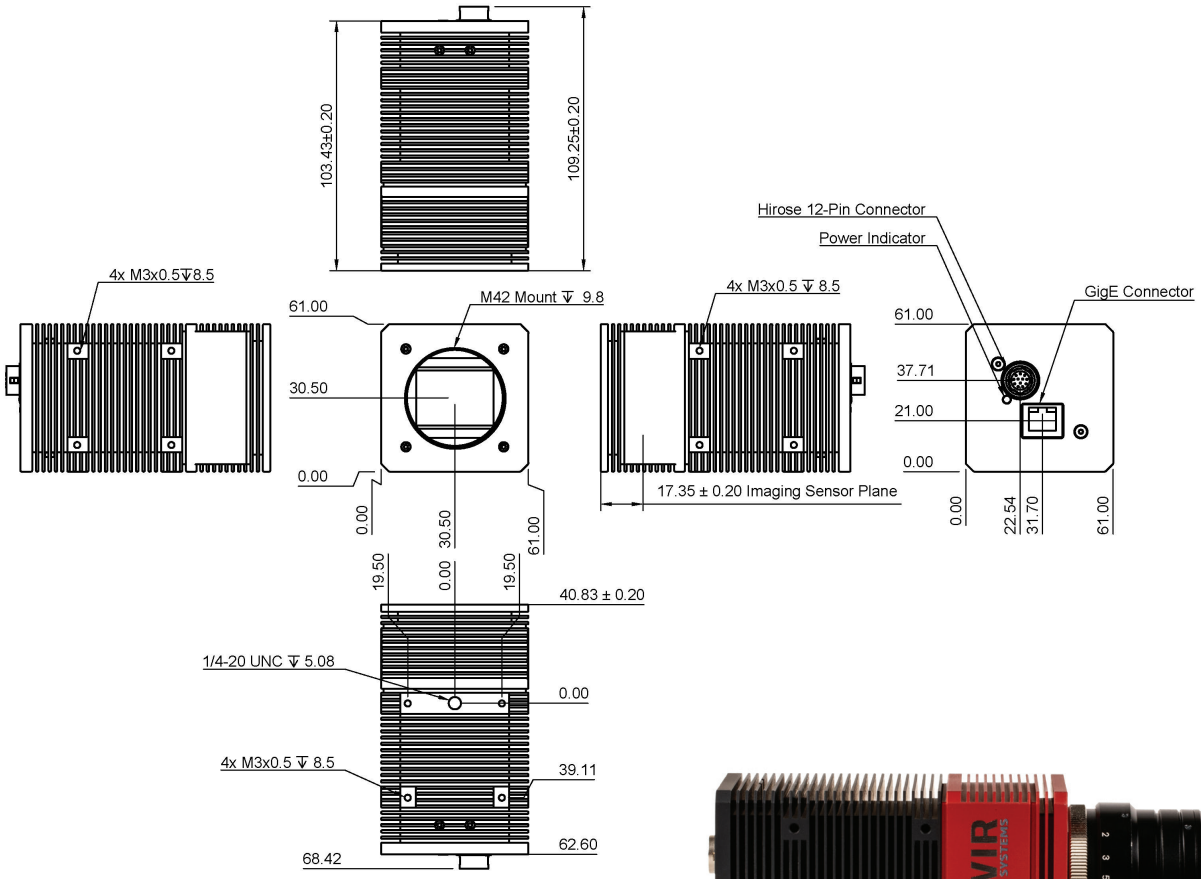
GEN<i>CAM GiGE VISION CE

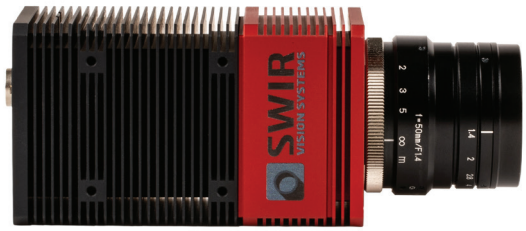
SWIR®
VISION SYSTEMS

High Definition. SWIR Vision.

Mechanical Drawings

M42 Short Mount





Contact Us:

For technical, pricing, and sales information, or to learn more about Acuros cameras or CQD sensor technology, please contact us at:



sales@swirvisionsystems.com

+1 919.248.0032

GEN<i>CAM GiGE VISION CE