

SNF-8010 5MEGAPIXEL NETWORK 360° FISHEYE CAMERA

TECHNICAL SPECIFICATIONS

SECURITY SYSTEM

DIVISION – 28 ELECTRONIC SAFETY AND SECURITY

LEVEL 1 28 20 00 ELECTRONIC SURVEILLANCE

LEVEL 2 28 23 00 VIDEO SURVEILLANCE

LEVEL 3 28 23 29 VIDEO SURVEILLANCE REMOTE DEVICES AND SENSORS

PART 2 – PRODUCTS

2.01 GENERAL

- A. All equipment and materials used shall be standard components that are regularly manufactured and used in the manufacturer's system.
- B. All systems and components shall have been thoroughly tested and proven in actual use.
- C. All systems and components shall be provided with the availability of a toll-free (U.S. and Canada), 24-hour technical assistance program (TAP) from the manufacturer. The TAP shall allow for immediate technical assistance for either the dealer/installer or the end user at no charge for as long as the product is installed.

2.02 SNF-8010 5MEGAPIXEL NETWORK 360° FISHEYE CAMERA

- A. The camera shall be of a dome type suitable for internal installation. The camera shall be ivory in appearance.
- B. The cameras shall feature a 1.14mm lens, providing a 187 degree horizontal and vertical field of view.
- C. The network camera shall feature up to 5 Mega Pixel resolution at 20fps.

2.03 ELECTRICAL SPECIFICATIONS

- A. Input Voltage / Current 12V DC $\pm 10\%$, PoE (IEEE802.3af class3)
- B. Power Consumption Max 10.2W(PoE, Class3), Max 7.8W(12V DC)

2.04 CAMERA

- A. Imaging Device 1/1.8" 6M PS CMOS(IMX178)
- B. Total Pixels (horizontal x vertical) 6megapixel / 5.2M (2560 x 2048)
- C. Scanning System Progressive
- D. Min. Illumination Color : 0.9Lux (1/30sec, F2.5, 50IRE),
0.015Lux (2sec, F2.5, 30IRE)
B/W : 0.09Lux (1/30sec, F2.5, 50IRE),
0.0015Lux (2sec, F2.5, 30IRE)
- E. Video Out CVBS : 1.0 Vpp / 75 Ω composite

2.04 LENS

- A. Focal length 1.14mm fixed
- B. Max. Aperture ratio F2.5
- C. Angular Field of View H:187° / V : 187° / D : 187°
- D. Min Object Distance 0.3m ~ Infinity / Manual
- E. Focus control Manual
- F. Lens Type Fixed focal
- G. Mount Type Board type (M12)

2.05 OPERATIONAL SPECIFICATION

- A. Camera Title On, Off (displays up to 15 characters)
- B. Day and Night True D&N
- C. Backlight Compensation BLC
- D. Contrast Enhancement SSDR(Samsung Super Dynamic Range)(Off/On)

E. Digital Noise Reduction,	SSNR(2D+3D noise filter)(Off/On)
F. Motion Detection	On, Off (4ea 4 points polygonal zones)
G. Privacy Masking	On, Off (32ea zones with 4 points of polygonal)
H. Gain Control	Off, Low, Medium, High,
I. White Balance	ATW AWC, Manual, Indoor, Outdoor, Mercury
J. Electronic Shutter Speed	2s~1/12,000s
K. Digital Zoom	16x, Digital PTZ(Preset, Group)
L. Flip / Mirror	On, Off
M. Intelligent Video Analytics	Tampering, Virtual line, Enter / Exit / Disappear, Audio detection
N. Alarm I/O	input 1ea / Output 1ea
O. Alarm Triggers	Motion detection, Tampering, Audio detection, Alarm input, Network disconnection
P. Alarm Events	File upload via FTP and E-Mail, Notification via E-Mail, TCP and HTTP Local storage (SD/SDHC/SDXC) recording at network disconnected & event (Alarm triggers), External output

2.06 NETWORK

A. Ethernet	RJ-45 (10/100Base-T) : Female type
B. Video Compression	H.264(MPEG-4 part 10/AVC), MJPEG
C. Resolution	
1. Fishyeye(Original)	<5.3M original> 2560 x 2048, 1920 x 1080, 1600 x 1200, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 720 x 480, 640 x 480, 320 x 240
2. Single rectangle	800 x 600, 640 x 480, 320 x 240
3. Quad view	1600 x 1200, 1280 x 960, 1024 x 768, 800 x 600, 640 x 480, 320 x 240
4. Double panorama	2048 x 1536, 1600 x 1200, 1280 x 960, 1024 x 768, 800 x 600, 640 x 480, 320 x 240
5. Single panorama	2048 x 768, 1600 x 600, 1280 x 480, 1024 x 384, 800 x 300, 640 x 240, 320 x 120
D. Max Frame rate(Raw)	<MJPEG>
1. Source view	2560 x 2048, 1920 x 1080, 1600 x 1200, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768 : 15fps / 800 x 600, 720 x 480, 640 x 480, 320 x 240 : 20fps
2. Single panorama view	800 x 600 : 15fps / 800 x 600 : 20fps
3. Double panorama view	800 x 600 : 15fps / 800 x 600 : 20fps
4. Quad view	800 x 600 : 15fps / 800 x 600 : 20fps,
5. Single rectangle view	All : 20fps@Ground / Ceiling mode 800 x 600 : 15fps@Wall mode / 800 x 600 : 20fps@Wall mode
E. Viewing Composition	
1. Camera Side	360 view, Single panorama, Double panorama, Single panorama + 3 rectangle, 360 view + 3 rectangle, Quad view, Single rectangle, Single panorama + 2 rectangle, 360 view + 8 rectangle
2. CMS side	360 view, Single panorama, Double panorama, Quad view, Single rectangle, 360 + 3 rectangle, Single panorama + 2 rectangle
F. Video Quality Adjustment	
1. H.264	Compression level, Target bitrate level control
2. MJPEG	Quality level control
G. Bitrate Control Method	
1. H.264	VBR or CBR
2. MJPEG	VBR

H. Streaming Capability	Multiple streaming (Up to 3 profiles) *Multiple straming (Up to 5 profiles), regardless of codec type
I. Audio In	Max output level : 1 Vrms, Supply voltage : 2.5V DC(4mA), Input impedance : approx. 2K Ohm SNF-8010 : Selectable (Mic in / Line in)
J. Audio Out	Line out (3.5mm stereo mini jack)
K. Audio Compression Format	G.711 u-law/G.726 selectable / G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps / AAC (16Khz/48Khz) (Coming '14. Sep)
L. Audio Communication	Bi-directional
M. IP	IPv4, IPv6
N. Network Protocol	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1, v2c, v3 (MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour
O. Security	HTTPS (SSL) login authentication, Digest login authentication, IP Address filtering, User access log, 802.1x authentication
P. Streaming Method	Unicast, Multicast
Q. Max. User Access	15 users at Unicast
R. Edge Storage	micro SD/SDHC/SDZC memory slot' Motion images recorded in the SDX/SDHC/SD memory card can be downloaded
S. Application Programming Interface	ONVIF profile S, SUNAPI (Samsung protocol), SVNP 1.2
T. Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek, Finnish, Norwegian
U. Web Viewer	
1. Supported OS	Windows XP, Windows Vista, Windows 7, 8, MAC OS X 10.7
2. Supported Browser	Microsoft Internet Explorer (Ver. 8 ~ 11), Mozilla Firefox (Ver. 9 ~ 19), Google Chrome (Ver. 15 ~ 25), Apple Safari (Ver. 6.0.2(Mac OS X 10.8, 10.7 only), 5.1.7) *Mac OS X only
V. Central Management Software	SSM, Smart Viewer, iPOLiS mobile

2.07 ENVIRONMENTAL SPECIFICATIONS

A. Operating Temperature	-10°C ~ +55°C (+14°F ~ +131°F)
B. Operating Humidity	Less than 90% RH *Start up should be done at above - 10°C
C. Storage Temperature	-30°C ~ +60°C (-22°F ~ +140°F)
D. Storage Temperature	Less than 90% RH
E. Standard Certification	UL, CE, FCC, RoHS, Gost, KC

2.08 PHYSICAL SPECIFICATIONS

A. Dimension	ø 145.9 x 49.6mm(ø5.74" x1.95")
B. Weight	750g(1.65lb)
C. Color	Ivory
D. Material	Aluminum

2.09 CERTIFICATIONS

- A. UL listed
- B CE mark
- C FCC mark

2.10 WARRANTY

- A. 3 years