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 SND-6084R 2 MEGAPIXEL FULL HD NETWORK IR DOME CAMERA

A. The camera shall be of a dome type suitable for internal installation. The camera shall be ivory in appearance.
B. The camera shall feature an Adaptive Infrared illumination system with 12 LEDs giving a viewable distance of 15m (49.21ft) in complete darkness.
C. The network camera shall feature up to 2 Mega Pixel Full HD (1080p) resolution in a 16:9 format. 4:3 format shall also be available in smaller resolutions.
D. The camera should be capable of capturing and transmitting an image size of 1920 x 1080 at 60 images per second.
E. The camera shall be capable of simultaneously streaming two 1080p video streams, each at 30 images per second.
F. The camera shall feature a day / night mode that incorporates an infrared cut filter removal mechanism for true colour reproduction and the best possible low light performance.
G. The cameras shall feature the Simple Focus automatic motorised focus adjustment. This should be activated by a button on the camera and remotely through the network interface. This can also be activated when the camera changes from day to night mode.
H. The camera shall feature a 3 - 8.5mm motorised varifocal lens with a maximum aperture of 1.2Lux.
I. The camera shall feature a built in microphone.
J. The camera shall feature Wide Dynamic Range with a gain of 100db. This feature will work at 30 images per second at 1920 x 1080 resolution. The WDR function shall feature an adaptive motion system to eliminate motion blur.
K. The camera shall feature a high performance 2D & 3D noise reduction that automatically adapts the type of technology used according to movement in the field of view. 2D noise reduction compares adjacent pixels while 3D technology compares the same pixel in the previous and subsequent images, giving a higher level of detail. When the camera detects movement in a region of the image it will apply 2D noise reduction to that area and 3D noise reduction to the remainder of the image.
L. The camera shall feature an automatic back light compensation technology that detects and enhances dark areas in the field of view and increases the gain in those areas.
M. The camera shall feature built in license free video analytics functions including line crossing, appear/disappear, audio detection, camera tamper (scene change) and enter/exit a predefined zone.
N. The camera shall feature advanced motion detection with definable detection areas, minimum / maximum object size definition and a learning algorithm that ignores false alarms such as trees and waves on water.

O. The camera shall support Multi Cropping technology to allow video profiles to be set up with a reduced area of the overall field of view of the camera.
P. The camera shall feature a face detection technology that can be used to create an event whenever there is a face or multiple faces in the image. The technology should be able to detect 32 faces simultaneously.
Q. The camera shall feature 32 privacy zone mask areas.
R. The camera shall feature a smart codec that can use a higher quality compression for regions of interest in the image, thereby prioritising the encoding of the most important areas of the field of view.
S. The camera shall feature a Digital Image Stabilisation function.
T. The camera shall feature a backlight compensation technology that can be used to manually select an area of high brightness in the field of view and adjust the gain in that area.
U. The network camera shall provide video transmission in an open format with H.264 or MJPEG compression.
V. The camera shall support ONVIF profile S for operation with 3rd party systems.
W. The camera shall be capable of simultaneously transmitting multiple video streams of different resolution, compression, frame-rate and compression settings.
X. The network camera should be configurable through a built in web server that can be accessed via standard browsers including Internet Explorer, Firefox, Chrome & Safari.
Y. The camera shall feature a line level audio input with an alarm function.
Z. The camera shall feature a line level audio input and output capable of duplex operation.
AA. The cameras shall support micro SD, SDHC & SDXC flash memory card for recording video footage on event, network loss or continuously.
BB. The camera shall provide a customizable on-screen display (OSD) which shall be available in English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Romanian, Serbian, Dutch, Croatian, Hungarian, Greek, Finnish, Norwegian.

2.03 CAMERA

A. Imaging Device	1/ 2.8” 2M PS Exmor 2.38M CMOS
B. Total Pixels	1,952(H) x 1,116(V)
C. Effective Pixels	1,944(H) x 1,104(V)
D. Scanning System	Progressive
F. Min. Illumination	
1. Color	0.1 Lux (F1.2, 50IRE), 0.0017Lux (30fps 2sec, 50IRE)
2. B/W	0.01 Lux (F1.2, 50IRE)
G. S / N Ratio	50dB
H. Video Output	CVBS : 1.0 Vp-p / 75Ω composite, 704x480(N), 704x576(P), for installation - DIP connector type

2.04 LENS TYPE

A. Lens Type	DC Auto Iris
B. Mount Type	Board-in type
C. Focal Length(Zoom Ratio)	3~ 8.5mm (2.8X) Motorized Varifocal
D.Max. Aperture Ratio	F1.2
E. Angular Field of View	H : 105.5°(Wide) ~ 37.1°(Tele) V : 57.5°(Wide) ~ 21.0°(Tele)
F. Min. Object Distance	0.5M
G. Focus Control	Simple Focus (Motorized V/F) / Manual - Remote control via network (Manual, Simple Focus, Day&Night)

2.05 Pan / Tilt / Rotate

A. Pan Range	'0 ° ~ +355 °
B. Tilt Range	'0 ° ~ +67 °
C. Rotate Range	'0 ° ~ +355 °

2.06 OPERATION

A. Camera Title	Off / On (Displayed up to 45 characters)
B. Day & Night	Auto (ICR) / Color / B/W / External / Schedule
C. Backlight Compensation	Off, BLC, WDR
D. Wide Dynamic Range	Off, / On (100dB)
E. Contrast Enhancement SSDR	On, Off
F. Digital Noise Reduction SSNRIII	On, Off
G. Motion Detection	Off / On (4ea 4 Points Polygonal zones)
H. Privacy Masking	Off / On (32ea Rectangular zones)
I. Sens-up (Frame Integration)	Off, Auto (2x ~ 60x)
J. Gain Control	Off / Low / Middle / High / Manual
K. White Balance	ATW / AWC / Manual / Indoor / Outdoor
L. Electronic Shutter Speed	Auto / A.FLK / Manual (1/30 ~ 1/12,000sec)
M. Flip / Mirror	Off, On
N. Intelligent Video Analytics	Tampering, Virtual Line, Enter/Exit, Appear / Disappear, Audio Detection, Face Detection
O. Alarm I/O	Input 1ea / Output 1ea
P. Alarm Triggers	Motion detection, Tampering, Audio Detection, Face Detecton, Video Analytics, Alarm Input, Network Disconnection
Q. 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
R. Defog	Auto/Manual/Off
S. IR LED	12ea
T. Viewable Length	15m(49.21ft)

2.07 NETWORK PROTOCOL

A. Ethernet	RJ-45 (10/100Base-T)
B. Video Compression Format	H.264(MPEG-4 part 10/AVC), MJPEG
C. Resolution	1920x1080 /1600x1200/ 1280x1024 /1280x960 / 1280x720 / 1024x768 / 800x600 / 800x450 / 640x480 / 640x360 / 320x240 / 320x180
D. Max. Framerate	
1. H264	Max 60fps at all resolutions
2. Motion JPEG	1920x1080 /1600x1200/ 1280x1024 /1280x960 / 1280x720 / 1024x768 : Max. 15 fps 800x600 / 800x450 / 640x480 / 640x360 / 320x240 / 320x180 : Max. 30fps
E. Video Quality Adjustment	
1. H.264	Compression level, Target bit rate level control
2. MJPEG	Quality level control
F. Bitrate Control Method	
1, H.264	CBR or VBR
2. MJPEG	VBR
G. Streaming Capability	Multiple Streaming (Up to 10 Profiles)
H. Audio I/O	Mic(Line) in / Line out (1Vrms), Built-in Mic.
I. Audio Compression Format	G.711 u-law /G.726 Selectable G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps
J. Audio Communication	Bi-directional audio
K. IP	IPv4, IPv6
L. 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, PIM-SM, UPnP, Bonjour
M. Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access Log 802.1x Authentication
N. Streaming Method	Unicast, Multicast
O. Max. User Access	15 users at Unicast mode
P. Memory Slot	SD/SDHC/SDXC - motion Images recorded in the SDX/SDHC/SD memory card can be downloaded.
Q. ONVIF Conformance	Yes, Profile S
R. Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Denish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatia, Hungary, Greek, Finnish, Norwegian
S. Web Viewer	
1. Supported OS	Windows XP / VISTA / 7 / 8, MAC OS X 10.7
2. Supported Browser	Microsoft Internet Explorer (Ver. 7~10), 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.
3. Central Management Software	SmartViewer 4.0

2.08 ELECTRICAL

A. Voltage	DC12V±10%, PoE(IEEE802.3af)
B. Consumption	Max. 8.5W

2.09 ENVIRONMENTAL SPECIFICATIONS

A. Operating Temperature	-10°C ~ +55°C (14°F ~ 131°F)
B. Operating Humidity	Less than 90% RH

2.10 PHYSCIAL SPECIFICATIONS

A. Dimension	D132.1 ,H107.6
B. Weight	525g(1.16lb)
C. Color	IVORY(Polycarboate)

2.11 CERTIFICATIONS

A. CE mark
B. FCC mark

2.12 WARRANTY

A. 3 years, parts and labor.