3960 Series *i-view*^{II} Integrated Positioner, Camera & Control

COHU

Striking, yet unobtrusive appearance

DSP technology for highest quality images day and night

Now with electronic image stabilization option

8 or 16-point on-screen compass display, plus absolute position in degrees

High speed positioner can be operated inverted

A vertical tilt range greater than standard pan and tilts

Multi-manufacturer protocol control system for system-wide compatibility

i *view*^{II}

Cohu Electronics

APPLICATIONS

- *General Surveillance & Monitoring*
- *Traffic Management*
- *Access Control*

i *-view*^{II} is fast becoming the new standard in high performance CCTV cameras and, with the addition of progressive new features, offers even more value and imaging advantages. This integrated camera/positioner provides what you can always expect from Cohu Electronics: quality, affordability, and style. *i-view*^{II} has the right options and features to complete an individual site or a whole system.

Compass Setting and Display. Camera direction can be identified in 8 or 16 compass positions, with the ability to set the true north position. Plus, absolute scene position can be displayed in degrees, if desired.

Image stabilization option. Two frequency operating modes provide stable, jitter-free video under adverse conditions.

Multi-protocol Control System. You can incorporate quality Cohu cameras into an existing control system from other major manufacturers. Traffic management professionals can install *i-view*^{II} today for immediate NTCIP 1205 compatibility.

Digital position feedback. Each *i-view*^{II} site can provide the precise camera and positioner data to system management software.

There is a wide range of DSP functions to support the particular camera site, including privacy zones, image manipulation and backlight control.

Higher standards. Complies with NEMA TS-2 environmental, electrical specifications and shock/vibration.

Look beyond its striking appearance. Cohu designed this next generation camera and positioning system to meet the technical objectives of security professionals.

The *i-view*^{II} contains a high performance color DSP camera with integrated lens, a built-in camera control receiver, and a pan/tilt mechanism that is both attractive yet unobtrusive. Its sleek design allows for quick and easy mounting, and is unassuming in any installation.

Because it's made by Cohu Electronics, the camera is protected by our legendary sealed and pressurized camera enclosure that protects your investment in good video by eliminating intrusion of water, pollutants and corrosives that degrade the camera. The camera enclosure is rated IP67. The positioner unit is rated IP66 and TS-2. Cohu guarantees years of clean, reliable images and backs it with a world-class warranty.

Unlike ordinary sunshields, the *i-view*^{II} sunshield is pre-positioned and needs no adjustments – reducing installation costs and maximizing performance.

The positioner pans and tilts at an impressive 160°/sec in the preset mode, with 0.1° accuracy. The side-mounted camera allows uninterrupted view directly beneath the installation, and its 180° tilt axis provides a vertical scan range greater than standard pan and tilts.

3960 Series
i-view II Integrated Positioner, Camera & Control

The i-view II is available in three models:

- Day/night camera with 23x lens
- Day/night camera with 23x lens and image stabilization
- Day/night camera with 35x lens and image stabilization

Extended Zoom Range

The i-view II camera features a 23x or 35x optical zoom range (3.6 mm to 82.8 mm or 3.4 mm to 119 mm), with selectable automatic or manual focus. With its high resolution (520 HTVL for 35x) the i-view II is ready to produce clear images of just about anything within its field of view.

Day/Night Camera Technology

Automatic Day/Night switching technology, coupled with the camera's progressive scan sensor and internal scan converter, assures vivid color images during daylight, and high sensitivity monochrome images after dark. This greatly extends the nighttime or low-light capability of the camera.

Fast Positioning

A high-speed positioner, with up to 0.1° accuracy, provides 360° continuous rotation and up to 63 user-defined preset positions, each with a two-line, 24-character title.

Image Stabilization

With this option, i-view II uses real time computer algorithms to correct for shaking and waving images caused by wind and vibration. The two modes of stabilization settings, 5 Hz and 16 Hz, allow a wide range of vibration compensation. In addition to the clear image, this option also allows the system designer to potentially specify lighter and less-rigid poles, or utilize existing bridge signs and traffic lights.

Multi-manufacturer protocol is standard

Cohu i-Series cameras (i-dome and i-view II) feature the exclusive Cohu multi-protocol control firmware. This means you can incorporate this Cohu camera into an existing control system from other major manufacturers. For traffic management video systems, i-view II can also be ordered with NTCIP control language. All camera and positioner functions ar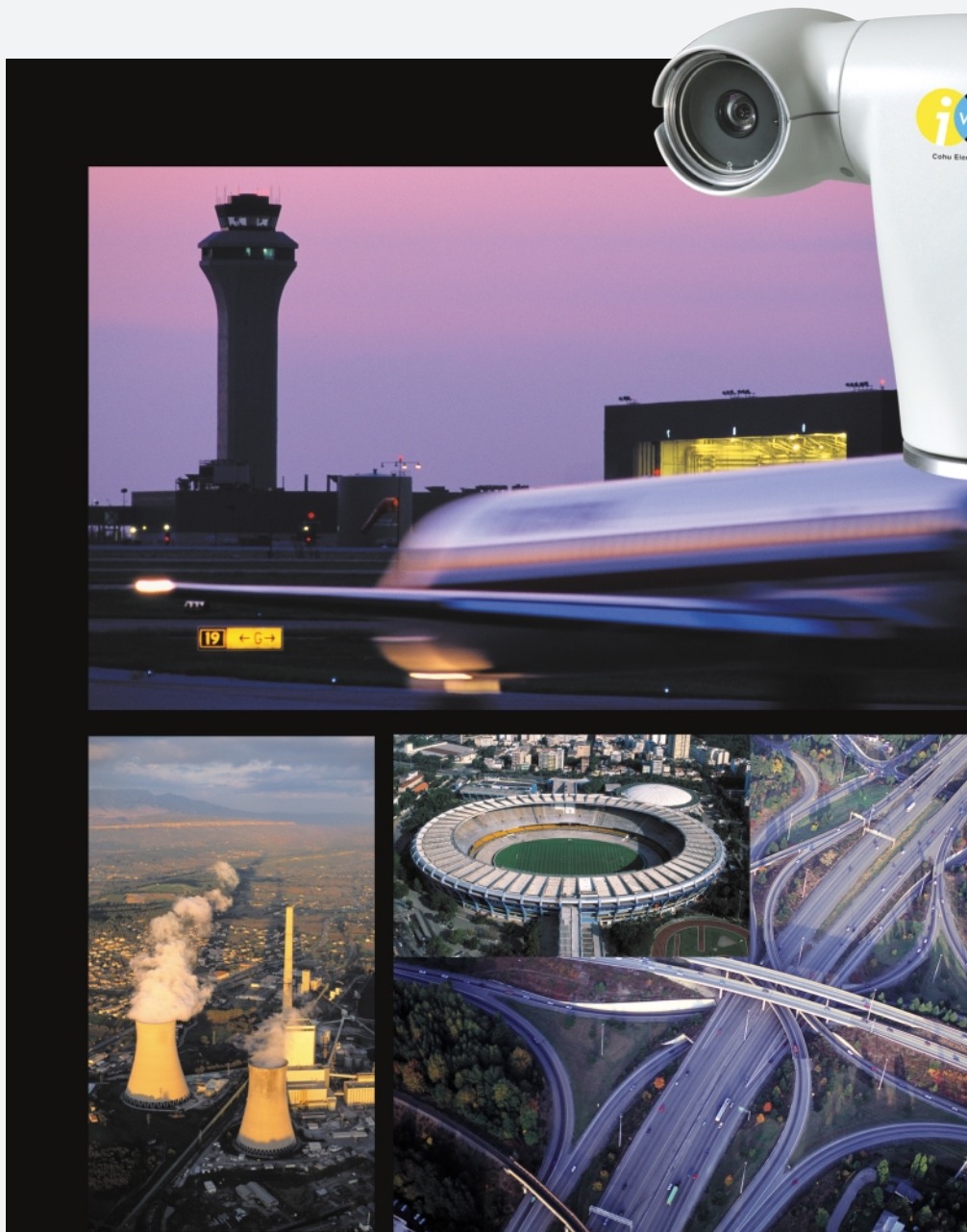e controlled by the integrated receiver/driver, operable via RS-232/422 serial communications with digital position feedback. WinMPC sets up camera and positioner functions.

Touring, Sector IDs and Privacy Zones

Up to eight tours, each with up to 32 preset positions and dwell time, can be stored in memory. Set up to sixteen sectors in a horizontal plane, each with its own identification title. In addition, eight programmable privacy zones can be set to prevent the viewing of selected scenes.

Built for the Not-So-Great Outdoors

The i-view II housing provides a low profile installation that creates very low wind loading. The camera enclsoure is sealed and pressurized to provide maximum protection against grime and insects. It is rated IP67 and NEMA 4X and, additionally, meets NEMA power and operating temperature standards for TS-2 traffic control systems.

The i-Series Cameras are ideally suited to a wide variety of critical monitoring and surveillance applications.

SYSTEM SPECIFICATIONS

Pan/Tilt Drive

Angular Travel
360° continuous pan range, -90° to +90° tilt range

Pan Speed (preset)
160°/sec

Pan Speed (manual)
0.1° to >80°/sec

Tilt Speed (preset)
160°/sec

Tilt Speed (manual)
0.1° to >40°/sec

Preset Accuracy
>0.1°

Presets
64 preset positions (each preset includes pan, tilt, zoom and focus coordinates and 24 character ID label)

Video Tours
8 tours, each consisting of 32 presets with dwell time per preset per tour

Sector Zones
Up to 16 programmable zones in the horizontal plane

Privacy Zones
8 programmable zones can be set for video blanking

Compass Direction
8 or 16 direction points (i.e.: north, NE, east, SE, south, SW, west, and NW) can be displayed. Function can be on/off, 3-sec. time out or permanent

Absolute Position
Displayed in 0-359° AZ and +95° to -95° EL. Function can be on/off, 3-sec. time out or permanent

Cloning
Positioner settings (presets, title, etc.) can be stored to file for easy duplication

Title Generation

Camera ID
2 lines of 24 characters
Preset ID
1 Line of 24 characters
Sector Zone
1 line of 24 characters per zone
Privacy Zone
1 line of 24 characters per zone
Alarm Label
2 lines of 24 characters
Compass/Position
1 line, includes compass direction and absolute position

Inverted Operation
Can be mounted in an inverted position. Software setting compensates image and control for inversion

CAMERA

Imager
1/4" color, NTSC or PAL, interline transfer CCD

Resolution
23X Lens: 470 horizontal TV lines
23X Lens & EIS: 470 horizontal TV lines
35X Lens & EIS: 520 horizontal TV lines

Pixels
23X Lens: 724 x 494
23X Lens & EIS: 711 x 485
35X Lens & EIS: 768 x 494

Progressive Scan
23X Lens: Yes
23X Lens & EIS: Not supported
35X Lens & EIS: Yes

Lens Zoom
23X Lens: 3.6 to 82.8 mm; f1.6 (w) f3.7 (t)
23X Lens & EIS: 3.6 to 82.8 mm; f1.6 (w) f3.7 (t)
35X Lens & EIS: 3.4 to 119 mm; f1.4 (w) f 4.2 (t)

Lens Horiz. Angle of view
23X Lens: 54° (w) 2.5° (t)
23X Lens & EIS: 41.5° (w) 1.9° (t)
35X Lens & EIS: 55.8° (w) 1.7° (t)

Iris/Focus/Shutter Operation
Auto/Manual

Wide Dynamic Range
23X Lens: On/off
23X Lens & EIS: Not supported
35X Lens & EIS: On/off

EIS @ 5 Hz Suppression
23X Lens: Not supported
23X Lens & EIS: 20dB suppression from 3-13 Hz
35X Lens & EIS: 20dB suppression from 3-13 Hz

EIS @ 16 Hz Suppression
23X Lens: Not supported
23X Lens & EIS: 20dB suppression from 7-17 Hz
35X Lens & EIS: 20dB suppression from 7-17 Hz

Digital Zoom
Auto/Manual (12X)

White Balance
Auto/Manual

Sync
Xtal/Phase adjust line lock

SNR
>50 dB

Sensitivity (scene)
23X Lens: 3.0 lux @ 1/60 sec. (color day); 0.2 lux @ 1/4 sec. (color day); 0.02 lux @ 1/4 sec. (mono night)
23X Lens & EIS: 2.0 lux @ 1/60 sec. (color day); 0.2 lux @ 1/4 sec. (color day); 0.01 lux @ 1/4 sec. (mono night)
35X Lens & EIS: 1.0 lux @ 1/60 sec. (color day); 0.1 lux @ 1/4 sec. (color day); 0.01 lux @ 1/4 sec. (mono night)

ELECTRICAL

Power Input
89 VAC to 135 VAC, 120 VAC nominal 60Hz.
Conforms to NEMA TS2 para. 2.1.2.
24 VAC also available

Power Consumption
54 W max; 154 W max with p/t heater (NEMA 4X icing option)
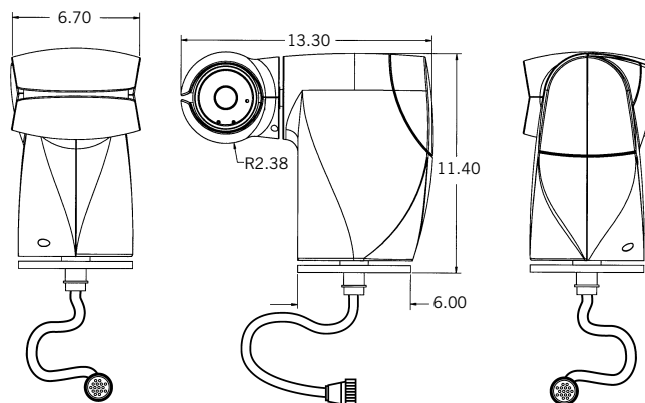
Power Interruption
Conforms to NEMA TS2 para. 2.1.4

Power Transients/Interruptions
Conforms to NEMA TS2 para 2.1.6

DIMENSIONS *in inches*

COMMUNICATIONS

Data Format
RS-422 and RS-232

Protocol
Cohu, Pelco D & P, Vicon, Bosch, A/D, Ultrak, Javelin. Optional NTCIP available

Firmware
Stored in flash memory; upload via serial port

MECHANICAL

Weight
18.5 lbs (8.4 kg)

Dimensions
see diagram

Connector
16-pin Amp or 18-pin MS (user selected)

ENVIRONMENTAL

Protection Rating
IP-67 and NEMA 4X; Camera housing sealed and pressurized to 5 psi with dry nitrogen.
IP-66 pan/tilt assembly

Ambient Temp. Limit
Operating: -34 to 74° C (-27 to 165° F)
Storage: -40 to 85° C (-40 to 185° F)
Conforms to NEMA TS2 para 2.1.5.1

Humidity
Up to 100% relative humidity

Vibration
Conforms to NEMA TS2, para. 2.1.9

Shock
Conforms to NEMA TS2, para. 2.1.10

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

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

EMI
FCC rules, Part 15, Subpart J, for Class B devices

ORDERING INFORMATION

396 X – XXXX / XXXX

Power
4 - 24 VAC
5 - 115 VAC

Video
3 - NTSC Day/Night with 23X zoom
4 - NTSC Day/Night with 23X zoom and electronic image stabilization
5 - NTSC Day/Night with 35X zoom and electronic image stabilization
7 - PAL Day/Night with 23X zoom
8 - PAL Day/Night with 35X zoom and electronic image stabilization

Protocol
1 - Standard (Contact Cohu for current list of protocols supported)
2 - NTCIP 1205 Camera Control

Options
0 - None
1 - P/T Heater option (NEMA4X icing)
2 - Wiper option
3 - P/T Heater and Wiper option

Connector
0 - Standard Amphenol connector
1 - Environmental MS connector

Mount

PEDD - Pedestal, small base	**POLE** - Pole mount
LPED - Pedestal, large base	**CONR** - Corner mount
WALL - Wall mount	**PARP** - Parapet mount