ARCHITECT & ENGINEER SPECIFICATIONS
SECTION 16780
VIDEO SURVEILLANCE SYSTEMS

SNC-RZ50N High Resolution Day/Night Pan/Tilt Zoom Camera with 10/100 Base T Ethernet

PART 2   PRODUCTS

2.01   CCTV / NETWORK CAMERA SPECIFICATIONS

A.   GENERAL REQUIREMENTS:

1. The SNC- RZ50N shall be a network enabled High Resolution Pan/Tilt Zoom Camera, utilizing a 1/4 type Exwave® HAD interline transfer CCD. The camera shall also provide an analog video output producing 450 TV lines of horizontal resolution.

2. The SNC-RZ50N shall be capable of 340 degree pan rotation and a tilt range of 115 degrees, suitable for either ceiling or desk mount operation.

3. The SNC-RZ50N shall incorporate a built-in 26X optical, auto focus zoom lens, and shall have 12X digital zoom capability.

4. The SNC-RZ50N shall be day/night capable. During normal illumination or daytime use, the camera shall be in color mode. Upon initiation of night mode, the IR cut filter shall move away from the CCD imager, to allow the camera to 'view' the scene using near IR illuminators. The camera shall switch to monochrome in night mode.

5. The SNC-RZ50N network interface shall be 10 Base T /100 Base TX Ethernet.

6. The SNC-RZ50N shall utilize JPEG and MPEG-4 compression. JPEG Compression levels shall be user selectable in 10 levels of compression ratios, based on an image of 24bits per picture element (8bits each for YUV).

7. The SNC-RZ50N shall be capable of streaming both MPEG4 and JPEG data simultaneously.

8. The SNC-RZ50N shall have unicast or multicast capability for MPEG4.

9. The SNC-RZ50N shall have the capability to stream MPEG4 in TCP or UDP mode

10. The SNC-RZ50N shall utilize hardware based PKI technology that sends a digital signature along with the video data from the camera to authenticate the images and the source of the image. This feature shall be available in JPEG mode only.

11. The SNC-RX550 shall incorporate built-in motion detection and object detection capabilities.

12. Object detection capability on the SNC-RZ50N shall allow the camera to detect an object that was not part of the original scene and conversely detect and trigger an alert when an object is removed from the scene. Minimum amount of time for the camera to detect such an object shall be 40 seconds. Minimum object size shall be 8x8 pixels in VGA, and 4x4 pixels in QVGA.

13. The SNC-RZ50N shall have a user adjustable release time for the intelligent object detection. Release time shall be a minimum of 1 minute, with a maximum of 12 hours, in 1 minute increments. Release time shall mean the time after which the camera detects the object or the removal thereof, to allow the camera to take the current scene as the basis for further object detection.

14. To alleviate false triggers, the SNC-RZ50N motion detection shall compare the current image with prior 15 frames within the camera

15. The SNC-RZ50N shall incorporate the Dynamic Frame Integration feature which allows the camera to dynamically assign field integration on moving objects only within the image, to prevent blurring or deinterlace artifacts on the captured image, while maintaining frame integration on the rest of the scene.

16. The SNC-RZ50N shall incorporate a digital image stabilization that compensates for camera motion. When activated, 5% of the edge of the images shall be used to correcting the blur caused by the motion. Blurring occurring due to motion between 2 Hz to 30Hz, shall be compensated. Frame rate of the camera dropping by 50% when this is activated shall be allowed.

17. The SNC-RZ50N shall support up to 16 user defined presets. Each preset shall allow up to 4 user defined windows for motion detection or object detection.

18. User shall have the option of choosing between object detection or motion detection on the SNC-RZ50N.

19. The SNC-RZ50N shall incorporate a built-in web server, such that standard web browser Internet Explorer® (version 6.0 recommended) can be used to view the camera view without need for special viewer software. The supported operating system is Windows® 2000 and Windows XP®. Minimum PC requirements shall be 1.5 GHz or higher, Pentium® IV Processor, with 256MB RAM or more supporting 1024X768 True Color display capability with Ethernet 100 BaseTX.

20. The SNC-RZ50N shall be capable of supporting up to 20 users simultaneously over the network.

21. The SNC-RZ50N shall have up to 6 user defined settings shown below, with each access level having capability to trigger ftp and/or have audio.

a.	View	Viewing only
b.	Light	Capture image, digital zoom, view size
c.	Preset	All of the above, including access to presets
d.	Pan Tilt	All of the above, including full pan/tilt operation
e.	Full	All of the above, including trigger for email, ftp, day/night etc
f.	Administrator	Parameter changes plus all of the above

22. Maximum frame rate capability of the SNC-RZ50N over LAN shall be up to 30 frames per second, VGA size, in either MPEG4 or JPEG, and up to 30 frames per second on dual stream mode of MJPEG and MPEG 4, at a capture size of QVGA.

23. The SNC-RZ50N shall equalize file sizes in JPEG compression, for stable data file management.

24. The SNC-RZ50N shall be capable of transmitting MPEG-4 and JPEG resolutions at the following frame rates:

MPEG-4	JPEG
640 x 480 @ 30 fps,	640 x 480 @ 30 fps,
320 x 240 @ 30 fps,	320 x 240 @ 30 fps,

25. Image sizes are user selectable for the following:

MPEG-4	JPEG
640 x 480	640 x 480
320 x 240	320 x 240
160 x 120	160 x 120

26. The SNC-RZ50N minimum slow shutter setting shall be 1 second, and a maximum high speed shutter of 1/10,000 sec.

27. The SNC- RZ50N shall support the following Network protocols: TCP/IP, DNS, RTP/RTCP, UDP, ARP, HTTP, ICMP, SMTP, FTP, DHCP, NTP and SNMP (MIB2). Network security shall be via Password (basic authentication) and IP filtering.

28. The SNC-RZ50N shall have both FTP client and server capabilities.

29. The SNC-RZ50N shall have user configurable port settings.

30. The SNC-RZ50N shall be capable of dynamic IP address change notification. It shall accomplish this via an email to a specified address when its IP address changes.

31. The SNC-RZ50N shall have an internal image memory size of 8MB for pre and post alarm buffering.

32. The SNC-RZ50N shall be capable of specifying up to 10 users/groups, inclusive of administrator,   and allow each user to have one of four levels of access.

B. CAMERA LENS SPECIFICATIONS:

1. The SNC-RZ50N shall incorporate a built-in 26x optical zoom and 12x digital zoom capability

2. The SNC-RZ50N's built-in lens shall be auto-focus type, and can be switched to manual focus mode, which can be set by the administrator

3. The SNC-RZ50N shall have minimum object distance of 320mm (Wide). And 1500mm (Tele)

4. The SNC-RZ50N lens shall have an F Number of F= 1.6 (wide) to F 3.8 (tele)

5. The SNC-RZ50N lens shall have a focal length of f= 3.5 to 91mm

6. The SNC-RZ50N shall be capable of auto switchover from color (day-mode) to b/w   (night-mode) and vice versa, or via sensor input triggers, or by schedule.

7. The SNC-RZ50N shall require a minimum scene illumination of:
   Color: 2.2 lux at F1.6 (50 IRE, AGC ON.)
   B&W: 0.3 lux at F1.6 (50 IRE, AGC ON)

C. VIDEO-ELECTRICAL REQUIREMENTS

1) The power connection shall be by means of screw down mini terminals connector.

2) The scanning system shall be 525 lines, 60 fieldes/30 frames, 2:1 interlace.

3) The video output of the SNC-RZ50N shall meet the EIA/NTSC standard.

4) Camera synchronization shall be Internal.

5) The composite video output shall be 1.0 V peak to peak @ 75 ohms.

6) The video signal to noise ratio shall be more than 50dB (Normal AGC, Weight ON).

7) White balance shall be Auto, Indoor 1, Outdoor, One push AWB, ATW or Manual.

8) Minimum illumination shall be 2.2 lux, F1.6 in color and 0.3 lux in monochrome.

9) The SNC-RX550N shall have backlight compensation system, and shall be ON/OFF selectable.

10) The SNC-RZ50N shall be capable of being externally triggered to change from color to b/w modes. The cameras shall also be capable of switching between color and b/w modes automatically, or by schedule.

11) The SNC-RZ50N shall have selectable exposure settings as follows: Full auto, Shutter priority, Iris priority and Manual mode,

12) The SNC-RZ50N shall have slow shutter mode capability down to 1 second, and highest shutter speed of 1/10,000 sec.

13) The Auto tracking white (ATW) balance range shall be 2,000 degrees Kelvin to 10,000 degrees Kelvin.

D: AUDIO REQUIREMENTS:

1. The SNC-RZ50N shall support audio. Audio compression standards supported shall be G.711 (64kbps) & G.726 (40, 32, 24, 16Kbps).

2. The SNC-RZ50N shall also support an external microphone. External microphone connectivity shall be via a single channel stereo type mini- jack, supporting 2.4 VDC power at 2.2 kilo-ohm external microphone input.

3. The SNC-RZ50N shall support an external active speaker via a mini-jack. Audio output shall be a maximum level of 1.0 Vrms.

4. The SNC-RZ50N shall be capable of bi-directional audio transmission.

5. The SNC-RZ50N shall be capable of storing up to 3 pre-recorded audio files, uploaded via a personal computer. Upon initiation, either through external trigger or intelligent object or motion detection, the camera shall playback the pre-recorded audio file, through an active speaker connected the active speaker jack, or to an audio system.

E: MECHANICAL REQUIREMENTS:

1) The SNC-RZ50N shall have ±170° pan range and -90° to +25° tilt range.

2) Unit shall be designed for desktop or ceiling mount operation.

3) The SNC-RZ550N shall have 16 user defined presets, with a repeatable preset accuracy of ±0.068°.

4) SNC-RZ50N shall have a 12 pin I/O interface located on rear of the base.

5) There shall be two (2) alarm input port, and two (2) Alarm/relay output ports. The alarm input port shall be opto-isolated. An RS-232C port shall also be on this connector.

6) Relay outputs shall be rated at 1 Amp at less than 24V DC

7) The analog video output from the SNC-RZ50N shall be a BNC type of connector.

8) The SNC-RZ50N shall have a built-in Type II PC card slot and TypeI/TypeII Compact Flash slot to allow the use of additional PC card type II ATA memory or CF Memory, or allow the use of a manufacturer specified compact flash wireless LAN card (SNCA-CFW1).

9) A microphone input jack as well as an active speaker shall be located on the rear of the base of the unit. Microphone and active speaker jacks shall have a diameter of 3.5mm.

10) The SNC-RZ50N maximum pan speed shall be 300 degrees per second, supporting 16 preset positions with a repeatable preset accuracy of ±0.064 degree.

11) Network interface shall be via an RJ-45 jack, supporting 10 BaseT/100 BaseTX Ethernet.

12) The SNC-RZ50N dimensions shall be 5-5/8(W) x 16-5/8(H) x 5-3/4(D) inches, 140mm (W) x 166mm (H) x 142mm (D).

13) The SNC-RZ50N shall weigh approximately 2 lbs. 10 oz.(1.2kg).

F. POWER REQUIREMENTS

1. The SNC-RZ50N power requirements shall be AC 24V 60 Hz or DC 12V.

2. Power consumption for the SNC-RZ50N shall be 25 watts maximum.

G. ENVIRONMENTAL REQUIREMENTS

1. The operating temperature shall be 32°F to 114°F (0°C to +40°C)

2. Storage temperature shall be within -4°F to 140°F (-20°C to +60°C)

H. SYSTEM REQUIREMENTS

1. Operating system requirements: Microsoft Windows 2000/XP.

2. Minimum processor requirements: Pentium IV, 1.5 GHz or higher.

3. Minimum memory requirements : 256MB RAM

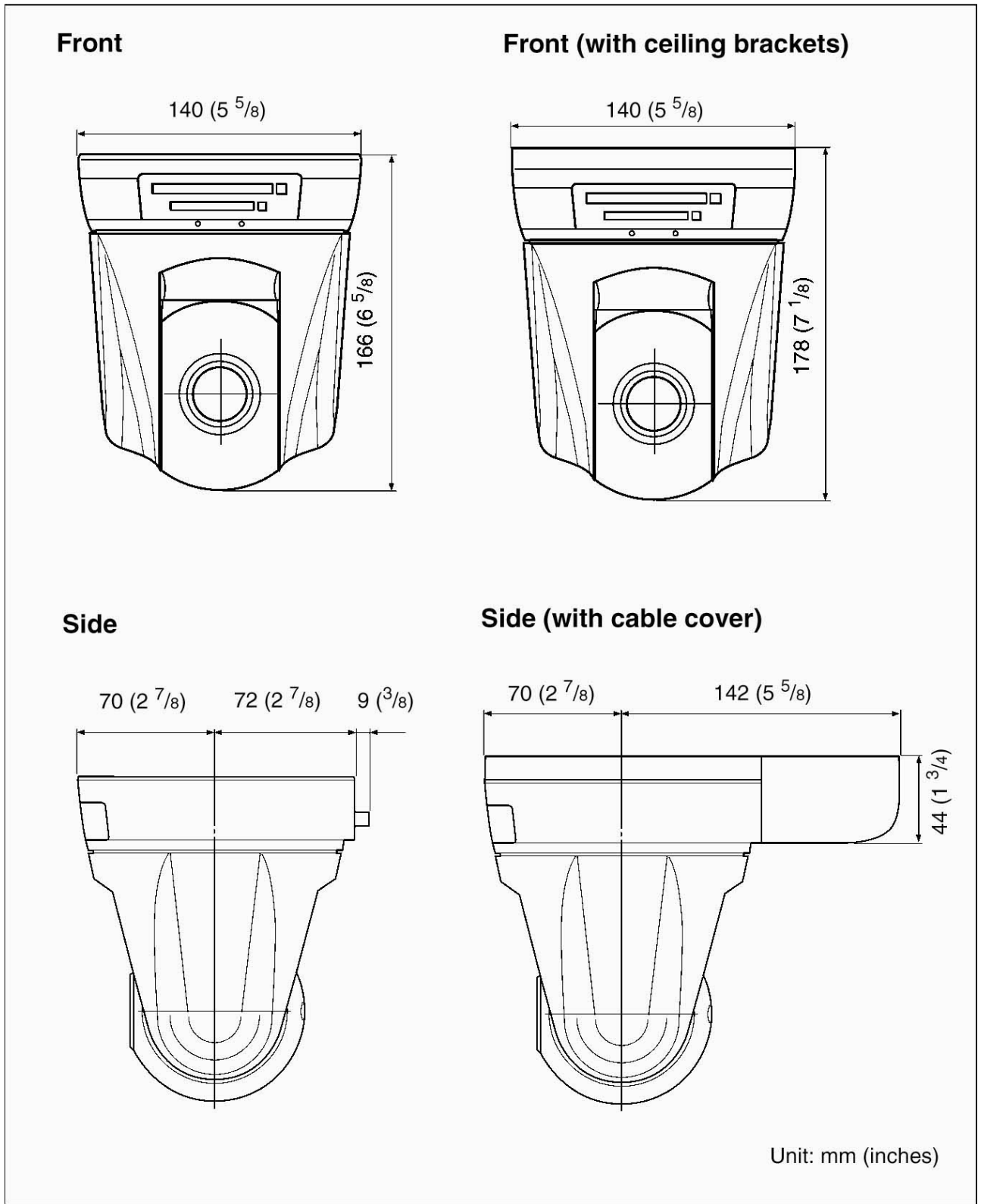4. Web browser requirements: shall be Internet Explorer® version 5.5 higher

I. SUPPLIED ACCESSORIES

1) CD-ROM（User's guide and utility programs）
2) Installation manual
3) AC power adaptor
4) Power cord
5) Upper ceiling bracket
6) Lower ceiling bracket
7) Cable cover
8) Mounting bracket cover
9) Screws M3 x 6
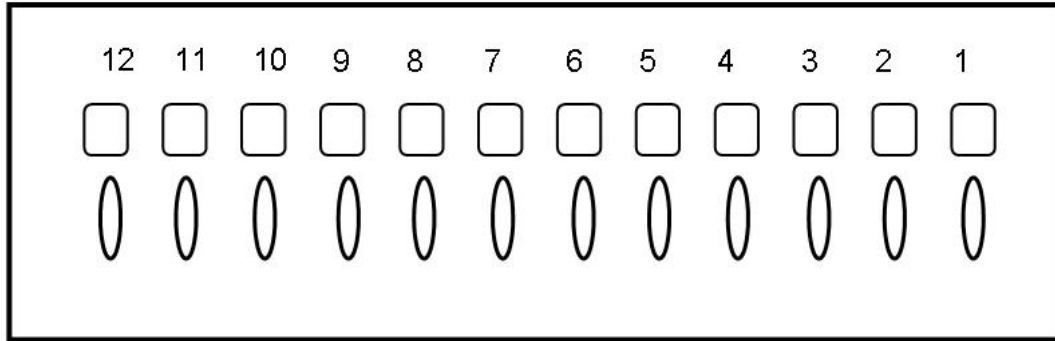10) Shoulder screw M4
11) Plug retainer
12) Rubber foot
13) Wire rope

J. OPTIONAL ACCESSORIES

1) YT-ICB550/C   Clear dome type in-ceiling mount kit
2) YT-ICB550/T   Tinted dome type in-ceiling mount kit
3) YT-MA550   Mounting adaptor for YT-ICB550
4) SNCA-CFW1   IEEE-802.11b Wireless LAN Card
5) SNCA-AN1   External antenna for SNCA-CFW1
6) MSX-2GN   Memory Stick Pro® (2GB)
7) MSX-1GS   Memory Stick Pro® (1GB)
8) MSX-512S   Memory Stick Pro® (512MB)
9) MSH-128   Memory Stick® (128MB)

Dimensions

Front

140 (5 $^5/_8$)

166 (6 $^5/_8$)

Front (with ceiling brackets)

140 (5 $^5/_8$)

178 (7 $^1/_8$)

Side

70 (2 $^7/_8$)　　72 (2 $^7/_8$)　　9 ($^3/_8$)

Side (with cable cover)

70 (2 $^7/_8$)　　142 (5 $^5/_8$)

44 (1 $^3/_4$)

Unit: mm (inches)

Pin assignment / Connector
I/O port

12	11	10	9	8	7	6	5	4	3	2	1

Pin No	Pin name
1	Sensor in 1+
2	GND
3	Sensor in 2+
4	GND
5	Alarm out 1+
6	Alarm out 1-
7	Alarm out 2+
8	Alarm out 2-
9	GND
10	GND
11	RS232C_RX
12	RS232C_TX