



## Surveyor2000™ Compact Camera Dome System

The Surveyor2000 Camera Dome System is a compact, light-weight and intelligent security device comprised of a camera, pan/tilt drive, receiver and CPU-based electronics all in an attractive and covert enclosure. Surveyor2000 can be programmed and operated using any V1300X/V1400X series of NOVA™ communication devices and enhanced VicoaxII protocol. It is available in a variety of indoor and outdoor versions and can be configured with a variety of camera and lower dome types. Refer to Tables 1 and 2.

- **Variety of color lower domes available**
- **CPU control of most functions**
- **Internal receiver with RS-422/485 control**
- **Indoor or outdoor, ceiling or pendant configurations**
- **360° continuous rotation pan-and-tilt drive with 184× maximum optical/digital zoom camera**
- **Intelligent, compact and complete 1/4 in CCD camera dome system**
- **Innovative Digital Slow Shutter feature available for enhanced low-light applications**
- **Optional day/night version cameras available that provide automatic light-level control**
- **Outdoor version provides ultimate environmental protection**
- **Convenient integration into any existing CCTV matrix system**
- **Designed for simple installation and easy servicing**
- **Internal program provides remote access to configuration of all features**
- **Alarm and relay features allow automatic control of peripheral devices**
- **Standard support of enhanced VicoaxII protocol**
- **Daisy-chaining of up to 32 camera domes possible**
- **Programmable Tours and Autotours provide strategic automatic surveillance of an area.**

**Notes:** SUPERSEDES PRODUCT SPECIFICATION 031-300

Model Number	Product Code	Description
S2000-UWM	7032	Wall mount, indoor/outdoor
S2000-UCM	7033	Ceiling mount, indoor/outdoor
S2000-UPM	7034	Parapet mount, outdoor
S2000-URM	7035	Roof mount, outdoor

Table 1: Surveyor2000 Mounts

## Product Specification (cont'd)

Model Number	Product Code	Environment	Camera Type/Format	Mount Type	Optical Zoom/Total Zoom	Lower Dome Type
S2000-CC16	7199-00	Indoor	Color/NTSC	Ceiling	16x/128x	(not included)
S2000-CC16C	7199-01	Indoor	Color/PAL	Ceiling	16x/128x	(not included)
S2000-MC16	6982-00	Indoor	Monochrome/EIA	Ceiling	16x/128x	(not included)
S2000-MC16C	6982-01	Indoor	Monochrome/CCIR	Ceiling	16x/128x	(not included)
S2000-CC22	6988-00	Indoor	Color/NTSC	Ceiling	22x/176x	(not included)
S2000-CC22C	6988-01	Indoor	Color/PAL	Ceiling	22x/176x	(not included)
S2000-MC22	6987-00	Indoor	Monochrome/EIA	Ceiling	22x/176x	(not included)
S2000-MC22C	6987-01	Indoor	Monochrome/CCIR	Ceiling	22x/176x	(not included)
S2000-CP16	7200-00	Indoor	Color/NTSC	Pendant	16x/128x	(not included)
S2000-CP16C	7200-01	Indoor	Color/PAL	Pendant	16x/128x	(not included)
S2000-MP16	6983-00	Indoor	Monochrome/EIA	Pendant	16x/128x	(not included)
S2000-MP16C	6983-01	Indoor	Monochrome/CCIR	Pendant	16x/128x	(not included)
S2000-CP22	7069-00	Indoor	Color/NTSC	Pendant	22x/176x	(not included)
S2000-CP22C	7069-01	Indoor	Color/PAL	Pendant	22x/176x	(not included)
S2000-MP22	6989-00	Indoor	Monochrome/EIA	Pendant	22x/176x	(not included)
S2000-MP22C	6989-01	Indoor	Monochrome/CCIR	Pendant	22x/176x	(not included)
S2000-CW16	7201-00	Outdoor	Color/NTSC	Pendant	16x/128x	Clear
S2000-CW16C	7201-01	Outdoor	Color/PAL	Pendant	16x/128x	Clear
S2000-MW16	6984-00	Outdoor	Monochrome/EIA	Pendant	16x/128x	Clear
S2000-MW16C	6984-01	Outdoor	Monochrome/CCIR	Pendant	16x/128x	Clear
S2000-CW22	7071-00	Outdoor	Color/NTSC	Pendant	22x/176x	Clear
S2000-CW22C	7071-01	Outdoor	Color/PAL	Pendant	22x/176x	Clear
S2000-MW22	7070-00	Outdoor	Monochrome/EIA	Pendant	22x/176x	Clear
S2000-MW22C	7070-01	Outdoor	Monochrome/CCIR	Pendant	22x/176x	Clear
S2000-RW23	7005-00	Outdoor	Color/NTSC (day/night)	Pendant	23x/184x	Clear
S2000-RW23C	7005-01	Outdoor	Color/PAL (day/night)	Pendant	23x/184x	Clear

**Table 2: Surveyor2000 Model Versions**

# Contractors' Specification

## Surveyor2000 Compact Camera Dome System

The motorized dome shall have internal CPU-circuitry and provision for external programming via standard RS-422/485 protocol or enhanced VicoaxII protocol. This circuitry shall provide for an external power supply input, four alarm inputs, one relay output and communications wiring.

Alarm inputs shall be individually programmable for their functional state (enabled or disabled), reporting state (report on or off), active state (high or low), acknowledge mode (manual or automatic), automatic acknowledge dwell time control, set and reset action (action when triggered or reset) and displayed title text.

The relay output shall be programmable for its power-on state (on or off), output type (momentary or latching) and displayed title text.

Programmable titling shall be provided for the camera and every preset position, alarm, relay, and sector. Titles shall be enabled or disabled individually or globally. The overall position of the titles and display frame position shall be programmable.

There shall be 79 programmable preset positions available, each having a variable preset solve speed and accuracy of 0.3°.

The dome's 360 degree view shall be programmable for a maximum of 16 sectors. Each sector shall have the capability to be blanked out (no video display). The number and size of sectors shall be programmable and have a custom title.

There shall be eight tours available with 32 steps per tour. Tour steps shall include preset positions with speed control, relay control, alarm acknowledge, save/recall camera status, repeat tour, call another tour, call an autotour and dwell timing control. There shall be two autotours available with 360 pan, tilt and zoom functions per autotour. Timing shall be dynamic or as is actually programmed with the joystick and push buttons.

Pan and tilt functions shall be externally controlled, continuously variable and programmable to be enabled or disabled. There shall be an autopan feature and it shall be programmable for its functional setting (enabled or disabled). Maximum manual pan and tilt speeds shall be programmable. Maximum pan speed shall be 300 degrees/sec and maximum tilt speed shall be 110 degrees/sec. Pan and tilt speeds shall also be scalable to the zoom setting. The zoom function speed shall be externally controlled using three settings, low, medium and high.

The camera-lens module shall be a 1/4 inch, high-resolution monochrome or color type. Camera sensitivity shall be between 0.0019 fc (0.02 lux) to 0.019 fc (0.2 lux), depending on the model. The lens on the standard cameras shall have a maximum optical zoom setting of 16× and a maximum digital zoom setting of 8× for a total zoom setting of 128×; the lens on the DSS cameras shall have a maximum optical zoom setting of 22× and

a maximum digital zoom setting of 8× for a total zoom setting of 176×; the lens on the day/night cameras shall have a maximum optical zoom setting of 23× and a maximum digital zoom setting of 8× for a total zoom setting of 184. Lens focal length shall be 4-64 mm with a maximum aperture of f1.4 for the standard cameras and 4-88 mm with a maximum aperture of f1.6 for the DSS and day/night cameras. The digital zoom shall be programmable for its functional setting (enable/disable). An autoiris function with a manual override feature and an autofocus function with functional setting control (enable/disable) shall also be provided.

In addition, the camera shall provide high level, programmable functions. The autoiris and AGC shall be adjustable. The shutter speed shall be automatic or manual. On the DSS and day/night camera versions, the automatic shutter speed shall work with an auto exposure feature. This feature can be set to operate with a fully automatic shutter speed or a fixed, selectable, linear speed. These features are called exposure priority or shutter priority. All color cameras shall have white balance gain using red and blue scales. Backlight compensation shall be programmable for its relative setting using a tuning value scale. Video line locking shall be provided with an internal crystal clock or a programmable vertical phase scale.

The basic ceiling mounted version shall be designed to mount into any dropped or hard ceiling having the capacity to support the dome's weight. There shall be an optional mounting kit for ceilings not able to support the dome's weight.

The indoor pendant version shall be mounted using a molded thermoplastic housing and 1 inch NPT threaded fitting. The outdoor pendant model shall include a molded thermoplastic sunshield and additional environmental control.

The lower dome shall be 5.9 inches (150 mm) in diameter, fitted with a color-coordinated bezel and provide a full 360 degrees of camera view. The indoor version shall be snapped into place while the outdoor version shall be snapped on and fastened with screws. The lower dome shall be available in three colors, gray (smoked), chrome and gold for the indoor version. The outdoor version shall come equipped with a clear lower dome.

The indoor ceiling version shall be no greater than 7.1 in. (180 mm) in diameter, 8.8 in. (223 mm) in height and 4.5 lb (2.0 kg) in weight. The indoor pendant version shall be no greater than 8.0 in. (203 mm) in diameter, 9.2 in. (234 mm) in height and 5.7 lb (2.6 kg) in weight. The outdoor pendant version shall be no greater than 9.0 in. (228 mm) in diameter, 9.3 in. (236 mm) in height and 6.5 lb (2.9 kg) in weight.

The camera dome system shall be Vicon's Surveyor2000 models. Refer to Table 1.

# Technical Information

## ELECTRICAL

**Drive Type:** Electrical motorized pan and tilt with electronic control.

**Camera Types:** Units available in monochrome (EIA/CCIR) and color (NTSC/PAL) formats and a variety of zoom capabilities. See Table 6.

**Input Voltage:** 22-34 VAC.

**Current:** Indoor unit: 1.2 A nominal.  
Outdoor unit: 2.0 A nominal.

**Power Consumption:** Indoor unit: 28.8 W nominal.  
Outdoor unit: 48 W nominal.

**Heat Equivalent:** Indoor unit: 1.6 btu/min (0.4 cal/min).  
Outdoor unit: 2.7 btu/min (0.6 cal/min).  
Note: These figures represent the conversion of 100% of the electrical energy to heat. Actual percentage of the heat generated will be less and will vary from product to product. These figures are provided as an aid in determining the extent of cooling required for an installation.

**Connector Types:** Video In: BNC-F.  
Power: screw terminal block, 3 position.  
Control Input/Output: removable screw terminal block, 5 position, or RJ-45.  
Relay Output: RJ-45 connector.  
Alarm Input: RJ-45 connector.

**Video Output Impedance:** 75 ohms.

**Fuse:** F1: 2AG, 1.6 A 250 VAC, slo-blo.  
F2: 2AG, 2.5 A 250 VAC, slo-blo.

**Safety Standard:** UL 2204.  
CSA C22.2, No. 1.

**Radio Frequency Emission Rating:** FCC Class A.

**European Community (CE) Standards:** EN 50081-1 generic emissions.  
EN 50082-1 generic immunity.

## OPERATIONAL

**Pan Speed:** Variable, 0.25 - 300°/sec.

**Autopan Speed:** Variable, 3 - 45°/sec.

**Tilt Speed:** Variable, 0.25 - 110°/sec.

**Zoom Speed:** Variable, 0 - 200°/sec.

**Focus Speed:** Less than 1.8 sec from end to end.

**Preset Capabilities:** 79 individual programmable preset positions.

**Tour Capabilities:** 8 tours available with 32 programmable events per tour. Events may be preset positions, alarm acknowledgement, alarm or preset dwell times, relay function activation, calling autotours, tour repeat or chaining tours.

**Autotour Capabilities:** 2 autotours available with 360 pan, tilt and zoom functions per autotour. Programming is done in real time with joystick and push buttons.

**Preset Solving Speed:** 1 sec nominal.

**Preset Repeatability:** 0.3 degrees maximum.

**Alarm Capabilities:** 4 alarm inputs.  
Individual input enable/disable.  
Alarm report to CPU enable/disable.  
Active level definition (high/low).  
Alarm acknowledge definition (manual or automatic) with programmable dwell time.  
Alarm action definition (preset solve, relay on/off, tour, or no action).  
Alarm titling.

**Relay Output Capabilities:** 1 relay output.  
Power-on state definition (on/off).  
Output type definition (momentary or latching).  
Relay function status titling.

**Control Hardware:** Vicon's NOVA V1422 Matrix Switcher, V1300, V1344 and V1466 series NOVA CPUs, V1400X-DVC System Console and V1300X-DVC desk-top keypad or V1300X-RVC rack-mounted keypad.

**Control Software:** Vicon's ProTech software (or compatible) runs on a standard PC type computer with an RS-422/485 half duplex protocol interface.

**Control Format:** RS-422 or RS-485 protocol selectable via DIP switch 2. Communication is simplex or half duplex operation at 4800, 9600 or 19,200 baud or Vicon's enhanced VicoaxII protocol (superimposed data on composite video signal) automatically detected upon power up. RS-485 protocol utilizes full tri-state outputs for daisy chain capability.

**Control Display:** On-screen, menu driven system allowing full configuration of the dome.

**Screen Titling Capabilities:** Programmable for camera, preset, sector and alarms. Fixed for relay function and lens status.  
Camera: 1 for each.  
Preset: 79 maximum.  
Sector: 16 maximum.  
Alarm: 4 maximum.  
Individual type enable/disable.  
20 characters maximum.  
Selectable position.

## MECHANICAL

**Application:** Indoor or outdoor.

**Mounting:** In-ceiling or Indoor/Outdoor pendant. See Table 2 for compatible Vicon mounts.

**Housing Types:** Indoor pendant housing and outdoor sunshield.

**Pendant Mount Size/Thread:** Standard 1.0 inch NPT pipe thread or metric equivalent.

## Technical Information (cont'd)

**Lower Dome Types:** Units available for indoor or outdoor mount and in a variety of colors. See Table 3.

**Dimensions:** See Figure 1 and Table 4.

**Weight:** Indoor ceiling: 4.5 lb (2.0 kg).  
Indoor pendant: 5.7 lb (2.6 kg).  
Outdoor pendant: 6.5 lb (2.9 kg).

**Construction:** Plastic, aluminum and steel.

**Color:** Off-white housing and sunshield.

**Shipping Dimensions:** See Table 5.

**Shipping Weight:** See Table 5.

**Shipping Volume:** See Table 5.

### ENVIRONMENTAL

**Operating Temperature Range:** Indoor units: 35 to 122° F (2 to 50° C).  
Outdoor units: -40 to 122° F (-40 to 50° C).

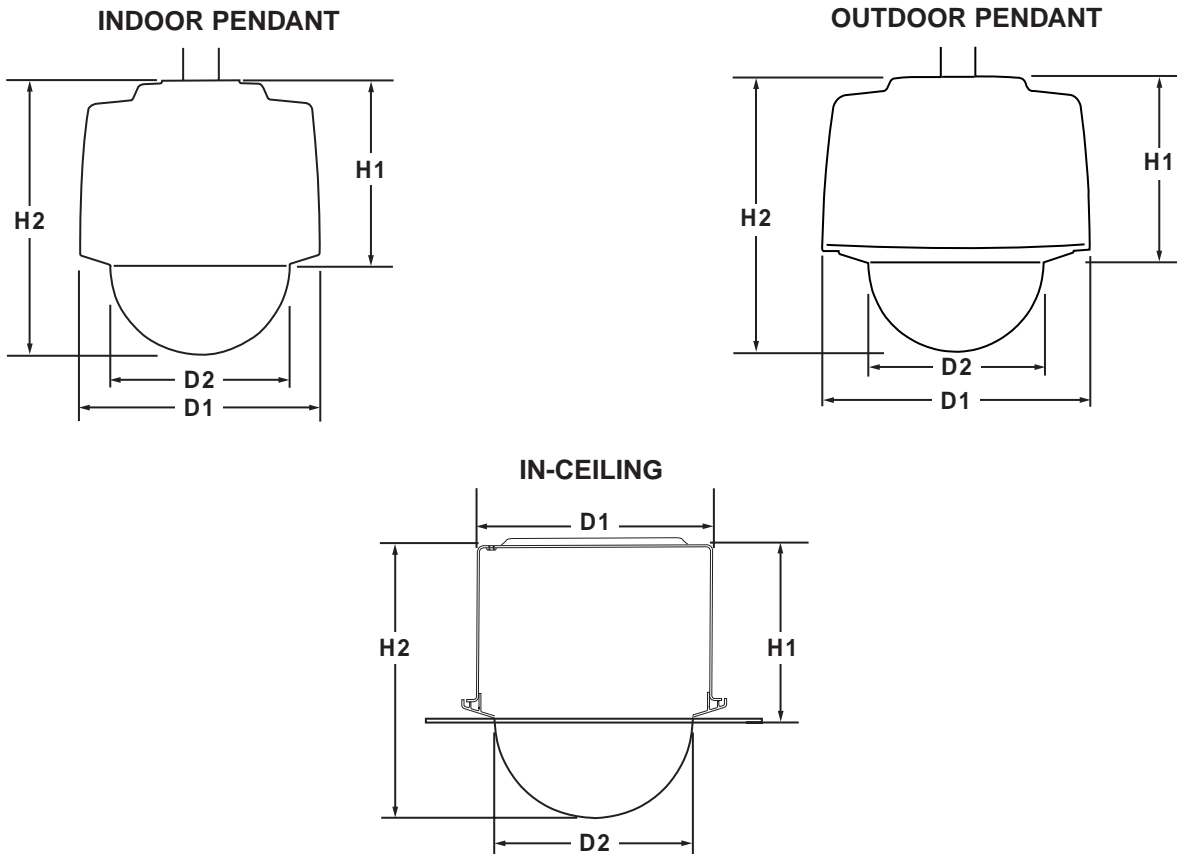
**Operating Humidity Range:** Indoor units: 0 to 90% relative, noncondensing.  
Outdoor units: 100% relative humidity.

**Storage Temperature Range:** -40 to 150° F (-40 to 65° C).

**Storage Humidity Range:** 0 to 90% relative, noncondensing.

**Ingress Protection:** EN60529, IP 56 rated.

**Wind Load:** Outdoor: heavy rain or snow driven by winds up to 80 mph.



**Figure 1**  
Surveyor2000 Dimensions

## Technical Information (cont'd)

Model Number	Product Code	Mount Type	Environment	Color
S2000-SMK-LD	7006	Ceiling/Pendant	Indoor	Gray Tint
S2000-CHR-LD	7007	Ceiling/Pendant	Indoor	Chrome
S2000-GLD-LD	7008	Ceiling/Pendant	Indoor	Gold
S2000-CLR-LD	7009	Ceiling/Pendant	Indoor	Clear
S2-CHR-LDW	7072	Pendant	Outdoor	Chrome
S2-CLR-LDW	7042	Pendant	Outdoor	Clear

**Table 3: Surveyor2000 Lower Domes**

Mounting Type	Enclosure/Housing (D1) in. (mm)	Outer Dome (D2) in. (mm)	Enclosure/Housing (H1) in. (mm)	Total Height (H2) in. (mm)
Ceiling	7.1 (180)	5.9 (150)	5.3 (134)	8.8 (223)
Indoor Pendant	8.0 (203)	5.9 (150)	6.4 (163)	9.4 (239)
Outdoor Pendant	9.0 (228)	5.9 (150)	6.3 (160)	9.3 (236)

**Table 4: Surveyor2000 Dimensions (Refer to Figure 1)**

Boxed Component Dimensions: (L × W × H) in. (cm) Weight: lb (kg) Volume: ft <sup>3</sup> (m <sup>3</sup> )	Indoor Ceiling	Indoor Pendant	Outdoor Pendant
Surveyor2000 Basic Unit 12.6 (32.0) × 12.6 (32.0) × 13.1 (33.3) 4.9 (2.2) 1.2 (0.03)	<b>X</b>	<b>X</b>	<b>X</b>
S2H Indoor Housing 11.1 (28.2) × 11.1 (28.2) × 8.5 (21.6) 1.6 (0.7) 0.6 (0.02)		<b>X</b>	
S2H Outdoor Housing 11.1 (28.2) × 11.1 (28.2) × 8.5 (21.6) 2.3 (1.0) 0.6 (0.02)			<b>X</b>
Surveyor2000 Lower Domes 9.7 (24.6) × 9.7 (24.6) × 5.4 (13.7) 0.4 (0.2) 0.3 (0.01)	<b>X</b>	<b>X</b>	Color Dome Optional
NUMBER OF BOXES	2	3	2
TOTAL WEIGHT lb (kg)	5.3 (2.4)	6.9 (3.1)	7.2 (3.3)
TOTAL VOLUME ft <sup>3</sup> (m <sup>3</sup> )	1.5 (0.04)	2.1 (0.06)	1.8 (0.05)

**Table 5: Surveyor2000 Shipping Dimensions**

## Technical Information (cont'd)

Specifications	Model Numbers			
	S2000-MC16 S2000-MP16 S2000-MW16	S2000-MC16C S2000-MP16C S2000-MW16C	S2000-CC16 S2000-CP16 S2000-CW16	S2000-CC16C S2000-CP16C S2000-CW16C
	Product Codes			
	6982-00 6983-00 6984-00	6982-01 6983-01 6984-01	7199-00 7200-00 7201-00	7199-01 7200-01 7201-01
	Formats			
	EIA	CCIR	NTSC	PAL
Type	Monochrome	Monochrome	Color	Color
Optical Zoom	16x	16x	16x	16x
Digital Zoom	8x	8x	8x	8x
Total Zoom	128x	128x	128x	128x
Zoom Speed	Tele - Wide: 3.6 sec	Tele - Wide: 3.6 sec	Tele - Wide: 3.6 sec	Tele - Wide: 3.6 sec
Image Device	¼-inch interline transfer CCD	¼-inch interline transfer CCD	¼-inch interline transfer CCD	¼-inch interline transfer CCD
Picture Elements	768(H) × 494(V), 380,000 pixels"	752(H) × 582(V), 440,000 pixels	768(H) × 494(V), 380,000 pixels	752(H) × 582(V), 440,000 pixels
Scanning System	2:1 interlace, 525 lines 60 fields/sec	2:1 interlace, 625 lines 50 fields/sec	2:1 interlace, 525 lines 60 fields/sec"	2:1 interlace, 625 lines 50 fields/sec"
Sensitivity	0.009 fc (0.1 lux) at F1.4 and 40 IRE	0.009 fc (0.1 lux) at F1.4 and 300 mV	0.12 fc (1.3 lux) at F1.4 and 40 IRE	0.12 fc (1.3 lux) at F1.4 and 40 IRE
Resolution	More than 500 TV lines	More than 500 TV lines	More than 450 TV lines	More than 450 TV lines
S/N Ratio	More than 46 dB	More than 46 dB	More than 46 dB	More than 46 dB
Synchronization	Internal/External (Line Lock on AC line)	Internal/External (Line Lock on AC line)	Internal/External (Line Lock on AC line)	Internal/External (Line Lock on AC line)
Automatic Gain Control (AGC)	Adjustable to 26.5 dB	Adjustable to 29.5 dB	Adjustable to 22 dB	Adjustable to 24.7 dB
Backlight Compensation	Software adjustable background video level	Software adjustable background video level	Software adjustable background video level	Software adjustable background video level
Iris Control	Automatic/Manual	Automatic/Manual	Automatic/Manual	Automatic/Manual
Video Focus	Automatic/Manual 1.0 m(tele) - 0.01 m(wide)	Automatic/Manual 1.0 m(tele) - 0.01 m(wide)	Automatic/Manual 1.0 m(tele) - 0.01 m(wide)	Automatic/Manual 1.0 m(tele) - 0.01 m(wide)
White Balance	n/a	n/a	Automatic/Manual Red/Blue Gain Level	Automatic/Manual Red/Blue Gain Level
Shutter Speed	Automatic/Manual 1/60 - 1/30K sec	Automatic/Manual 1/50 - 1/30K sec	Automatic/Manual 1/60 - 1/30K sec	Automatic/Manual 1/50 - 1/30K sec
Input Voltage	9.0 VDC ± 0.5 V	9.0 VDC ± 0.5 V	9.0 VDC ± 0.5 V	9.0 VDC ± 0.5 V
Power Consumption	3.2 W max	3.2 W max	3.2 W max	3.2 W max
Dimensions H × W × D	2.4 × 2.0 × 3.3 in. 60 × 50 × 86 mm	2.4 × 2.0 × 3.3 in. 60 × 50 × 86 mm	2.4 × 2.0 × 3.3 in. 60 × 50 × 86 mm	2.4 × 2.0 × 3.3 in. 60 × 50 × 86 mm
Weight	0.5 lb (0.23 kg)	0.5 lb (0.23 kg)	0.5 lb (0.23 kg)	0.5 lb (0.23 kg)
Lenses				
Focal Length	4 - 64 mm	4 - 64 mm	4 - 64 mm	4 - 64 mm
Aperture Max	f/1.4	f/1.4	f.1/4	f/1.4
Horizontal Angle of View	47° wide, 3° tele	47° wide, 3° tele	47° wide, 3° tele	47° wide, 3° tele

Table 6: Camera/Lens Specifications

## Technical Information (cont'd)

Specifications	Model Numbers			
	S2000-MC22 S2000-MP22 S2000-MW22	S2000-MC22C S2000-MP22C S2000-MW22C	S2000-CC22 S2000-CP22 S2000-CW22	S2000-CC22C S2000-CP22C S2000-CW22C
	Product Codes			
	6987-00 6989-00 7070-00	6987-01 6989-01 7070-01	6988-00 7069-00 7071-00	6988-01 7069-01 7071-01
	Formats			
EIA	CCIR	NTSC	PAL	
Type	Monochrome	Monochrome	Color	Color
Optical Zoom	22x	22x	22x	22x
Digital Zoom	8x	8x	8x	8x
Total Zoom	176x	176x	176x	176x
Zoom Speed	Tele - Wide: 3.9 sec	Tele - Wide: 3.9 sec	Tele - Wide: 3.9 sec	Tele - Wide: 3.9 sec
Image Device	1/4-inch interline transfer CCD	1/4-inch interline transfer CCD	1/4-inch interline transfer CCD	1/4-inch interline transfer CCD
Picture Elements	768(H) × 494(V), 380,000 pixels	752(H) × 582(V), 440,000 pixels	768(H) × 494(V), 380,000 pixels	752(H) × 582(V), 440,000 pixels"
Scanning System	2:1 interlace, 525 lines 60 fields/sec	2:1 interlace, 625 lines 50 fields/sec	2:1 interlace, 525 lines 60 fields/sec	2:1 interlace, 625 lines 50 fields/sec
Sensitivity	0.0019 fc (0.02 lux) at Auto 1/4s, F1.6 and 40 IRE	0.0019 fc (0.02 lux) at Auto 1/3s, F1.6 and 40 IRE	0.019 fc (0.2 lux) at Auto 1/4s, F1.6 and 40 IRE	0.019 fc (0.2 lux) at Auto 1/3s, F1.6 and 40 IRE
Resolution	More than 500 TV lines	More than 500 TV lines	More than 470 TV lines	More than 460 TV lines
S/N Ratio	More than 50 dB	More than 50 dB	More than 50 dB	More than 50 dB
Synchronization	Internal/External (Line Lock on AC line)	Internal/External (Line Lock on AC line)	Internal/External (Line Lock on AC line)	Internal/External (Line Lock on AC line)
Automatic Gain Control (AGC)	Adjustable to 25 dB	Adjustable to 32 dB	Adjustable to 25 dB	Adjustable to 32 dB
Backlight Compensation	Software adjustable back-ground video level	Software adjustable back-ground video level	Software adjustable back-ground video level	Software adjustable back-ground video level
Iris Control	Automatic/Manual	Automatic/Manual	Automatic/Manual	Automatic/Manual
Video Focus	Automatic/Manual 1.0 m(tele) - 0.01 m(wide)	Automatic/Manual 1.0 m(tele) - 0.01 m(wide)	Automatic/Manual 1.0 m(tele) - 0.01 m(wide)	Automatic/Manual 1.0 m(tele) - 0.01 m(wide)
White Balance	n/a	n/a	Automatic/Manual Red/Blue Gain Level	Automatic/Manual Red/Blue Gain Level
Shutter Speed	Auto(DSS) 1/2 - 1/60 Man 1/2 - 1/30K sec	Auto(DSS) 1/1.5 - 1/50 Man 1/1.5 - 1/30K sec	Auto(DSS) 1/2 - 1/60 Man 1/2 - 1/30K sec	Auto(DSS) 1/1.5 - 1/50 Man 1/1.5 - 1/30K sec
Input Voltage	9.0 VDC ± 0.5 V	9.0 VDC ± 0.5 V	9.0 VDC ± 0.5 V	9.0 VDC ± 0.5 V
Power Consumption	3.3 W max	3.3 W max	3.3 W max	3.3 W max
Dimensions H × W × D	2.4 × 2.0 × 3.5 in. 60 × 50 × 89.5 mm	2.4 × 2.0 × 3.5 in. 60 × 50 × 89.5 mm	2.4 × 2.0 × 3.5 in. 60 × 50 × 89.5 mm	2.4 × 2.0 × 3.5 in. 60 × 50 × 89.5 mm
Weight	0.5 lb (0.22 kg)	0.5 lb (0.22 kg)	0.5 lb (0.22 kg)	0.5 lb (0.22 kg)
Lenses				
Focal Length	4 - 88 mm	4 - 88 mm	4 - 88 mm	4 - 88 mm
Aperture max	f/1.6	f/1.6	f/1.6	f/1.6
Horizontal Angle of View	47° wide, 2.2° tele"	47° wide, 2.2° tele"	47° wide, 2.2° tele"	47° wide, 2.2° tele"

**Table 6 (cont'd): Camera/Lens Specifications**



Specifications	Model Numbers	
	S2000-RW23	S2000-RW23C
	Product Codes	
	7005-00	7005-01
	Formats	
	NTSC	PAL
Type	Color	Color
Optical Zoom	23x	23x
Digital Zoom	8x	8x
Total Zoom	184x	184x
Zoom Speed	Tele - Wide: 3.9 sec	Tele - Wide: 3.9 sec
Image Device	1/4-inch interline transfer CCD	1/4-inch interline transfer CCD
Picture Elements	768 (H) × 494 (V), 380,000 pixels	847 (H) × 582 (V), 490,000 pixels
Scanning System	2:1 interlace, 525 lines 60 fields/sec	2:1 interlace, 625 lines 50 fields/sec
Sensitivity	0.0019 fc (0.02 lux) at Auto 1/2s, F1.6 and 40 IRE, IR filter removed (B/W)	0.0019 fc (0.02 lux) at Auto 1/1.5s, F1.6 and 40 IRE, IR filter removed (B/W)
Resolution	470 TV lines	530 TV lines
S/N Ratio	More than 50 dB	More than 50 dB
Synchronization	Internal/External (Line Lock on AC line)	Internal/External (Line Lock on AC line)
Automatic Gain Control (AGC)	0 to 30 dB, adjustable	0 to 30 dB, adjustable
Backlight Compensation	Software adjustable background video level	Software adjustable background video level
Iris Control	Automatic/Manual	Automatic/Manual
Video Focus	Automatic/Manual 1.0 m (tele) - 0.01 m (wide)	Automatic/Manual 1.0 m (tele) - 0.01 m (wide)
White Balance	Automatic/Manual Red/Blue Gain Level	Automatic/Manual Red/Blue Gain Level
Shutter Speed	Auto (DSS) 1/2 - 1/60 Man 1/2 - 1/30 K sec	Auto (DSS) 1/1.5 - 1/50 Man 1/1.5 - 1/30 K sec
Input Voltage	9.0 VDC ±0.5 V	9.0 VDC ±0.5 V
Power Consumption	400 mA	400 mA
Dimensions (H × W × L)	2.4 × 2.0 × 3.5 in. 60 × 50 × 89.5 mm	2.4 × 2.0 × 3.5 in. 60 × 50 × 89.5 mm
Weight	0.5 lb (0.23 kg)	0.5 lb (0.23 kg)
Lenses		
Focal Length	4 - 88 mm	4 - 88 mm
Aperture Max	f/1.6	f/1.6
Horizontal Angle of View	47° wide, 2.2° tele	47° wide, 2.2° tele

Table 6 (cont'd): Camera/Lens Specifications