



Virtual Matrix Controller

- Enhance existing or new ViconNet system to simulate crosspoint matrix functionality
- Displays any ViconNet camera on any monitor over the network
- Utilizes KRX-3 Video Decoder to decode network video to analog
- Displays video on any composite, S-Video or VGA monitor
- Offers simple and intuitive graphical user interface to control the Virtual Matrix
- Fully compatible with Vicon keypads for camera selection and control
- Offers alarm management and monitor titling functionality
- Supports wall designs typical of large-scale security command centers
- Works in conjunction with any other ViconNet viewing software (version 4 and higher)

The ViconNet® Virtual Matrix Controller (VMC) changes the way video can be controlled on an IP video or DVR system. Combined with the KRX-3 Video Decoder, the ViconNet system can be transformed to simulate true crosspoint matrix functionality. The Virtual Matrix Controller is software-based and runs on a preconfigured PC-based controller, tower or rack-mount versions. See Table 1 for model numbers.

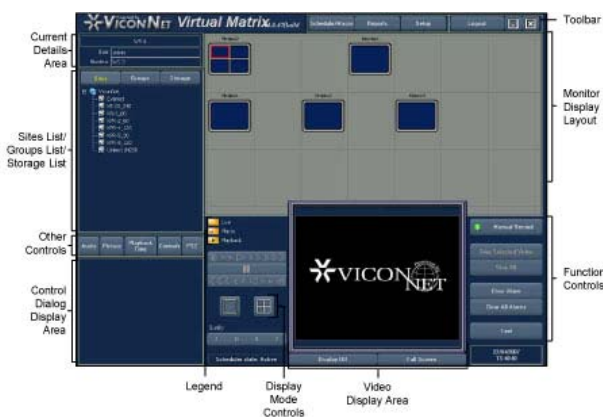
The Virtual Matrix Controller, along with the KRX-3, takes video from Kollector Digital Recorders or IP cameras/servers from the network and outputs analog video to monitors. The

KRX-3 Video Decoder handles the translation from ViconNet digital video to analog composite, VGA or S-video. In this way, ViconNet can integrate into an existing security infrastructure. The ViconNet Virtual Matrix can be controlled from the VMC GUI or via a conventional keypad. (By giving the cameras a unique numerical ID, they can be called up by the keypad.) The functionality and setup screens of the Virtual Matrix match ViconNet version 4.

The VMC can work independently or in conjunction with any other ViconNet viewing software. The user can choose the display option that works best for the particular installation. For example, the control center can use the VMC with its monitor wall while the system administrator can utilize a PC with VN1000 software viewing the same cameras.

When a camera is selected for viewing, it displays on the selected monitor and a spot view displays on the PC, if this feature is turned on. The monitors are graphically depicted on the PC and the selected monitor is highlighted in red and spotlighted. The PTZ function can be used on the preview display. Video can be played back on a selected monitor. Playback video is selected by date and time from a displayed calendar or by Quick Playback. Titles display, if they are enabled, and text messages can be sent to the monitor for display. Certain monitors can be dedicated for alarms or alarms can display on all monitors. When an alarm occurs, the word ALARM displays and the alarm video is played; the alarm must be manually acknowledged.

The Main Window contains the necessary controls to operate and set up the unit. The login window requires a preconfigured User Name and Password for access.



Sample Playback Virtual Matrix Screen

Vicon requires the use of uninterruptible power supply systems (UPS) to prevent voltage fluctuations that can affect operation, cause video loss and damage to the equipment. Failure to comply voids the unit's warranty.

Vicon Product Facts		Model No: Virtual Matrix Controller	Product Code: See Table 1	SEC: 1	SPEC: V177	REV: 707
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Vicon part number 8009-7177-01-00
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Product specifications subject to change without notice.

Model	Product Code	Description
VN-VMC-V4	9141-00	ViconNet Virtual Matrix Controller unit; PC preloaded with Virtual Matrix software; can handle up to 2 keypads and up to 32 concurrent videostreams; tower case version
VN-VMC-V4-R	9141-01	ViconNet Virtual Matrix Controller unit; PC preloaded with Virtual Matrix software; can handle up to 2 keypads and up to 32 concurrent videostreams; rack mount version
VN-VM-SW	9141-10	ViconNet Virtual Matrix Software; for installation onto a PC; can handle up to 2 keypads and up to 32 concurrent videostreams. Single license.

Table 1: Models, Product Codes and Descriptions

ViconNet has vast features to view, record and playback video including:

Site Devices: Cameras, microphones and sensor devices can be remotely configured.

Users and Groups: Users can be configured to access the system with custom privileges.

Quick Playback: Allows instantaneous playback of any currently recording, live-view window of a local camera. When that screen is selected, there are 2 options; display of the camera information or selection of 7 playback intervals from 10 seconds to 30 minutes. When selected, the playback video is displayed in an adjacent window and the recording for all cameras is unaffected.

Play from Time: Allows calling up playback images directly from the Main Window based on time of occurrence.

Macro Programming: Predetermined routines to display and record cameras and activate devices at specific times or following specific events.

Scheduling, Display and Alarm Notification: Establishing routines for recording and operating devices.

Sites and Device List provides a physical list of all known current and connected cameras, PTZ cameras, sensors, relays, and microphones in the system.

Groups List contain logical camera Groups can be created. Cameras PTZ cameras, sensors, relays, and microphones can be grouped and individually named for flexibility and easy access.

Current Details Area provides a set of fields used to show the current local machine name, user and Nucleus name. These devices are represented by graphical symbols. Components in the Sites and Device List are selectable and configurable.

Control Dialog Display Area provides a space to work in conjunction with the Other Controls Area. When one of the Other Controls is selected, the corresponding button palette appears in this area. The Other Controls are Playback, PTZ, Controls, Audio, Control and Picture.

Toolbar provides access to all major functionality of the system. The Schedule/Macro, Reports, Setup, Logout and Shutdown buttons are accessible in this area. The Schedule/Macro button allows the running of preconfigured

combinations of cameras, microphones, sensors and PTZ programmed routines. The Reports button allows the viewing of status reports. The Setup button allows configuration of the local unit, authorizations, sites, authentication, utilities, schedules and macros. The Shutdown button allows full shutdown of the unit without closing the software.

Display Mode Controls Area provides a palette of buttons that provides access to functionality according to the currently selected control in the Other Controls area.

Function Controls Area provides a palette of controls to manually record selected video, clear alarms, control text and set the video quality.

Other Controls Area provides a palette of buttons that only become active when a valid device is selected from the Sites and Device List. When active, the selection of these buttons causes the Control Dialog Display Area to display additional control information. The Other Controls are Playback, PTZ controls, Controls, Audio and Picture.

Playback Controls Area provides a palette of buttons used to playback video previously selected in the Navigator Window. The control buttons include Play, Forward, 7-Speed Fast Forward, Backward, 7-Speed Fast Rewind, Stop/Pause, Previous Frame and Next Frame.

Monitor Display Layout Area is a graphical representation of the analog monitors controlled by the VMC. It can be configured to any specific layout. The selected monitor's video is spotlighted and displayed in the spot Video Display Area. The video on the monitors is designated as Live, Playback or Macro and video quality can be set to be displayed.

Display Mode Controls Area provides buttons to view a single, quad or full screen display.

There are several high-level configuration features allowing custom setup of the system. The System Configuration feature is comprised of a Main Settings Menu. This menu allows setup of the sites, macros, CFN display, authorization, alarms, Autologin, scheduling, Devices group sets, LTU, Registration and priorities.

Macro configuration can be defined for recorded or displayed/played cameras, microphones and sensors, command duration, recording destination, device ID, picture quality, refresh mode, related devices and alarm activation.

Product Specification

Authorization rights setup can be performed using the Site Authorization screen. Group rights are configured by specific site. Rights provide authority to perform all system functions. Alarm response is performed using system macros. Alarms can be programmed to announce under specific schedules. Alarms can be triggered by physical sensors, detected video loss, detected video motion, or messages sent over the network.

ASSOCIATED EQUIPMENT AND ACCESSORIES

ViconNet VN1000V4 Master Workstation Software, Product Code 9162: Software CD for a PC for use with Kollector Elite and Pro series recorders; registration required for use. Product Specification V113.

ViconNet VN-NVR Master Workstation, Product Code varies by model: PC preloaded with VN1000V4 Master Control Software for use with Kollector Elite and Pro series recorders; registration required for use. Product Specification V113.

Kollector Elite Digital Video Recorder, Product Code varies by model: 16-channel networked digital video recorder for use with Kollector Pro Series recorders and ViconNet VN-NVR systems. Product Specification V112.

Model NETSWITCH-8 Network Switch, Product Code 7787: 8 port, 10/100 autosensing network switch, stackable.

NETSWITCH-16 Network Switch, Product Code 8495: 16-port, 10/100 autosensing network switch, stackable. Product Specification V161.

NETSWITCH-24POE Network Switch, Product Code 8495-20: 16-port, 10/100/1000 autosensing network switch with a choice of 24 VAC or PoE power source, stackable. Product Specification V162-20.

NETSWITCH-24 Network Switch, Product Code 8495-10: 16-port, 10/100 autosensing network switch, stackable. Product Specification V162.

Kollector Pro Digital Video Recorder, Product Code varies by model: 16-channel local-video networked digital video recorder for use with Kollector Elite series recorders and ViconNet VN1000V4/VN-NVR Workstations. Product Specification V128.

Model KTX-4 Digital Video Encoder, Product Code 8959-55: 4-channel video server that converts analog video inputs to digital and send this video over the network to the ViconNet system. Product Specification V172-11.

Model KRX-3 Video Decoder, Product Code 9119-00: 3-channel video decoder that translates digital video data from ViconNet into analog output. Product Specification V184.

I-ONYX Series of IP Cameras, Product Code varies by model: Vicon offers a line of IP cameras, including a high-resolution model, a day/night model and a model with Wide Dynamic Range capability. Refer to Product Specification V181-00.

V725-UPS Uninterruptible Power Supply, Product Code 8298-10: 725 VA unit with DB9 (RS-232) and USB ports; 120 VAC input/output. Product Specification V147.

VIRTUAL MATRIX CONTROLLER

Motherboard/

Power Supply: ATX motherboard with 300 W power supply.

Operating System: Windows XP Embedded.

CPU: Pentium IV, 3.0 GHz.

RAM Memory: 1 GB DDR-SDRAM DIMM.

Hard Drive: 80 GB min.

Pointing Device: PS-2 or USB wheel mouse.

Keyboard: PS-2 or USB, 101 keys.

Network: 1 Gbps onboard.

VGA Adapter: Video adapter with onboard 128 MB RAM (1028x768 pixels, 32-bit color).

Cooling: Internal fan, 45 cfm flow rate.

SOFTWARE FEATURES

Main Window

Screen: A display area containing all necessary controls to operate and setup the system, including monitor layout.

Sites and Device

List: A physical list of all known Site areas and connected cameras and microphones. Allows the set up of site groups.

Quick Playback: Start video playback of live camera with a few clicks.

Play from Time: Call up images from the database from Main Screen based on time of occurrence.

Control Dialog

Display Area: A space that provides a variety of additional functions based on the selected tool.

Toolbar: An area providing access to all major functionality of the system.

Display Mode

Controls Area: A palette of buttons to set the video view mode for single, quad or full screen.

Other Controls

Area: A palette of buttons that activate when a valid device is selected from the Sites and Device List.

Function Control

Area: A palette of controls used to manually record, set the picture quality (resolution), clear alarms and stop video.

System

Configuration: A Main Settings Menu used for setup of devices, authorization, and all other system functions.

Site Configuration: Allows setup of all IP address information and a Nucleus and Backup Nucleus.

Macro

Configuration: Macros can be defined for recording or displaying/playing cameras, microphones and related devices (sensors) as well as sending alarm notification through email or SMS.

Device

Configuration: Devices can be configured for system recognition and operation.

Authorization

Rights Setup: Group rights can be configured by specific site. Rights provide authority to perform all system functions.

Log Reporting: Continuously running activity log.

Schedule Function: System can be set to record and display a video "tour" of multiple channels.

Alarm

Configuration: Alarms can be programmed to annunciate under special conditions.

Storage

Database Utilities: This utility allows setup and usage of detected hard disks locally.

Authentication: Video authentication is established by site and affects display of destination video.

Central Failure

Notification (CFN): Sends notifications indicating certain applications have failed.

PC REQUIREMENTS (when purchasing software only)

Operating System: Windows XP Professional.

CPU: Pentium IV, 3 GHz minimum.

RAM Memory: 1 GB minimum.

Hard Drive: 3 GB of free space required.

Mouse: PS-2 or USB type required.

Network: 1 Gbps required for network connection.

VGA Adapter: Video adapter with onboard 128 MB RAM. Recommended settings are 1024 x 768 pixels and 32-bit color.

Product Specification

MECHANICAL

Case Style: Standard mid-height tower or rack-mount.

Dimensions: Tower
Height: 2.5 in. (63.5 mm).
Width: 12 in. (305 mm).
Depth: 10.75 in. (273 mm).
Rack Mount
Height: 1.25 in. (32 mm).
Width: 19 in. (483 mm).
Depth: 15 in. (381 mm), excluding connectors and handles.

Weight: Tower: Approx. 7.75 lb (3.5 kg).
Rack Mount: 12.8 lb (5.8 kg).

Construction: Steel and plastic.

Color: Black.

Shipping

Dimensions: Tower
Dimensions TBD.

Rack Mount
Dimensions TBD.

Shipping Weight: Tower: 40 lb. (18 kg).
Rack Mount: TBD

Shipping Volume: Tower: TBD
Rack Mount: TBD



Rack Mount Model

ENVIRONMENTAL

Operating Temperature Range: 32 to 104° F (0 to 40° C).

Operating Humidity Range: 0 to 95% relative, non-condensing.

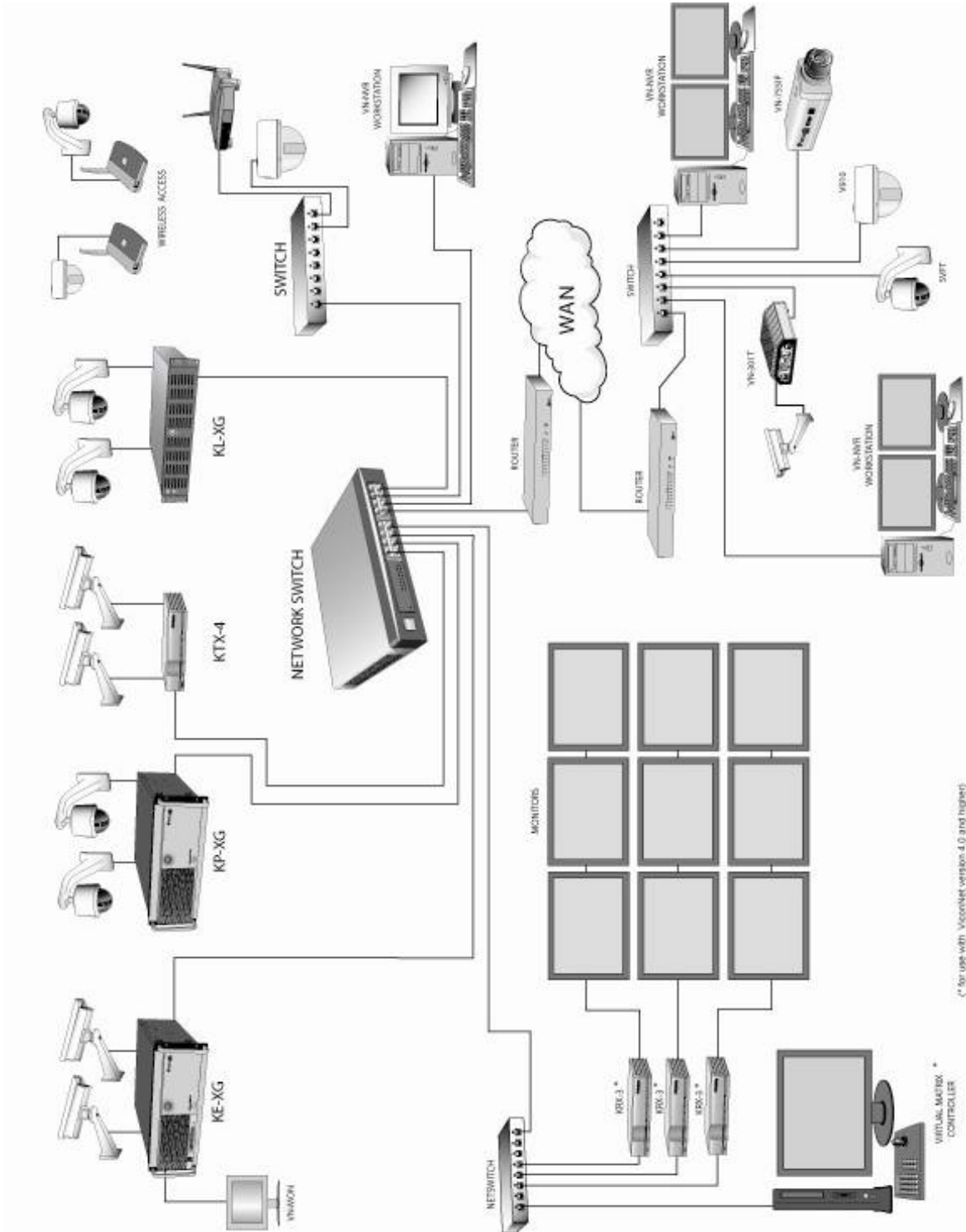
Storage Temperature Range: -4 to 158° F (-20 to 70° C).

Storage Humidity Range: 0 to 95% relative, non-condensing.



Tower Model

Product Specification



* for use with Viconnet version 4.0 and higher