VICONNET Powered by

Virtual Matrix Controller

- **Enhance existing or new ViconNet system to simulate crosspoint matrix functionality**
- **Displays any ViconNet camera on any monitor over the network**
- **Graphical Map feature supports realistic camera location**
- **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)**

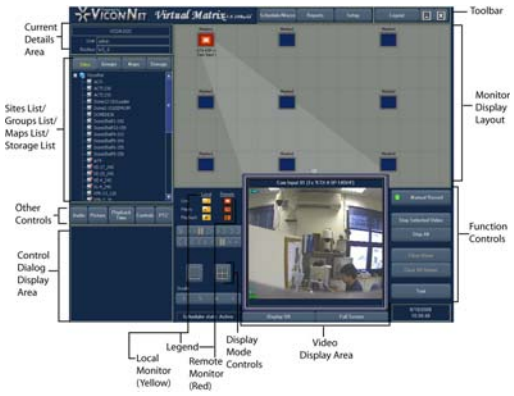
The ViconNet® Virtual Matrix Controller (VMC) changes the way video can be controlled on an IP video or DVR system. Combined with the KRX-3 Video Decoder, the ViconNet system can be transformed to simulate true crosspoint matrix functionality. The Virtual Matrix Controller is software-based and runs on a preconfigured PC-based controller, mini-desktop 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 5.

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 VN-WS-SW/VN-NVR-SW 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.

ViconNet's Main Window provides a multi-channel display area containing up to 16 connected cameras and microphones. An optional map can be added with actual camera locations, making camera selection simple. The Main Window contains the necessary controls to operate and setup the system. 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 part number 8009-7177-02-00
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Model	Product Code	Description
VN-VMC-V5	9141-20	ViconNet Virtual Matrix Controller unit; PC preloaded with Virtual Matrix software; can handle up to 2 keypads and up to 32 concurrent videostreams; mini-desktop version
VN-VMC-V5-R	9141-21	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-V5	9141-30	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 VMC has vast features to view, record and playback video including:

Toolbar provides access to all major functionality of the system. The Schedule/Macro, Reports, Setup, Minimize and Close buttons are accessible in this area.

Current Details Area displays the name of the current local device name, user and Nucleus name.

Site Devices are cameras, microphones and sensors that can be remotely configured. **Sites List** provides a physical list of all known network Site areas, connected cameras, PTZ cameras and microphones. **Site Map** allows organizing devices on a map of the physical environment. Cameras can be organized into logical groups and individually named for flexibility and easy access (**Groups List**).

Video Display Area is a viewer for viewing and listening to live video and audio and playback recorded video and audio. The display can be turned on or off.

Other Controls provide a palette of buttons that only become active when a valid device is selected. The Other Controls are Audio, Picture, Controls, PTZ, and Playback Time. The selection of each button causes the Control Dialog Display Area to display additional controls.

Control Dialog Display Area offers controls depending on which of the Other Controls is selected.

Function Controls provide a palette of controls to manually start and stop recording currently running live video and macros and set the video quality. The Scheduler State is displayed and Text button allows entering text to display on the remote monitor. This is setup in System Settings.

Monitor Display Layout is a graphical representation of the analog monitors controlled by the VMC. It can be configured to any specific layout in the System Settings. 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 allow the user to toggle between single, full screen or quad (2x2) mode display on a remote monitor.

Playback Controls provide a palette of buttons used to playback video selected with the Playback Time button. The control buttons include Play, Forward, 7-Speed Fast Forward, Backward, 7-Speed Fast Rewind, Stop/Pause, Previous Frame and Next Frame.

Quick Playback allows instantaneous playback of a currently recording, live-view window of a local camera.

Selection of video and audio for playback can be done using **Play From Time,** allowing calling up playback images directly from the Main Window based on time of occurrence.
There are several high-level configuration features that provide custom setup of the system by means of the **System Settings** menu.

The **Network Settings and Site Name** configuration allows setup of all site IP address information.

Macros are defined for those cameras that will be recorded in predetermined routines. They are configured to display and record cameras and activate devices at specific times. Macro configuration can be defined for displayed/played cameras, microphones and sensors, command duration, picture quality, refresh mode and related devices.

Site Authorization rights are configured by specific site. Rights provide authority to perform specific system functions for defined users and groups, Administrator or Guest.

Scheduling establishes routines for recording and operating devices.

Alarm response is performed using system macros. Alarms can be programmed to annunciate under specific schedules. Alarms can be triggered by physical sensors, detected video loss, detected video motion, or messages sent over the network. A log is kept of each alarm occurrence.

Central Failure Notification (CFN) enables workstations and Kollector Elites connected to the same Nucleus to receive notifications indicating that certain applications have failed, for example, macro, recording and database failures. It also notifies any device (camera, encoder, DVR or workstation) failure. CFN increases the user's awareness of problems that occur at unmanned remote sites. The notifying site is the same as the Nucleus. The display of the notification can be programmed to be sent to other workstations/Kollector Elites.

Auto Login can be activated to allow selected users to automatically log in; when the application starts, the Main window displays without entering a user name/password.

Map Sets consists of various maps related maps, for example each floor of a building.

Display Settings provides a variety of screen resolutions, and an aspect ratio of 4/3, 16/9 or 16/10.

LTU enables translating the ViconNet user interface to any language.

Controls RS232/422/485 is used to configure the controls (PTZ joystick, relays, control panel) after the appropriate driver is installed.

Devices Group Sets enables organizing devices into logical groups by any criteria and combining these groups into group sets.

Registration of the ViconNet system is required for it to perform its full functionality.

ASSOCIATED EQUIPMENT AND ACCESSORIES

ViconNet VN-WS-SW Software: Full capability master workstation software package, except the recording function, for a PC for use with Kollector recorders; registration required for use. Product Specification V113-09.

ViconNet VN-NVR-SW Software/VN-NVR Master Workstation: ViconNet master workstation software package (primarily for recording function)**/**PC preloaded with Master Control Software for use with Kollector recorders; registration required for use. Product Specification V113-20.

Kollector Series Digital Video Recorder, Product Code varies by model: 16-channel networked digital video recorder for use with ViconNet VN-NVR systems. Kollector Elite, Product Specification V112, Kollector Pro, Product Specification V128, Kollector Lite, Product Speicification V181.

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.

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.

Uninterruptible Power Supplies: 725 VA and 1000 VA units with DB9 (RS-232) and USB ports; 120 VAC input/output. Product Specification V147.

VIRTUAL MATRIX CONTROLLER
(Tower and Rack Mount)

Motherboard/ Power Supply: ATX motherboard with 450 W power supply.
Operating System: Windows XP Professional.
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 (for NIC).
VGA Adapter: Video adapter with onboard 128 MB RAM (1028x768 pixels, 32-bit color).
Cooling: Internal fan, 45 cfm flow rate.
Current: Tower: 0.5A.
Rack Mount: 0.7A.
Power Consumption: Tower: 60 W.
Rack Mount: 80 W.
Heat Equivalent: Tower: 3.4 btu/min (0.9 kg-cal/min).
Rack Mount: 4.6 btu/min (1.2 kg-cal/min).
Note: These figures represent the conversion of 100% of the electrical energy to heat. Actual percentage of the heat generated will be less and will vary from product to product. These figures are provided as an aid in determining the extent of cooling required for an installation.

SOFTWARE FEATURES

Open Platform: Compatible with IP cameras from ACTi, AXIS, Panasonic, and Sony; compatible with megapixel cameras from Arecont and IQinVision. Refer to Table 2.

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

Graphical Map: Supports realistic camera location (a workstation with a dual output VGA will allow showing the Map on a dedicated monitor while viewing video on the other).

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 (Minimum) (when purchasing software only)

Operating System: Windows XP/Vista/2003 Server.
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 interface card (NIC).
VGA Adapter: Video adapter with onboard 128 MB RAM. Recommended settings are 1024 x 768 pixels and 32-bit color.

MECHANICAL

Case Style: Mini-desktop or rack-mount.

Dimensions: Mini-Desktop
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: Mini-Desktop: Approx. 7.75 lb (3.5 kg).
Rack Mount: 12.8 lb (5.8 kg).

Construction: Steel and plastic.

Color: Black.

Shipping Dimensions: Mini-Desktop
Height: 11.0 in. (279 mm).
Width: 15.25 in. (387 mm).
Depth: 18.25 in. (464 mm).
Rack Mount
Height: 6.5 in. (165).
Width: 21.25 in. (546).
Depth: 22.0 in. (559).

Shipping Weight: Mini-Desktop: 16.4 lb (7.4 kg).
Rack Mount: 21.9 lb (9.9 kg).

Shipping Volume: Mini-Desktop: 1.8 ft^3 (0.05 m^3).
Rack Mount: 1.8 ft^3 (0.05 m^3).

ENVIRONMENTAL

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

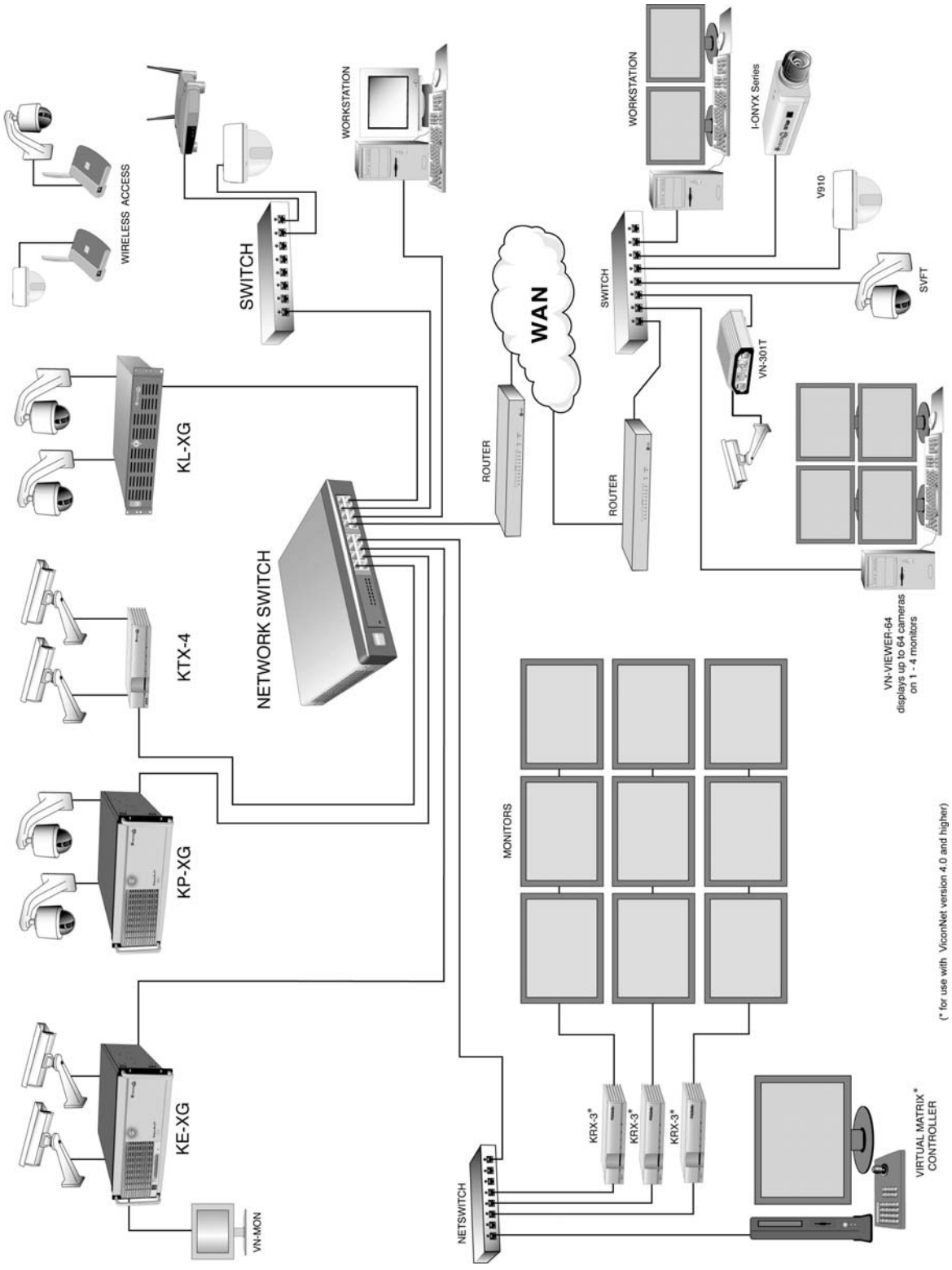
Operating Humidity Range: 0 to 95% relative, non-condensing.

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

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

Rack Mount Model

Mini-Desktop Model



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