

**Bosch VIDOS-NVR Network Video Recorder System**

ARCHITECTURAL AND ENGINEERING SPECIFICATION

Section 282313 - Closed Circuit Video Surveillance Systems

**PART 1 - General**

- A. All equipment and materials 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 shall be CE-marked, FCC, and TUV marked.

**PART 2 - Products**

**2.01 Manufacturer**

- A. Bosch Security Systems  
850 Greenfield Road  
Lancaster, PA 17601  
Tel (800) 326-3270  
Fax (717) 735-6560
- B. The product specified shall be manufactured by a firm whose quality system is in compliance with the I.S./ISO 9001/EN 29001, QUALITY SYSTEM.

**2.02 Bosch VIDOS-NVR Network Video Recorder System General Description**

- A. The system specified shall provide a long-term storage and retrieval solution for video and audio via an IP network. The product shall be the Bosch VIDOS-NVR Network Video Recorder System and consist of three main components: 1) management software 2) a server platform and 3) RAID 5 storage. The product shall function as a digital network recorder to store MPEG-2 and MPEG-4 video and audio while also providing the capability to replay and backup the recorded video. The system consists of a server PC preloaded and configured with VIDOS-NVR Network Video Recorder software and up to 12 Terabytes of external RAID storage. The system supports MPEG-2 and MPEG-4 sources simultaneously and is capable of recording up to 64 different video streams simultaneously. The product provides an integrated Automatic Network Replenishment (ANR) technology that ensures complete restoration of the recorded data in the event of network failure. The VIDOS-NVR Network Video Recorder System is designed to be operated with the Bosch VIDOS Video Management software to provide access to the complete range of VIDOS-NVR functions. Limited operation is also available using a web browser.

**2.03 VIDOS-NVR System Requirements**

- A. The product specified shall be the Bosch VIDOS-NVR Network Video Recorder System that functions as a digital network recorder to store MPEG-2 and MPEG-4 video and audio while also providing the capability to replay and backup the recorded video. The product supports MPEG-2 and MPEG-4 video sources simultaneously and is capable of recording up to 64 different video streams simultaneously.

- B. The system consists of the Bosch VIDOS-NVR Network Video Recorder software preloaded and preconfigured into a Bosch 1 rack high server PC designed with dual-redundant power supplies and is available with up to 12.8 Terabytes of external RAID storage. The RAID storage units shall be designed with hot-swappable drives and dual redundant power supplies.
- C. The VIDOS-NVR System shall support triplex applications where recording, replay, and backup functions may be executed simultaneously.
- D. The VIDOS-NVR shall operate with the Bosch VIDOS Video Management software. VIDOS software provides access to the complete range of functions in the VIDOS-NVR network video recorder software; however, limited operation shall also be available via a web browser.
- E. The VIDOS-NVR shall provide both a Continuous Record mode for uninterrupted recording and an Event Recording mode that starts recording only via an alarm condition from a Bosch remote video server. Alarms from a remote Bosch video server may be generated by external alarm contact inputs, motion detection, video loss, or low video contrast of the input camera video.
- F. The VIDOS-NVR shall display a replay page that provides time and date filters for selecting recordings for replay. Replay of recordings is controlled using simple "VCR like" buttons. Recordings may be saved as single image JPEG snapshots or as MPEG format video clips.
- G. The VIDOS-NVR shall provide a schedule function so that recording times may be programmed for specific times of the day and week.
- H. The VIDOS-NVR shall provide a Status page that displays information regarding the current status of the VIDOS-NVR, including remaining hard drive capacity and any active MPEG-2 or MPEG-4 recordings in addition to a list of all recording tasks.
- I. The VIDOS-NVR software shall provide two authorization levels:
  1. A Service level that allows access to all VIDO-NVR functions
  2. A User level that restricts access to the status page and allows replaying of the stored recordings.
- J. The VIDOS NVR shall provide direct access to the recorded video by allowing access from any location using a web browser or VIDOS software manufactured by Bosch Security Systems, Inc.
- K. The VIDOS-NVR shall support all network video server devices manufactured and recommended by Bosch Security Systems, Inc.
- L. The VIDOS-NVR shall provide a network time server function to synchronize the video servers and recordings.

**2.04 Automatic Network Replenishment**

- A. The VIDOS-NVR shall include an integrated Automatic Network Replenishment (ANR) technology that protects the system against data loss due to network failure. The NVR automatically restores the gaps in lost video on the network recorder. Once network operation is restored, the NVR software retrieves video that has been stored on the local hard drives or Compact Flash memory of the manufacturer recommended remote network video servers and copies the data into the gaps of the network recorder.

- B. The system shall be designed whereby current video/audio will still continue to be recorded while the ANR function is replenishing the network video recording gaps.

**2.05 Alarm Recording**

- A. The VIDOS-NVR shall be capable of recording both pre-alarm and post alarm video.
- B. An Event Recording mode shall start recording only via an alarm condition from a Bosch remote video server. Alarms from a Bosch specified remote video server may be generated by external alarm contact inputs, motion detection, video loss, or low video contrast of the input camera video.

**2.06 RAID Storage Requirements**

- A. The VIDOS-NVR System shall operate with up to 12.8 Terabytes of external, RAID storage capacity.
- B. The RAID storage units shall be available in 960GB, 1.6TB, 3TB, 4TB, and 6.4TB units. The server PC is designed with two SCSI interface ports that support up to 12.8TB of storage.
- C. RAID units shall be designed with hot-swappable disk drives and dual-redundant power supplies.

The product specified shall be the VIDOS-NVR Network Video Recorder Software Model NVR Series as manufactured by Bosch Security Systems.