

# 3600 Series Small Machine Vision Color CCD Camera

# COHU

One cable connectivity provides it all: power, video, and control

Small! Measures only 8.8 cm

Standard RS-170 output connects to all common, color frame grabbers or video monitors

Integration allows use in lowlight applications

DSP control for precise settings and imaging

Simple GUI control makes configuration fast and easy

Full Features with  
1/2" DSP Sensor  
and GUI setup



## APPLICATIONS

- Pharmaceutical production
- Medical imaging
- Food processing
- Printing

The Cohu 3600 Series will change the way you think about color imaging cameras. It's a professional-grade imaging camera designed exclusively for machine vision applications that require color images. It's small, ruggedly built and, with only one connector, easy to integrate into a variety of machine vision applications where space and installation efficiency are important. Optional sensor sizes increase optical flexibility.

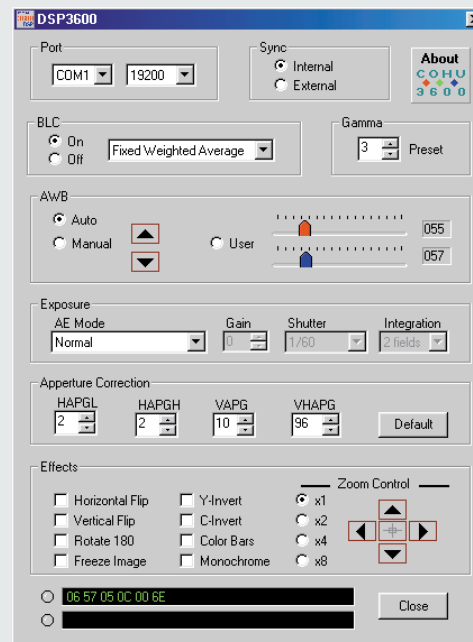
### It fits your equipment.

Measuring less than 3.5" x 1" x 1" (8.87 cm x 2.54 cm x 2.54 cm) the 3600 Series fits where you want it. And its one-connector simplicity uses less space and makes installation and set up easy. Because today's automated assembly machines are designed to be small and efficient, we've made a camera to match.

### GUI set up for precision and convenience.

A graphical user interface provides precise set up of the camera. Flash memory maintains last setting.

- **Internal Sync**
- **External Trigger – for snapshot mode**
- **Backlight Control**
- **Gamma Select**
- **White Balance** - auto/manual adjust
- **Exposure** - automatic, shutter and gain selectable, integration and gain selectable.
- **Aperture Correction** - horizontal and vertical adjustment.
- **Image Manipulation** - Digital zoom, pan, scroll, rotate, freeze, Y/C invert, color bars, color/mono.



Small size and GUI setup of the Cohu 3600 Series mean fast and easy operation.

### Built to take it.

The 3600 Series can be accelerated and vibrated under rigorous conditions while maintaining a clear, stable image, day in and day out. Cohu has more than 50 years experience building cameras to military specifications, and we apply that real-world knowledge to machine vision.

And because Cohu specializes in OEM cameras, you'll find economical pricing, as well.

Optics are standard C/CS-mount. Board sets and customization are available.

Designed and manufactured in the USA, the Cohu 3600 Series is backed by a two-year warranty.

## SPECIFICATIONS

### ELECTRICAL

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

**Active Pixels**  
768 H x 494 V

**Pixel Size**  
1/2": 8.4  $\mu$ m x 9.8  $\mu$ m

**Resolution**  
460 H X 350 V TV Lines

**Sensitivity**  
3 lux faceplate illumination minimum gain

**Shutter**  
Auto or Manual Exposure  
1/60 to 1/50,000 second

**Integration**  
Selectable to 8.5 seconds with freeze frame option

**Gain**  
Auto or Manual Gain Control  
0-32 db

**SNR**  
48-db max

**Output**  
NTSC or PAL composite and S-Video

**White Balance**  
Auto or manual white balance (2500 to 9500K)

**Sync**  
Internal crystal

**Input Power**  
2.5 W @ 5 VDC (500 mA)  
4.2 W @ 12 VDC (350 mA)

### MECHANICAL

**Dimensions**  
2.5" (L) X 1" (W) X 1" (H)

**Lens Mount**  
C/CS; sensor can be moved up to 3" from main electronics

**Weight**  
250 grams, 9.1 oz.

**ENVIRONMENTAL**

**Operating Temperature**  
-20°C to 70°C operating, -30°C to 85°C storage.

**Vibration (less lens)**  
.001 g<sup>2</sup>/Hz from 1 Hz to 10 Hz  
.075 g<sup>2</sup>/Hz from 10 Hz to 2000 Hz  
1 hour in any axis per MIL-STD-810E, 516.3

**Shock (less lens)**  
10 g, 11ms, any axis under non-operating conditions, per MIL-STD-810E, 514.3, categories 1,4,5,6,8,9,10

### ORDERING INFORMATION

**361X - 1XXX / XXXX**

Color DSP high-resolution camera for interior installation

**Power**  
1 - 5 VDC  
2 - 12 VDC

**Sync**  
1 - Crystal

**Iris**  
0 - Manual  
1 - Auto (12 VDC version only)  
3 - DC (12 VDC version only)

**Sensor Format**  
2 - 1/2" NTSC/S-video, 460 HTVL  
5 - 1/2" PAL/S-video, 460 HTVL

**Accessories**  
0 - None  
1 - Test cable CTC-32  
2 - Accessory kit\*  
3 - Test cable & accessory kit

**Lenses**  
0000 - None  
A003 - 3.7mm F1.6, 1/2" format, CS mount manual iris lens  
A006 - 6mm F1.4, 1/2" format, CS mount manual iris lens  
A013 - 12mm F1.4, 1/2" format, CS mount manual iris lens  
EH04 - 3.7mm F1.6, 1/2" format, CS mount auto iris lens  
EH06 - 6mm F1.4, 1/2" format, CS mount auto iris lens  
EH13 - 12mm F1.4, 1/2" format, CS mount auto iris lens  
ES04 - 4.2mm F1.6, 1/2" format, CS mount auto iris lens  
ES08 - 8mm F1.4, 2/3" format, C mount auto iris lens  
ES12 - 12.5mm F1.4, 1" format, C mount auto iris lens  
ES16 - 16mm F1.4, 2/3" format, C mount auto iris lens  
ES25 - 25mm F1.4, 1" format, C mount auto iris lens  
ES75 - 75mm F1.8, 1" format, C mount auto iris lens

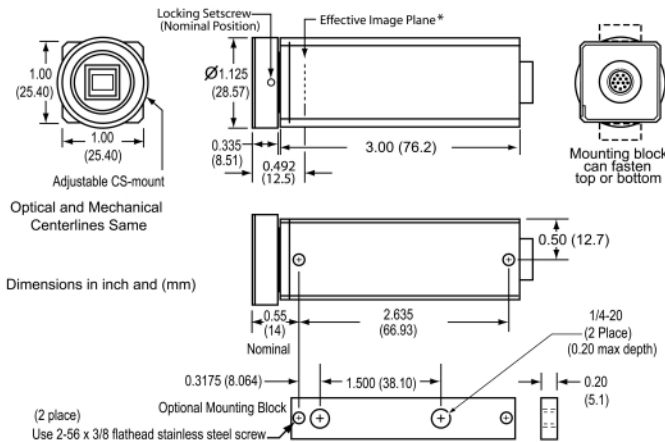
\* Note: Accessory kit includes allen wrench, power connector, mounting block, and C/CS lens adapter.

### Additional Accessories

6510190-001 - 120VAC to 5VDC, 2.0 amp power supply, without connector  
6510177-001 - 120VAC to 12VDC, 1.0 amp power supply, without connector  
8368-4 - 12 VDC power supply with connector for use with CTC-32 & -34  
8368-5 - 5 VDC power supply with connector for use with CTC-36  
CTC-34 - Test and setup cable for 3612 (auto/DC iris). Use with 8368-4 power supply  
CTC-36 - Test and setup cable for 3611. Use with 8470-5 power supply

### DIMENSIONS

\* Optical path includes 0.031 (0.8) thick BK-7 flat glass and 0.213 (5.4) thick multilayer quartz optical low-pass filter. Actual image plane is 0.81 (2.1) behind effective image plane.



The same fine camera is available packaged for harsh environments. Contact factory.

