

VECTIS iX06-1TB IP Video Network Recorder
ARCHITECTURAL AND ENGINEERING SPECIFICATION
DIVISION - LEVEL 1___ 28 ELECTRONIC SAFETY AND SECURITY
LEVEL 2___ 28 20 00 ELECTRONIC SURVEILLANCE
LEVEL 3___ 28 23 00 Closed Circuit Video Surveillance Systems

PART 2 – PRODUCTS

2.01 MANUFACTURER / Supplier

- A. Vanderbilt International (IRL) Ltd.
Clonsaugh Business and Technology Park
Clonsaugh
Dublin 17, Ireland
- B. This product shall be manufactured by a company whose quality system is in compliance with the ISO 9001, QUALITY SYSTEM.
- C. The product shall be fully RoHS2 compliant.

2.02 General NETWORK Video Recorder (NVR) Description

- D. The network video recorder (NVR) shall support similar product on market, and it's able to supply powerful function and user-friendly product feature.

The NVR shall receive IP camera video streaming over the internet and record on the disk as storage system. The NVR shall support any codec including H.264, MPEG4, MJPEG and JPEG from IP camera or video server recording; also it shall be able to support NTSC and PAL video format. It needs to support playback function and non-stop recording capability.

The NVR shall support digital video recording, it won't generate video noise or blur during the video pause, fast/slow playback, fast/slow reverse. The recorded data shall be instantly searched by time or event by tagged an event.

The NVR shall support schedule recording setting by define of time. Schedule recording type can be once upon specific date/time, weekly recurrence, or triggered by specific event.

When the storage space is filled, the NVR shall be able to overwrite the previous recording video data and record continuously. The NVR shall be able to send alarm notification once abnormal status detected in storage system.

The NVR shall support exclusive video coding format to prevent editing from any other users.

The NVR shall support remote management and remote video playback over the internet. The NVR shall provide USB2.0 ports for external storage device including USB hard disk, USB flash, or USB DVD-RW disk drive for software upgrade or video export function.

The NVR shall be capable of High Level Integration to an Access Control System such as Siemens SiPass and Digital Video Recorder such as SISTORE MX, CX, AX & HX without the need for any additional customised programming, thus providing a truly interoperable system.

2.03 Recorder Requirements

This system shall support up to 6 IP cameras video streaming recording and provide high definition video during the video playback and real-time video display with the product feature as below:

- E. The system shall be open platform support IP camera and device from any brand
- F. The system shall be a multi-tasking system, capable of simultaneous live monitoring, video recording, video playback, event's search and display and system status indicator.
- G. The system shall provide 4 operation modes including: Configuration mode, Display mode, Alarm mode, and Event mode
- H. The system shall provide various video searching engine by Date/Time, Time Slider, and Alarm event
- I. The system by model shall support total recording frame rates from 30 to 180 fps at D1 resolution
- J. The system shall support continuously recording and over write the recorded data once the storage space is filled
- K. The system shall support 4 (or more) USB 2.0 ports
- L. The system shall support one, dual or multiple monitor(s) display(s)
- M. The system shall support NVR non-stop recording during the video playback over the internet
- N. The system shall provide user-friendly GUI
- O. The system shall support various recording mode including schedule recording, event recording, motion detection recording, and manual recording
- P. The system shall support alarm sound effect when the alarm triggered
- Q. The system shall support at least three different types of logging system for alarm events, past events and system events

- R. The system shall provide client access interface for remote real-time video and video playback over the internet
- S. The system shall support NTP protocol for synchronizing the system clock
- T. The system shall provide NTP service to synchronize with internal network device(s).
- U. The system shall provide self-diagnosis mechanism and able to send out alarm notification including storage system, system efficiency, and hardware status.
- V. The system shall provide spooler area for up to 32 (or more) video clip/ snapshot files to play and preview before export the file.
- W. The system shall allow user to adjust system parameters under GUI without affecting real-time video monitoring and recording function
- X. The system shall provide self-diagnosis mechanism and able to provide hard disk, hardware and relevant system status information instantly
- Y. The system shall provide mechanism or software tools for system back up and able to reset default value
- Z. The system shall be able to integrate with third party DI/DO device and provide ultimate DI/DO for system alarm triggered interface
- AA. The system shall support multi-languages
- BB. The system shall support joystick keyboard command for PTZ control and NVR basic function operation
- CC. The system shall provide wizard tool with install procedure for user to complete all the setup immediately
- DD. The system shall support ONVIF compliant cameras and able to retrieve the video stream from camera directly without additional integration
- EE. The system shall support RTP/RTSP video stream from IP camera. The video stream can be required immediately by sending command.
- FF. The system shall support Multicast video stream from IP device. The video stream can be relay to additional receivers within same subnet, leverage bandwidth and server load
- GG. The system need to support the virtual keyboard, only mouse is required to operate the system.
- HH. The system shall support failover architecture to replace malfunction NVR system within five minutes.
- II. The system shall support data backup through centralized operation center and/or remote office equipped with CD-RW/DVR-RW or other storage medium device.
- JJ. The system shall support single to multiple IP device(s)'s recording backup based on user-defined date and time. The backup items shall also include a full functional player with the ability to perform quick search based on user's query criterial(s) and executable independently from the recording system.

2.04 Operation and System Control

Display Mode

- A. The NVR shall provide the device tree with the list of IP camera, relevant DI/DO device or map categories available for user to drag n drop to the viewer and play the video instantly
- B. The NVR shall provide different channel device name, status, and relevant information for the IP camera and relevant device on the device tree with different icon indicate the device type and status including connected, in recording, alarm status or video lost
- C. The NVR shall be able to call out the real-time player by double click the camera icon on the device tree, the player also supports the option of video playback.
- D. The NVR shall be able to display live images from IP camera with at least higher resolution than or equal as 1-megapixel video resolution and its frame rate at 30 fps.
- E. The NVR shall support multiple display panels for real time video, it provides optional patterns including full screen, single window, 2x2, 3x3, 4x4, 8x8, etc ... and other different patterns.
- F. The NVR shall provide more than 36 different display patterns saved in the control panel. The saved patterns can be arranged in tour mode and display by turns in appointed period of time
- G. The NVR shall provide speed control button on the display panel to run different display speed upon the bandwidth environment. It includes slow speed, middle speed, high speed and turbo speed:

Slow speed	Every viewer run 1 frame only
Middle speed	Only the selected viewer plays full frame and the rest viewers run 1 frame only
High speed	All viewers play full frame
Turbo speed	All viewers play full frame but with lower resolution, only the selected viewer play the original resolution

- H. The NVR shall provide mouse-controllable mechanism for PTZ camera to pan, tilt, and zoom functions directly on the display viewer. On the display viewer the user is able to set the PTZ preset point, center, home and save present point up to 18 sets. The system shall support all kinds of PTZ IP

camera communication protocol.

- I. The NVR shall integrate with PTZ camera and provide function menu on the display viewer to active or disable PTZ auto patrol function. The NVR can obtain the auto patrol preset point group list from the camera.
- J. The NVR shall provide function for user to create ultimate Region of Interest (ROI) from the main display and drag n drop to other viewers for monitor. In the ROI viewers, the user is able to operate virtual PTZ for moving object tracking.
- K. The NVR shall provide PIP (Picture in Picture) function, so that the user can know where their position is when they operate ROI or digital zoom in
- L. The NVR shall support digital zoom in/out for Arecont Vision 4 lens series camera.
- M. The NVR is able to display camera current status and relevant information including camera name, time/date, and camera status including connected, in recording, alarm status, and video loss.
- N. The NVR shall provide the display viewer with capability to display the camera name, record status, sub-camera frame, time stamp, time slider interface and alarm blinking frame indication on the display viewer. It also provides optional color setting for selected name and time stamp on the display viewer
- O. The NVR shall provide PTZ and PTZ streaming lock option in the real-time video display window to lock the PTZ function, or a video stream to prevent from the low authorized user to control the PTZ camera, or acquire the video stream. It need to define by those levels to determine whether it can be locked to unlock, low-authorized user lock PTZ functions and video streaming, or equivalent, required unlock from high authorized user.
- P. The NVR shall support step by step PTZ control which improves more accurate PTZ control for the limited network bandwidth environment
- Q. The NVR shall provide real-time digital video zoom-in function. The video can be zoom in/zoom out by mouse wheel and it is able to support ten times (or more) digital magnification.
- R. The NVR shall operate through mouse operation for live viewing, recording playback in original resolution and/or enlarge or resume to/from focusing area/or region of interest
- S. The NVR is able to provide quick function icon on the video display viewer. The function icon includes digital zoom function, active PTZ function, and audio on/off switch, first click to active the function and second click to disable the function
- T. The NVR shall provide snapshot function and able to restore the video clip to spooler area, the user is able to export the file with optional format upon its need.
- U. The NVR shall support dual video stream IP camera and able to switch to the supported codec during the real-time display viewer

- V. The NVR shall support synchronized audio/voice received by microphone during the real-time video display. It shall provide audio on/off option on the display window for user to select according to individual need.
- W. The NVR shall provide system self-diagnostic mechanism and provide the hard disk and relevant hardware status information including CPU operate temperature, fan speed, hard disk operate temperature, and power supply information.

X. Video/Audio Recording Mode

- Y. The NVR shall provide multiple and flexible recording mode. The user is able to set the full time schedule recording or event trigger recording. When the recorded data is filled in storage space, the NVR is able to set to overwrite the old video record automatically or stop recording
- Z. The NVR shall support IP camera at 1-megapixel video resolution, by model it shall support recording at 30 fps~180 fps, max. 72Mbps
- AA. The NVR shall support individual compression method based on video codec, resolution and bitrate for each IP camera, which varies its recording volume size.
- BB. The NVR shall support up to 6 IP camera audio transmission and recording
- CC. The NVR shall support once schedule recording, recurrence schedule recording and alarm event recording. And it supports advanced schedule recording including working hours, off time or holiday schedule recording
- DD. The NVR shall support pre-event recording and post-event recording under event recording mode. The recording time can be defined in the range of 5 sec~300 sec
- EE. The NVR shall provide one by one event recording mode for each IP camera including the DI/DO triggered event, motion detection, video loss, video recovery, and panic button triggered event.
- FF. The NVR shall provide manual recording mode for user to define the recording time or choose the required time under the real-time display mode
- GG. The NVR shall record without disruption independently while other tasks are active such as live viewing, alarm events query or recording playback

HH. Video Playback and Export Mode

- II. The NVR shall provide multiple video stream playback on the same screen. It shall support up to 16 video playback on different viewers at the same time and support synchronized playback. It shall be able to playback under the full display mode. Once the synchronized audio is active, the audio shall be able to play with the video
- JJ. The NVR shall provide various playback speed including fast forward and

backward at the video speed at 1/4x, 1/2x, 1x, 2x, 4x, 8x, 16x, and 32x, also it shall provide quick button for playing single frame of frame playback mode and available by time at optional 30sec, 1min and 5min. Also it shall provide pause key for pause the playback action and real-time quick button for recover to the live video

- a. The NVR shall support instant playback of maximum 6 IP cameras to recap previous time segment simultaneously.
- KK. The NVR shall provide various video search modes including source by date/time, directly click the time on the time slider, or search video by tagged event in alarm mode with condition including event status, event trigger time, event completed time, priority and rule name.
- LL. The NVR shall provide video analytic functions to find object(s) in user-defined parameter(s) such as size, dimension, time frame, space area, vector direction or virtual perimeter, which can be categorize or identify in a distinguishable form in recording timeline display.
- MM. The NVR shall provide time slider bar with recording status display option recognized by different colors including alarm index, recording, motion activities, alarm recording, manual recording, and no video. User is able to select different color upon personal preference
- NN. The NVR shall provide the looping function available for the user to mark any selected time period on the timeline for looping. The looping is able to active by the optional menu on the time line or quick function button on the panel
- OO. The NVR shall provide snapshot function for the image restore in the spooler area temperately. The selected image is able to export to external storage device according to user needs
- PP. The NVR shall provide digital zoom-in function for playback video. The video can be zoom in/zoom out by mouse wheel and it is able to support 10x (or more) digital magnification
- QQ. The NVR shall provide tagging function on the time line available for user to select the period of time of the video and export to the spooler area by mouse. The selected video is able to export to external storage device according to user needs
- RR. The NVR local or remote software shall support video export from multiple IP cameras. The user can select the desired period of time of the video on the timeline and export to spooler area. The user is able to choose batch of video clip and export to the external storage device.
- SS. The NVR local or remote software shall support exported video in AVI or other encrypted video format. It shall provide option to export include player software (the player shall support any Microsoft Window operation system environment) for user to export together with the player software, option of high speed export mode, option of export clip with audio streaming, and option of video export log (including the export information,

video information and relevant event within the selected time. The exported video shall support USB interfaced external storage device such as USB hard disk, USB flash or USB CD-RW drive, matching the available free disk space automatically.

TT. The NVR shall provide digital signature protection as watermark to protect against tampering or altering original recording.

UU. The NVR shall provide buffer control mechanism to optimize frame images playback control under critical network condition.

VV. Alarm Mode

WW. The NVR shall provide specific alarm mode display with relevant alarm function included. It includes alarm event list, device failure, equipment abnormally, network down, alarm video play, alarm event searching function, virtual fence, missing object and foreign object function

XX. The NVR shall support alarm event video play by click the restored alarm event video. It shall support up to 4 video stream play at the same time

YY. When the alarm video is available in alarm event, the alarm video is able to drag from the alarm event list to the spooler for video export

ZZ. In the alarm mode it shall allow the user to export the alarm event list for statistical data function. The export file shall be able to convert to .csv Excel file format

AAA. The alarm mode shall allow the user to source the specific alarm by various conditions including alarm status, priority, trigger date, completed time and alarm rule name

BBB. The missing object search function shall provide optional relevant parameter including object area define frame, camera selection, video sampling interval, consecutive time hits. It shall provide start /stop searching and stop when found function. When the search is complete, the search results are shown in the list or video clip and available to drag to spooler area for video export

CCC. The foreign object search function shall provide optional relevant parameter including detection area define frame, Max. Object define frame, Min. Object define frame, camera selection, time range, video sampling interval, and consecutive time hits, etc... It shall provide start / stop searching and stop when found function. When the search is complete, the search results are shown in the list or video clip and available to drag to spooler area for video export

DDD. The virtual fence function shall provide user the ability to define specific region of interest, for multiple purpose like trespassing, object counting, perimeter detection, etc.

EEE. Upon alarm events the NVR can send snapshot image as email attachment for recipient to determine onsite cause

FFF. Upon alarm events the NVR can send ASCII text messages to TCP-based event server for a rapid response system

GGG. Event Mode

HHH. The NVR shall provide event mode for system relevant event information listed in the event table. The event categories including System, User, and Camera events

III. In the event mode it shall allow the user to export the result table for statistical data function. The export file shall be able to convert to .csv Excel file format

JJJ. The event can be searched by time and or by categories including system, user, and camera events

KKK. The NVR shall provide records detailing system operation on/off, user's login/logoff, power failure, etc.

LLL. Configuration Mode

MMM. NVR function setting

NNN. The NVR shall provide system relative setting tab for user quickly setting the device and basic parameter. The NVR basic setting shall include Basic Setting, Customized Setting, System Security, Device Tree, Device List, Mail Setting, Hardware Monitor, Multiple Monitor, and License Control setting.

OOO. The NVR shall provide basic setting tab including name of NVR, Network Quality, Network Interface, Acknowledge Alarm Automatically, Mandatory Video Recycling, Synchronize Device Setting, Remote System Control, and PTZ Control Log.

PPP. The NVR shall provide customized setting tab including Display Setting, Spooler Export Setting, Alarm Setting, Miscellaneous Setting, and Language Setting.

QQQ. It shall support multi-languages

RRR. The NVR shall provide system security tab including Password Protection, Access Control, Local system settings, and miscellaneous

SSS. The NVR shall provide Device Tree tab allows user to change the channel order in the device tree

TTT. The NVR shall provide Device List tab for connected device information including camera name, channel ID, camera model, firmware version and IP address

UUU. The NVR shall provide Mail Setting tab for SMTP setting and Alarm Mail Default Setting

VVV. The NVR shall provide Hardware monitor tab including temperature format

- setting, status update interval setting, and Alias Name setting.
- WWW. The NVR shall provide Multiple Monitor tab for different display layouts and resolution setting
- XXX. The NVR shall provide License Control tab for license management. With Built license management button is able to run the software authentication or software upgrade

2.05 Device Setting

- A. The NVR shall provide either “Manual” or “Automatic” method to add the integrated IP camera. It shall provide optional tab allows user to delete, modify the connected IP camera anytime
- B. The NVR shall provide device connection parameter setting option for camera and relative device allows user to change connection parameters including device IP address, communication port and related device connection speed, etc.
- C. The NVR shall support foreign character such as Japanese, Chinese, Korean at least 10 characters as IP camera's description for identification.
- D. The NVR shall provide a search method to find IP device in the system.
- E. The NVR with integrated IP camera shall provide a graphical interface for directly setting the video streaming and image quality adjustment parameters from the camera. It includes: Video streaming: resolution, compression ratio, codec, frame rate, transmission rate, dual codec and sub-channel parameters (the parameters may be adjusted by different IP camera models and brands). Image quality adjustment: brightness, contrast, color saturation degree and other basic parameters (the parameters may be adjusted by different IP camera models and brands)
- F. The NVR shall support both on the embedded motion detection function from camera and the VMD (Generic, ONVIF, Vendor Generic, UDP, Dynacolor, Vivotek, Sony, Mobotix, BYXC, etc.), enabling to adjust the detected area range and sensitivity
- G. The NVR shall provide configuration page for camera audio input settings. It shall include Audio-in active option and audio format setting
- H. The NVR shall provide configuration page for video and audio recording settings. The panel shall include the storage assign, remove storage settings, storage volume information, video recording settings, and audio recording settings
- I. The NVR shall provide configuration page for DI/DO settings of integrated IP camera. It shall include digital input point setting and digital output point setting

- J. The NVR shall support custom CGI command to enhance custom ONVIF approved devices, like auto search, video streaming adjustment, basic configuration, PTZ command and Motion alarm, etc...
- K. The NVR shall support DI/DO and event notification send from ONVIF approved devices.
- L. Digital I/O Device Setting
- M. NVR shall provide operation interface to add external DI/DO device on the device tree. It shall be able to provide device status including video loss, connected, alarm status
- N. The NVR shall provide digital I/O device relative connection parameter setting option allows user to change connection parameters including device model, device ID, device name, internet protocol, device detect interval time, video timeout, device IP address or communication ports and connection speed settings, add/delete DI/DO device setting
- O. POS transaction Data Setting
- P. NVR shall provide operation interface to add external Ethernet to COM device on the device tree. It shall be able to receive foreign device like ATM, POS or any ASCII compatible equipment.
- Q. NVR shall provide transaction message integration capability with associate video recording.
- R. NVR shall provide operation interface to query based on date, time, keyword
- S. NVR shall provide transaction data export as CSV based on query result for further analysis
- T. NVR shall provide transaction data export as PDF based on query result as report document
- U. NVR shall provide transaction data export with Snapshot image
- V. NVR shall provide transaction data export with related Video Recording
- W. NVR shall trigger relay operation based on transaction's keyword predefined by user
- X. System Setting
- Y. Map Setting
- Z. The NVR shall support HTML map import function. It shall be available for all kind of relative IP camera and digital I/O device hyperlink icon for user to access the video or manage the device geographically.
- AA. The map shall provide a layer-style architecture for interaction.
- BB. The device icon on the map shall be able to indicate the device status.

- The device status on the map shall be the same as device tree
- CC. The NVR shall popup or highlight abnormally such as video loss in HTML map
- DD. The HTML map shall provide same operate interface as web browser allows user to attach additional information such as hyperlinks, and hidden information.
- EE. User account setting
- FF. The NVR shall allow system administrator to add, modify, and delete user accounts, the defined user account based on the information including: login name, password, full name, department, location, email, phone number, logon schedule and group.
- GG. Group Account Setting
- HH. The NVR shall provide multiple login priority to protect the system setting from unauthorized user. It shall allow administrator to add multiple group level and defined by group name, priority, group descriptions, group member, system permissions, alarm permissions, and others.
- II. The permission of camera setting shall include export video clip, manual recording, PTZ control, camera PTZ lock, live view and playback
- JJ. The permission of alarm setting including alarm acknowledge and alarm search
- KK. The permission of configuration setting including configure alarm rules, configure cameras, configure HD NVR, configure schedule, and configure storage
- LL. The permission of other setting including enable audio, event search, SDK access and remote system control
- MM. Alarm rule setting
- NN. The NVR shall provide multiple rule for alarm triggered including storage system failure, system hardware failure, video loss and regain video, motion detect, DI/DO trigger, and function button trigger
- OO. The NVR shall support alarm pop-up with relative video stream and map on the display. The pop-up video can be defined as live view or playback. It can support up to 16 (or more) video streaming display simultaneously
- PP. The NVR shall support alarm by email to inform responsible people once the alarm triggered
- QQ. The NVR shall support dialog pop up with preset text message on the display

RR. Schedule configuration

SS. The NVR shall provide schedule configuration with two exclusive option including time schedule and weekly recurrence

TT. The settings of time schedule shall provide option of start time and end time

UU. The settings of weekly recurrence shall be provided by cells in the timetable, it can be defined by hour unit including 7 days a week, 24 hours a day and available to select multiple time frame by mouse

VV. Storage device management

WW. The NVR shall provide storage device management software allows user to add or delete the storage volume. The storage unit shall be able to combine or remove all recognizable hard disk storage space in the operation system. The storage device management software shall provide controllable function including create storage volume, delete storage volume, modify storage volume, active storage volume, disable storage volume, rename storage volume, and detach a hard disk (from storage volume)

XX. The storage device management software shall provide user log-in password protection mechanism. The user permission is defined by user group to avoid non-authorized user to use the software

YY. The NVR by model shall be able to create max 4 sets storage units

ZZ. When create a new storage volume, the storage device management software shall provide storage volume supported by hard disk or index. The storage volume supported by hard disk shall provide options including storage volume name settings, available hard disk assign, add to the list, and create storage volume. The built storage volume shall be able to add to the list by function button and add to the established storage volume list by batch. The storage volume by folder shall include storage volume name settings, repository path settings, and folder size setting. The minimum storage size shall not be less than 4GB

AAA. The storage device management software shall be able to show the real time storage device status including storage volume normal status, storage volume failure status, storage volume disable status, hard driver normal status, hard drive failure status, hard drive disable or damage status

BBB. The storage device management software shall provide add or remove a hard disk from existing storage volume when unused hard disk in the hardware system

CCC. The storage device management software shall provide method to recover or manage failure hard disk in the storage volume

DDD. The storage device management shall provide hard disk repair method or management for failure hard disk

EEE. The system shall support auto recovery when volume damages in case of the power shut down at any exception case

FFF. The recording shouldn't be interrupted if user modifies volume related setting or adds new HDD drive into existed volume

GGG. Joystick keyboard (Vectis iX KP)

HHH. The NVR shall support dedicated joystick keyboard to operate monitor selection, viewer selection, IP camera video stream selection, stored display pattern selection, start/stop tour, video playback, manual recording, PTZ camera PTZ function control and PTZ save/call out present function.

III. The joystick in keyboard shall support PTZ camera control including left/right rotation, up/down swing, zoom in/zoom out function

JJJ. The NVR shall provide configuration interface for joystick connect IP address of monitor and IP camera by sequence

KKK. Remote Monitor

LLL. Remote access client software (Vectis iX96 RAS Client)

MMM. The NVR shall provide free client software that can be installed and run on the regular PC for remote access. It shall provide function including live video viewing, video playback, video export, PTZ camera control and alarm mode management

NNN. The operation method for available control function from the remote access client software shall be the same as local NVR software

OOO. The remote access client software shall support simultaneously log-in 3 NVR or manage up to 128 video streams

PPP. Through remote TCP/IP network connection shall provide operator the ability to use human interface peripherals such as keyboard and mouse to perform zoom in/out, full screen display, and adapting the use of all available view patterns, which can be arranged a tour-like display using time interval to cover larger surveillance area.

QQQ. Web browser remote client software (Web Client)

RRR. The NVR shall provide free web browser client software for normal PC user for remote access. It shall provide function including live video viewing, video playback, and PTZ camera control

SSS. The web browser client software shall provide 1x1, 2x2, 3x3 display patterns and it shall support up to 6 video stream channel monitoring at

the same time

TTT. Intelligent mobile remote client software (iPhone / Android NVR Viewer)

UUU. The NVR shall provide free intelligent mobile remote client software for remote access. It shall provide function including live video viewing, video playback, and PTZ camera control

VVV. The intelligent mobile client software shall provide 1x1, 2x1, 3, 2x2, 3x2, 4x1 display patterns and it shall support up to 8 video stream channel monitoring at the same time

WWW. Intelligent tablet remote client software (iPAD / Android NVR Viewer)

XXX. The NVR shall provide free intelligent tablet remote client software for remote access. It shall provide function including live video viewing, video playback, and PTZ camera control

YYY. The intelligent mobile client software shall provide 1x1, 2x1, 2x2, 3x2, 4x2, 3x3, 4x3, 4x4, 5x4 display patterns and it shall support up to 20 video stream channel monitoring at the same time

2.06 NVR SPECIFICATIONS

Communication Protocols	HTTP, RTP, RTSP, TFTP, FTP, TCP, UDP
Video Resolution	Max. 1920 x 1200 @ 60Hz
Playback/Record (ips)	180/180 FPS or 72Mbit/s
Interface Connector	4x USB 2.0 (Front 2x / Rear 2x) & 2 x USB 3.0 2x RJ45 Gigabit LAN port 1x DVI-I VGA port 1x HDMI 2x Front / 2x Rear USB 2.0 ports 2x USB 3.0 ports 1x S/PDIF out 1x RS232 1x RS232/RS422/RS485 1x Line in port 1x Line out port 1x MIC in port 1x Clear CMOS button 1x Kensington lock
System Hard Disk	Disk On Module (DOM)

Storage Hard Disk	SATA-II 1 to 2 HDDs 1TB each HDD
Video Export Device	USB hard disk drive, CD-RW drive or flash drive
Operating Temperature	41°F to 104°F (5°C to 40°C)
Operating Humidity	0% to 90% (Non-Condensing)
Power Adapter	90W Power Adapter Input: 100- 240V AC Output: 19V 4.47A DC

2.07 REGULATORY COMPLIANCE

- A. CE Product EMC:
 - a. EN 61000-6-3: 2007 Emission:
 - i. EN55022, Cl. B
 - b. EN 50130-4 Immunity
- B. CE Product Safety:
 - EN 60950-1
- C. International Certifications & Approvals:
 - CE
 - RCM
 - EAC
- D. National Certifications & Approvals:
 - “UVV-Kassen”, German BGV-approval
 - Sparkasse Finanzinformatik
 - Fiducia Informatik

Part 3 – EXECUTION

2.08 Installation

- A. The Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.

The Recorder shall be Network Video Recorder manufactured by Vanderbilt International (IRE) Ltd. or equivalent.