PART 2 – PRODUCTS

2.01 GENERAL

A. All equipment and materials used shall be standard components that are regularly manufactured and utilized in the manufacturer's system.

B. All equipment and components shall have been thoroughly tested and proven in actual use.

C. All equipment and components used shall be RoHS compliant and WEEE certified.

2.02 SYSTEM SPECIFICATIONS

A. The digital video server (DVS) shall be compatible with the following video management software applications:
   a. Nextiva Video Management Software
   b. Nextiva SConfigurator

B. The DVS shall be compatible with the following hardware-based digital video decoders:
   a. Verint Nextiva S1801e-R, for displaying up to 4 video tiles on traditional CCTV monitors, at up to D1, 30 frames per second video resolution
   b. Verint Nextiva S1801e-R-HD, for displaying up to 6 video tiles on high-definition monitors, at up to D1, 30 frames per second video resolution in Standard Definition (SD) mode and 1080i (1920x1080), 60 fields per second video resolution in High Definition (HD) mode.
   c. Verint Nextiva High-Definition receiver (HDR) 1800, and for displaying up to 18 video tiles, at up to 4CIF, 30 frames per second video resolution in Standard Definition (SD) mode and 1080p (1920x1080), 30 frames per second video resolution in High Definition (HD) mode.

2.03 FUNCTIONAL SPECIFICATIONS

A. The digital video server (DVS) shall be a single-input (1) video server using H.264 (MPEG-4 Part 10/AVC) Main Profile and MJPEG compressions technology.

B. The DVS shall be capable of streaming D1 video images from 1 camera input at 30 frames per second under all conditions of motion in the image.

C. The DVS shall be a video transmitter compatible with both PAL and NTSC cameras.

D. The DVS shall support NTSC/PAL signal format with a programmable resolution from CIF (352 x 240 pixels for NTSC; 352 x 288 pixels for PAL) to D1 format (720 x 480 pixels for NTSC; 720 x 576 pixels for PAL).

E. The DVS shall offer motion detection capabilities.

F. The DVS shall offer quadruple streaming capabilities; 3 H.264 streams and 1 MJPEG stream to allow simultaneous viewing and recording of live video at selected frame rates and/or quality from the Nextiva Video Management and storage software.

G. The DVS shall provide simultaneous triple (3) H.264 (MPEG-4 Part 10/AVC) encoded video streams at a performance level of no less than D1, 30 frames per second on all three H.264 streams; and a single MJPEG stream at a performance level of no less than D1, 30 frames per second simultaneously.

H. The DVS shall support:
    a. Constant bit rate (CBR) and Constant frame rate (CFR) H.264 compression. The bit rate mode shall be individually configured for each encoder.
    b. Constant bit rate (CBR), Constant frame rate (CFR) and Constant storage rate (CSR) MPEG-4 compression. The bit rate mode shall be individually configured for each encoder.

I. The DVS shall generate, during normal operation, an event when the coaxial cable used between the unit and a camera is faulty or tampered causing loss of the video signal and/or if the camera is not connected.

J. The DVS shall offer an intuitive Web Browser Interface to perform configuration and monitoring activities.
    a. The Web Browser Interface shall be localized to support various languages.
    b. A live video viewing functionality shall be part of the Web Browser Interface.
    c. A video retrieving functionality shall be part of the Web Browser Interface, providing a logic way to present, access, and retrieve recorded video from SDHC MicroSD card.

K. The DVS shall be configurable remotely via the network, either via the Nextiva Video Management software, the SConfigurator software or the Web Browser Interface.

L. The DVS firmware, including the video codec, shall be upgradeable remotely via the network, either via the Nextiva Video Management software or the SConfigurator software, and locally via the serial port.

M. The DVS shall not have a Windows operating system (OS) but instead operate from a real-time, Linux embedded OS.

N. The DVS shall possess an internal watchdog to detect and recover from the unlikely occurrence of system lockup.

O. The DVS shall meet or exceed the following design and performance specifications:
    a. The pan-tilt-zoom control latency shall be less than 115 msec, excluding network transmission latency.
    b. The maximum bandwidth used per video input by the DVS module shall be programmable from 30kbps to 6Mbps.
    c. The average compressed image file size generated by the DVS recorder shall be:
        - At CIF resolution, 1.25 KB to 2.5 KB depending on compression and frame rate settings.
        - At D1 resolution, 5 KB to 10 KB depending on compression and frame rate settings.
    d. The DVS shall have an MTBF of at least 150,000 hours (for PoE model, at least 130,000 hours) and shall include:

- Electros Static Discharge (ESD) protection on all input and output signals.

P. To improve reliability, the DVS shall be powered by an external power supply.

2.04 INTERFACE SPECIFICATIONS

A. The video input shall consist of 1 composite NTSC or PAL (1 Vpp into 75 ohms) video signal through female BNC connector.

B. One auto-sensing 10/100 Base-T connector (RJ45) shall be part of the DVS.

C. The DVS shall operate over a local area network (LAN), wide area network (WAN), or the Internet, using the standard Ethernet 10/100 Base-T connection. The unit shall include support for DHCP and APIPA automatic IP configuration protocols.

D. The DVS shall transmit or receive video using the RTP UDP/IP unicast, RTPUDP/IP multicast or TCP/IP communication protocol.

E. The DVS shall support the following IP protocols: RTP/IP, UDP/IP, TCP/IP, multicast IP, DNS, NTP, HTTP, HTTPS and DHCP client.

F. The DVS shall support Real Time Streaming Protocol (RTSP) to stream real-time video data in H.264 and MPEG-4 to third party media players.

G. The DVS shall comply with IEEE 802.1x protocol to protect DVS physical ports and avoid any illegal connection through the network cabling. Two types of EAP methods shall be supported to perform authentication:
    a. EAP-PEAP
    b. EAP-TLS

H. The DVS shall support SNMP v1/v2c/v3 (MIB-II) protocol both generic and Verint specific parameters including the following traps:
    a. Video Signal Loss
    b. Dry Input State changes
    c. Camera Tampering Out of Focus State changes

I. The DVS shall support SNMP configuration either through the Web Browser Interface (single mode) or SConfigurator (single and batch modes).

J. The DVS shall comply with the VSIP Open Technical Framework for video services over IP, an open standard definition freely published by Verint Systems, Inc.

K. The DVS shall transmit all command and control messages using the TCP/IP protocol and use cryptographic keys based on the SSL V.3.0 or TLS v 1.0 protocol to prevent eavesdropping, tampering, or message forgery.

L. The DVS shall support an asynchronous serial port that can be programmed for data rates up to 230 kbps and can be set to RS-232, RS-422 or RS-485 signal levels. The RS-485 mode shall support 2-wire and 4-wire interfaces. This port shall be used as a generic serial port to communicate with other products such as access control and intrusion detection systems.

M. The RS-232/RS-422/485 port, digital input, and digital output shall use an industrial-type pluggable screw-terminal strip block.

N. The DVS shall support 2 (input) dry alarm contacts and 1 (output) relay (48 AC/DC at 100 mA).

O. The DVS shall support bi-directional audio using a set of standard 1/8 inch (3.5mm) stereo jacks (1 audio input and 1 audio output). The audio input shall support signals from microphone to line-level with signal levels of -46 to -3dBV into 30Kohm. The audio output shall be able to drive line-level inputs as well as speakers with impedances as low as 16 ohms (-46 to -3dBV). The audio connectors shall support push-to-talk (PTT) and push-to-listen (PTL) dry-contact inputs.

P. The DVS shall support 1MicroSD card slot for storage on the edge - a failover mechanism ensuring video is recorded, can be retrieved and stored on a local drive, in case connection with Nextiva Video Management Software is lost - and for maintenance purpose.
    a. SDHS MicroSD card, up to 32 GB, shall be supported.

Q. The DVS shall be optionally available as a PoE IEEE 802.3af class 3 device.
    a. The PoE model shall provide an output power of 5 watts.

2.05 PHYSICAL SPECIFICATIONS

A. The DVS shall be rack mountable to a 1U standard 19 inch rack space.

B. The DVS shall be enclosed in a compact and durable metal enclosure with size not exceeding 4.2L X 3.5W X 1.7H inches (106L x 90W x 42H mm).

C. The DVS weight shall be 9.2 oz (260 g) or less.

D. The DVS shall operate from an external 12V DC power supply via an industrial pluggable screw-terminal block.

E. The DVS shall consume less than 5 watts.

2.06 ENVIRONMENTAL SPECIFICATIONS

A. The DVS shall be specified for operation in temperatures from 0°C to 60°C (32°F to 140°F) without forced air cooling and humidity from 0 to 95% non condensing at 60°C (140°F).
    a. The PoE optional model shall operate from 0°C to 55°C (32°F to 131°F) without forced air cooling and humidity from 0 to 95% non condensing at 55°C (131°F).

2.07 CERTIFICATIONS

A. The DVS shall meet the following EMI/EMC certifications and regulations:
    a. USA: FCC part 15 subpart B class A
    b. Canada: ICES03 class A
    c. Europe: CD marking (EN550222, EN55024)

B. The DVS shall meet the following safety certifications and regulations:
    a. UL, ULC, CE LVD directive (EN60950-1)

C. The DVS shall meet the ROHS and WEEE regulations.

D. The power supply used to power the DVS device shall be energy efficiency level V qualified and shall be supplied with the DVS.

2.08 WARRANTY AND SUPPORT

A. All systems and components shall be provided with the availability of a toll-free (US and Canada) Technical Support number from the manufacturer. This shall allow for technical assistance and break-fix support for the dealer/integrator/installer or the end user at no charge for the stated warranty period.

B. Each dealer/integrator/installer and end user shall have access to a password-protected partner portal for Web-based technical assistance on a 24-hour basis. This site will enable downloads of software updates, manuals, review of frequently asked questions.

C. All systems and components shall have a five to seven business day target turnaround for repair service. This target is excluding all customer pending tasks and shipping time and is subject to change due to parts availability and volume. The repair and parts shipping shall be guaranteed by the manufacturer.

D. Any device that fails within 60 days of shipping is considered a DOA (Dead on Arrival) and will be advance replaced at the manufacturer's cost.

E. The DVS shall have a 3-year warranty (parts and labor) for Americas.

2.09 VERINT MODEL NUMBERS

A. S1801e: Single-port Video Encoder featuring H.264 technology with 12V DC universal power supply

B. S1801e-PoE: Single-port Video Encoder featuring H.264 technology with PoE support

C. S1802e: Dual-port Video Encoder featuring H.264 technology with 12V DC universal power supply

D. S1801e-R: Single-port Video decoder featuring H.264 technology with 12V DC universal power supply

E. S1801e-R-HD: Single-port Video Encoder featuring H.264 technology with HDMI connector and 12V DC universal power supply