

2700 Series Dual Gain Monochrome CCD Cameras

COHU

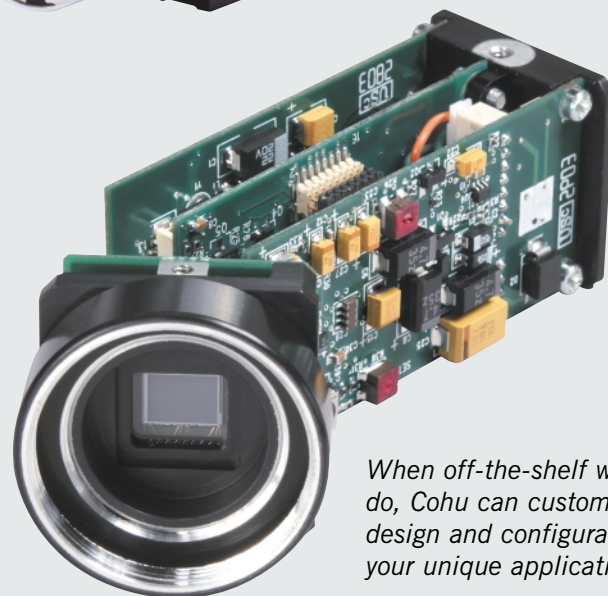
Dual gain circuitry provides near Gen-I quality video at a fraction of the cost

Indoor model: small! Only 2.5" x 1" x 1". One cable connectivity provides it all: power, video and control

Environmental model: tough! sealed and pressurized outdoor housing with several configuration options including ID generator and fiber video transmitter

Custom model: flexible! Front sensor assembly can be oriented to 45°

Standard 1/2" format provides wide lens selection



APPLICATIONS

- *Surveillance*
- *Industrial Inspection*
- *Low Light Observations*
- *X-Ray Imaging*

When off-the-shelf won't quite do, Cohu can customize the design and configuration for your unique application.

2700 Series

Dual Gain Monochrome CCD Cameras

The Cohu 2700 Series provides near Gen-1 low light level performance at a fraction of the price. By using specially designed dual-gain circuitry this professional grade camera is a cost-competitive solution for industrial inspection, machine vision, security, and medical imaging.

For conventional installations, its compact size and single connector wiring make it easy to put nearly any-

where. For specialized installations, the front plate is easily removed and oriented up to 45° (180° optional) off center, adding to its mounting options. When used for outdoor surveillance, the camera and related hardware can be enclosed in a Cohu sealed and pressurized housing. Optics are standard C/CS-mount

Built to take it.

The 2700 Series can be accelerated

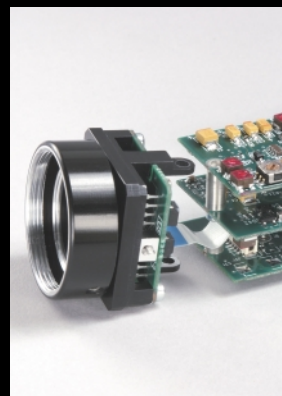
and vibrated under rigorous conditions while maintaining a clear, stable image, day in and day out. For the harsh outdoors, Cohu includes a sealed and pressured version of the camera in this product line. Cohu has more than 40 years experience building cameras to military specifications and we apply that real-world knowledge to our products.

All 2700 Series cameras share the same high quality features:

- **Dual gain circuitry that provides near Gen-1 quality at a fraction of the cost**
- **Standard C/CS mount provides wide lens selection**

Three configurations serve specific purposes:

- **Indoor – small size with one cable connectivity does it all: power, video, and control**
- **Environmental – for outdoor surveillance, Cohu's sealed and pressurized housing provides camera protection along with options like fiber optic transmission and ID generator**
- **OEM – Cohu can custom package your camera to your unique requirements. We've been manufacturing machine vision cameras for nearly 50 years.**



The 2700 Series is available off-the-shelf as an indoor or environmental model. OEM camera, the configuration can be adjusted to specific applications.

2710 Series Specifications

ELECTRICAL

Sensor

1/2" (6.4mm x 4.8mm)

Actual Pixels

768 x 494 (RS-170);
752 x 582 (CCIR)

Pixel Cell Size

8.4 (H) x 9.8 μ (V) (RS-170);
8.6 (H) x 8.3 μ (V) (CCIR)

Resolution

580 HTVL (RS-170);
560 HTVL (CCIR)

Sensitivity

Full video, max gain, AGC off:
Standard: .0012 lux
Extended: .0009 lux
80% video, max gain, AGC off:
Standard: .0010 lux
Extended: .0007 lux

Shutter

Switchable 1/60 (1/50 CCIR) to
1/100,000 sec

Gain

Auto/manual 0 to 46 db

SNR

58 dB max; gain 0

Image Processing

Gamma fixed at 0.6 (1 or 0.45);
no sharpness circuit; field mode
only

Lens Drive

Both auto and DC iris interfaces
included

Sync

Internal crystal or external line lock
based on adjustable reference

Power

12 VDC, 2.7 W

MECHANICAL

Dimensions

2.84" (D) x 1" (W) x 1" (H) (less
lens); see illustration

Weight

250 grams

Lens

C/CS mount

Connector

Hirose HR10A-10R-12PC

ENVIRONMENTAL

Operating Temperature

-20°C to 60°C operating, -30°C to
85°C storage

Vibration (less lens)

Per Mil-STD-810(E), Method
514.4, Categories 1, 4, 5, 8, 9,
10

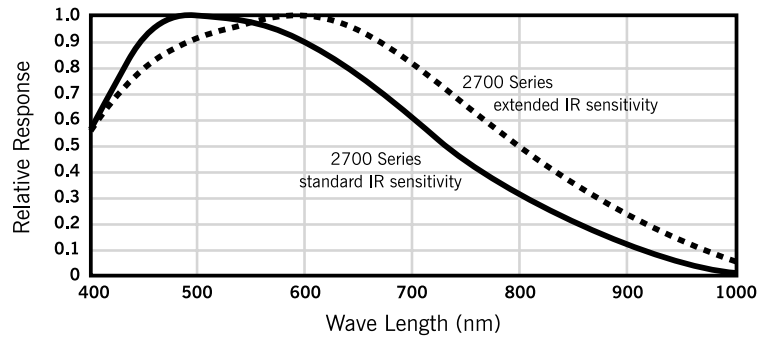
Shock (less lens)

No damage to 30g, 11ms duration,
no crash hazard to 75g, 11ms
duration

REGULATORY

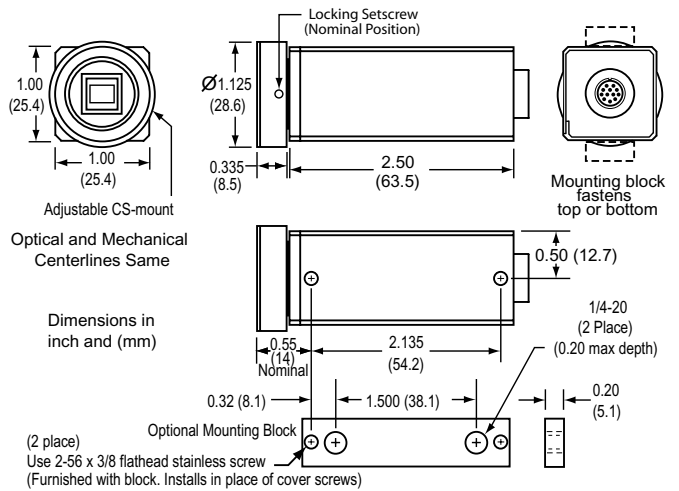
FCC/CE Class B

SPECTRAL RESPONSE



The extended IR sensor option of the 2700 Series provides increased low light sensitivity.

DIMENSIONS



2740 Series Specifications

ELECTRICAL

Sensor
1/2" (6.4mm x 4.8mm)

Actual Pixels
768 x 494 (RS-170);
752 x 582 (CCIR)

Resolution
580 HTVL (RS-170);
560 HTVL (CCIR)

Sensitivity
Full video, max gain, AGC off:
Standard: .0012 lux
Extended: .0009 lux
80% video, max gain, AGC off:
Standard: .0010 lux
Extended: .0007 lux

Shutter
Switchable 1/60 (1/50 CCIR) to
1/100,000 sec

Gain
Auto/manual 0 to 46 db

SNR
58 dB max; gain 0

Image Processing
Gamma fixed at 0.6 (1 or 0.45); no
sharpness circuit; field mode only

Lens Drive
Both auto and DC iris interfaces
included

Sync
Internal crystal or external line lock
based on adjustable reference

Power
24 VAC or 115 VAC

Power Consumption
6W max. (with heater on)

Vibration (less lens)
Sine vibration from 5 to 60 Hz, with
0.082 inches total excursion (15
g's @ 60 Hz)
Random vibration from 60 to 1,000
Hz, 5 g's rms (0.027g²/Hz with-
out damage)

Shock (less lens)
Up to 15 g's, 11ms, in any axis
under non-operating conditions,
MIL-E 5400T, paragraph 3.2.24.6

Altitude
Sea level to equivalent of
3,000m/10,000 feet (508mm/20
inches of mercury)

Air Contaminants
Withstands exposure to sand, dust,
fungus, and salt atmosphere, per
MIL-E-5400T, paragraph
3.2.24.7, 3.2.24.8, and
3.2.24.9

Explosion
MIL-E-5400T, paragraph 3.2.24.10

Acoustic Noise
Can withstand environments greater
than 150 dB continuously for 30
minutes

REGULATORY

FCC/CE CISPR11 Class B plus
EN61000-4-3, -4-6, -4-8
interference immunity tests

ORDERING INFORMATION

27X X-XXXX/XXXX

Dual gain monochrome camera

Enclosure
1 - Indoor
4 - 4.5" environmental enclosure

Power Configuration
2 - 12 VDC
4 - 24 VAC (4.5" environmental enclosure only)
5 - 115 VAC (4.5" environmental enclosure only)

Sync
1 - Internal crystal
2 - Line lock (4.5" environmental enclosure phase adjust)

Iris options
0 - Auto/DC iris
3 - Electronic iris

Format
2 - 1/2" (RS-170), standard sensitivity
3 - 1/2" (RS-170), extended near-IR sensitivity

Accessories
0 - None
1 - Test cable CTC-31 (indoor only)
2 - Accessory kit* (indoor only)
3 - Test cable & accessory kit (indoor only)
4 - ID generator (4.5" environmental enclosure only)
5 - Fiber optic (4.5" environmental enclosure only)
6 - ID generator & fiber optic video

Lenses

The flexibility of this camera provides for a wide range of lenses.
Consult your Cohu sales representative.

* Accessory kit contains Allen wrench, mounting block, mating power
connector, 5mm extender.

MECHANICAL

Dimensions
see illustration

Weight
10 lbs (less lens)

Mounts
1/4-20 threaded

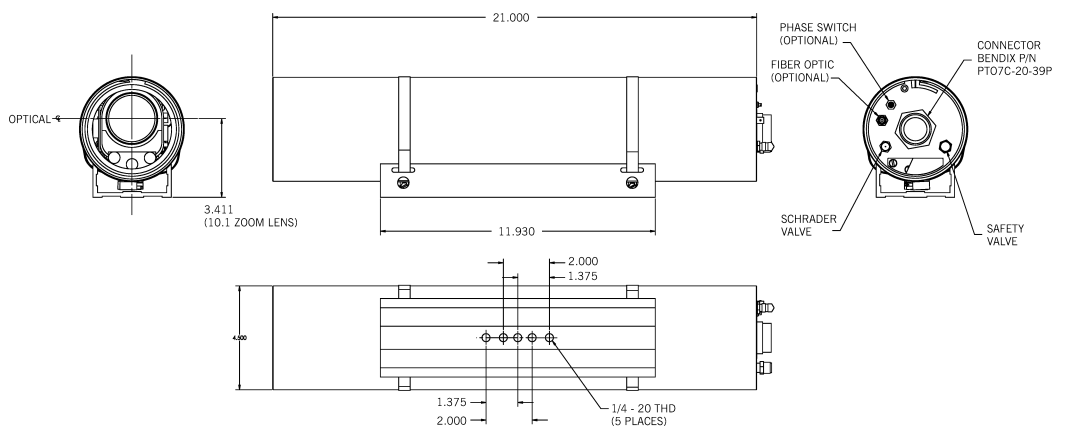
Connectors
39-pin Bendix, Shrader pressure
charge valve, pressure relief

ENVIRONMENTAL

Operating Temperature
-20 to 60° C operating, -40 to 60°
C with heater, -30 to 70° C storage

Humidity
Up to 100% relative humidity

DIMENSIONS



COHU
Cohu, Inc. / Electronics Division
ISO 9001 Certified

Cohu reserves the right to change specifications without notice.

GSA Advantage!
www.gsaAdvantage.gov

ADVANCED
VIDEO
TECHNOLOGY
Made in the USA

FSC Group 58, part 1
FSC Class 5820
Contract # GS-03F-4001B