

Panasonic®

Matrix System 500
WV-CU550C
WJ-SX550C
WJ-AD550

Matrix Control Systems

Expandable to 128 Camera Inputs and 16 Monitor Outputs



Up to 128 Panasonic Cameras (VD2 compatible) can be sequenced on up to 16 Monitors with roll free synchronized switching

The Matrix System 500 CCTV switching and control system is engineered with the latest advancements of microprocessor and LSI (Large Scale Integrated Circuitry) technology. It integrates Panasonic's extensive line of CCD cameras, time lapse VCRs, monitors and peripheral products into a comprehensive CCTV system. And, it also enhances each unit's performance with system control sophistication.

All control, video, and timing signal (VD2) are multiplexed over a single coaxial cable allowing synchronization for most Panasonic CCD cameras. It allows you comprehensive and reliable viewing and recording to capture critical events. Matrix System 500 can fully control integrated camera devices such as the WV-CS854A/CS554 and all the on-board electronic functions of Panasonic's intelligent CCD cameras: WVCP460/CP240 and WV-BP550 Series.

A built-in cable compensation circuit for every input channel provides high quality picture, control and synchronization up to 3,000 ft with RG-59/U cable (Belden 9259 or equivalent). The single coaxial cable concept results in significant savings through reduced material and labor costs.

The extensive programming capabilities include versatile camera sequencing, alarm modes, time/date event scheduling, password protection, operator's access level, priority, and system partitioning.

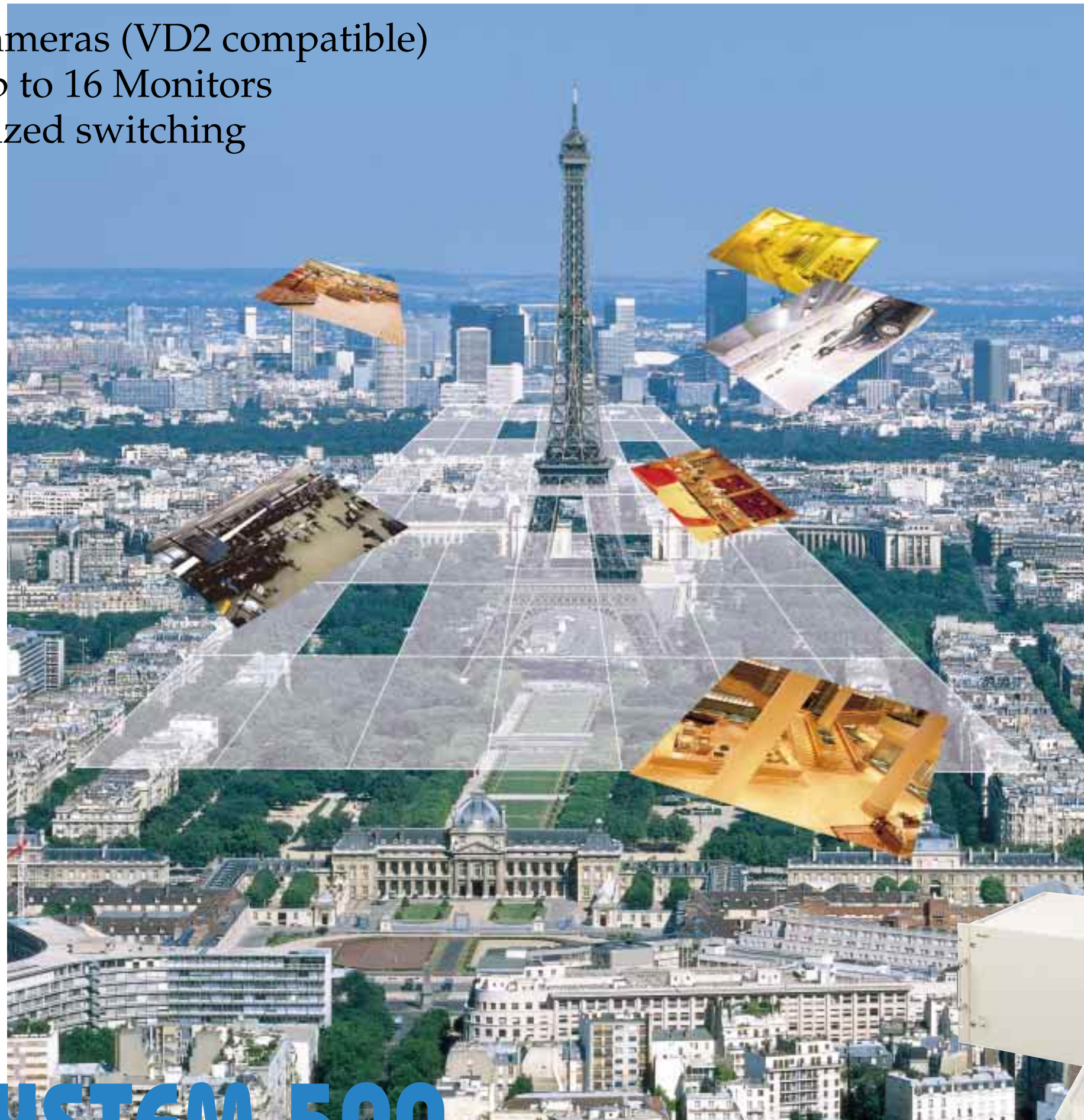
The Matrix System 500 consists of the main unit WJ-SX550C and the system controller WV-CU550C. It's modular construction enables expansion of up to 64 camera inputs and 16 monitor outputs.

Utilizing the optional WJ-AD550 card cage, system expansion of up to 128 camera inputs is possible.

The on-screen graphic menu programming, enables real time system status and, user-friendly operations.

VCR control includes time/date synchronization, alarm control and camera sequence corresponding to time-lapse modes.

The Matrix System 500 can also integrate external devices such as computers, printers and alarm input devices.



Main Features and Functions

CAMERAS

Single coaxial cable concept reduces material and labor costs

- Roll free synchronized switching with up to 128 cameras using WJ-AD550
- Control for both integrated and intelligent cameras
- Pan and Tilt, Lens, alarm and related accessories are processed through the coax cable or RS485
- All camera inputs are equipped with cable compensation for up to 3,000 ft

SYSTEM

Extensive programming capability and expandable structure for flexible and simple operation

- Versatile camera sequence modes, variety of alarm activations and timer event scheduling
- Programmable password protection, operator's access level, priority and system partitioning
- Modular construction allowing for up to 128 inputs and 16 outputs
- Easy to use system controller with LCD display and function keys

MONITORS

- User friendly on-screen graphic menu set-up for system programming
- Real time system status monitor
- On-screen display for time & date, camera number, title, sequence mode, and alarm status

VCRS

- Synchronized time & date between Matrix display and VCR
- VCR control for alarm activation and reset
- Camera switching output to time lapse mode

EXTERNAL SYSTEM DEVICE

- Data (RS-485) communication board for long distance communication
- RS-232C communication port system control and integration
- Printer output port
- Up to 128 alarm inputs

MATRIX SYSTEM 500

WJ-AD550



WJ-SX550C

WV-CU550C

Single Coaxial Cable

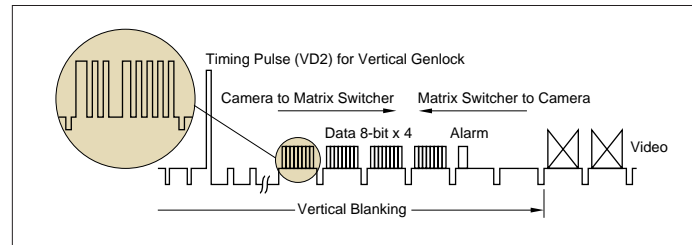
Control data, Video Signal and Timing Pulse (VD2) are multiplexed on to the video signal over a single coaxial cable, reducing material and labor costs. VD2 (synchronization for roll free switching) is accepted by most of the Panasonic CCD cameras. (See applicable cameras shown below.)

B/W Cameras	WV-BP140 Series, WV-BP330 Series, WV-BP550 Series, WV-BL730 Series
Color Cameras	WV-CP460 Series, WV-CP240 Series, WV-CL830 Series, WV-CL920 Series
Integrated Dome Cameras	WV-CS854A WV-CS554
Single Wire Cameras	Through Power Supply Unit WV-PS15 and WV-PS154, WV-CP160, WV-CP110

Since 1988, most of Panasonic cameras have been designed and manufactured to accept VD2 signal for system integration.

Control data (8 bit x 4 between camera site and matrix) can control integrated camera devices such as WV-CS854A/CS554, intelligent cameras such as WV-CP460/CP240 and WV-BP550, and pan/tilt/zoom lens functions through optional receivers WV-RC100 and WV-RC150.

Alarm signals received from the WV-CS854A or the WV-RC100/150 at the camera site can be transmitted to Matrix over a single coaxial cable to activate alarm events, preprogrammed in the system.



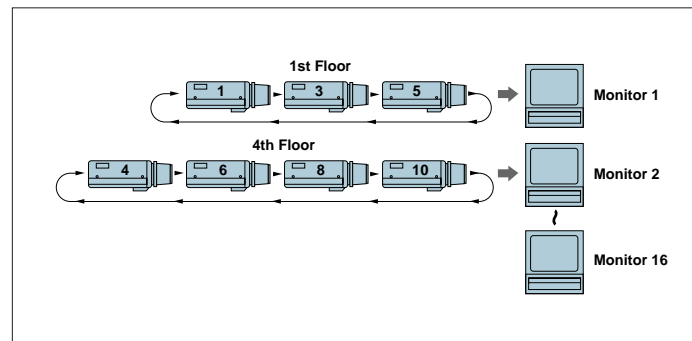
In addition, built-in cable compensation circuitry enables camera control and synchronization on RG59U at distances of up to 3,000 feet.

Versatile Camera Sequence Modes

Three types of sequence modes are provided to meet most application needs. Any sequences can be called up by the operator manually. Any tour and group sequence can be called up by alarm or trigger schedule automatically.

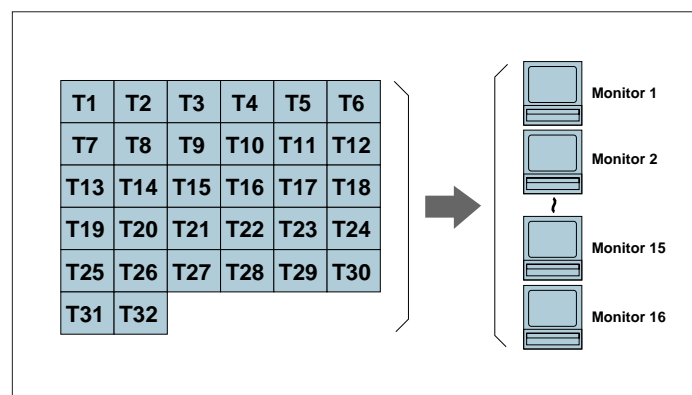
Program Sequence

A single sequence pattern for each monitor can be programmed. Up to 16 programs are available.



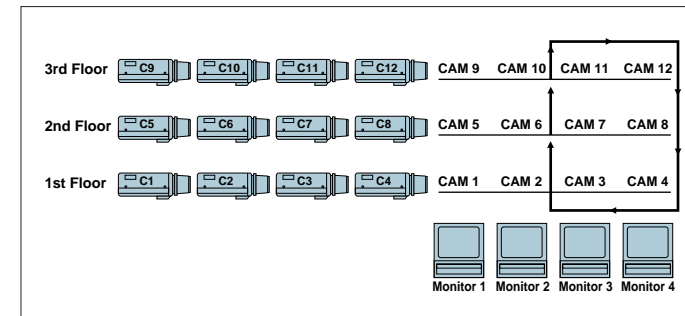
Tour Sequence

32 sequence patterns can be programmed. A tour sequence can be viewed from any monitor. Each tour sequence can include independent dwell time, camera preset position, and auxiliary control in each step.



Group sequence

The group sequence mode allows system cameras to be switched onto different banks of monitors in synchronization. In other words, it enables a combined display of cameras located on specific zones/floors-to be synchronized together on a designated group of monitors.



Timer Function

The timer function is used to register and activate a tour or group sequence within a specific period by setting start and stop time (maximum 45/day) on each day for the week, or five (5) special days. Also the alarms can be integrated in to the Time Schedule.

Roll Free Synchronized Switching

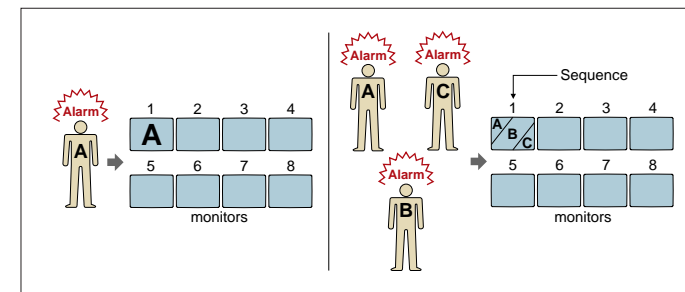
Panasonic's VD2 compatible cameras are completely synchronized to the Matrix System 500 and provide roll free switching for up to 128 cameras. It provides reliable viewing and recording to capture critical events.

Multiple Alarm modes

Three alarm modes are available.

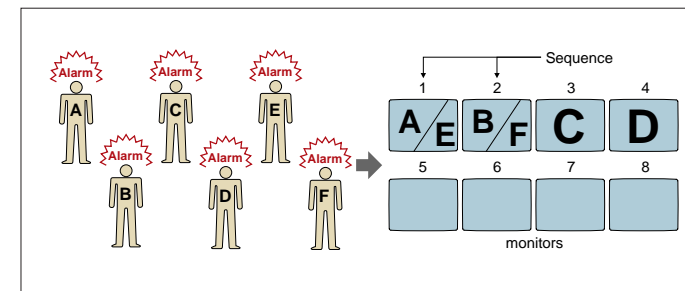
Alarm Mode 1 : Any alarms to 1 monitor

Mode 1 displays all alarms on Monitor One. If more than one alarm is activated, the system will sequentially display the alarms on Monitor One.



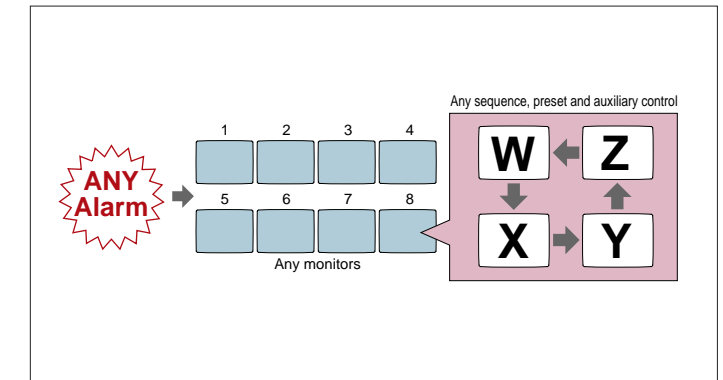
Alarm Mode 2 : Any alarms to 4 monitors

Mode 2 displays the first alarm on Monitor One, the second on Monitor Two, the Third on Monitor Three and the fourth on Monitor Four. If more than four alarms are activated, the system will sequence the pictures starting on Monitor One, then Two, etc.



Alarm Mode 3 : Any alarms to any monitors

Mode 3 is a fully programmable mode. Any alarm can be shown on any monitor, plus sequence routines, presets and auxiliary relays in receivers can be activated.



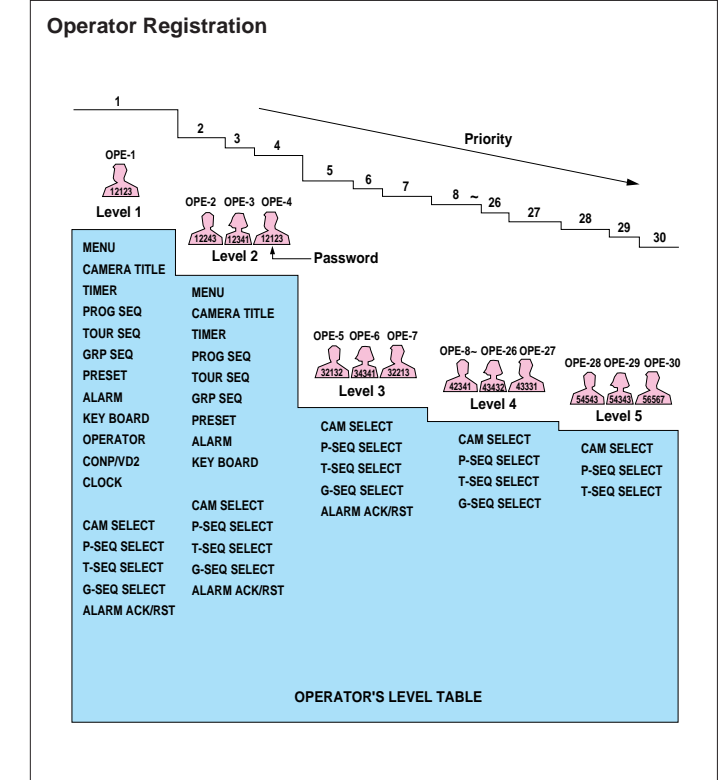
Timer Alarm Function

Alarm Interface

- The optional alarm board (WV-PB5564) can receive up to 64 alarm signals (Normally Open (NO) / Normally Closed (NC) selectable).
- Alarm signals can be multiplexed with the video signal from the optional receiver (WV-RC100/WV-RC150) over a single coaxial cable.
- VCR recording mode can be controlled under alarm conditions.
- Alarm condition can be reset either manually or automatically.

Operator Registration and System Partitioning

Up to thirty (30) operators can be registered in a system for different operator access levels for set up and operation. Password protection is available to limit operator access. Also, operator priority is available to lock out lower priority operators and to limit operator access to specific cameras and controls. Controller's partitioning can limit access to specified monitors.



User Friendly On-Screen Set Up

System set up can be easily programmed using graphic menus. System information can be displayed on each monitor and system status is available on a separate output.

Examples of Menus



Example of Character Displays



Characters can be displayed on each monitor.

Display items: Date and time, camera title (15 characters x 2 lines), camera number, monitor number, sequence mode in effect, status, timer mode

Data (RS-485) Communication for Long Distance Surveillance

The data communication board (WV-PB5548) enables RS-485 communication through optical fiber or other communication lines for long distance surveillance.

VCR Control

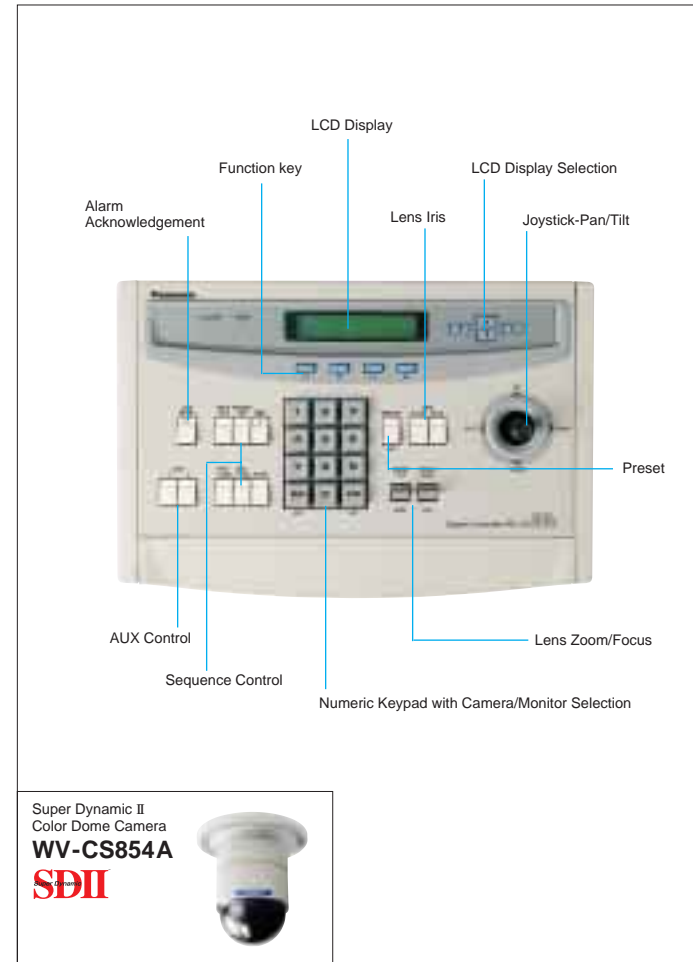
VCR recording modes can be switched automatically from time-lapse mode to real time mode and back, corresponding to alarm conditions in the system. Time synchronization between Matrix's display and VCR's is also possible using Panasonic time-lapse VCRs. Camera switching for time-lapse recording can be synchronized through an external timing pulse.

External Devices

The built-in RS-232C port allows integration to other systems. The Matrix System 500 can be controlled and programmed through the RS-232C port. If a printer is connected, the system set-up data can be printed and verified.

WV-CU550C ; Easy-To-Operate Multiple Function Controller

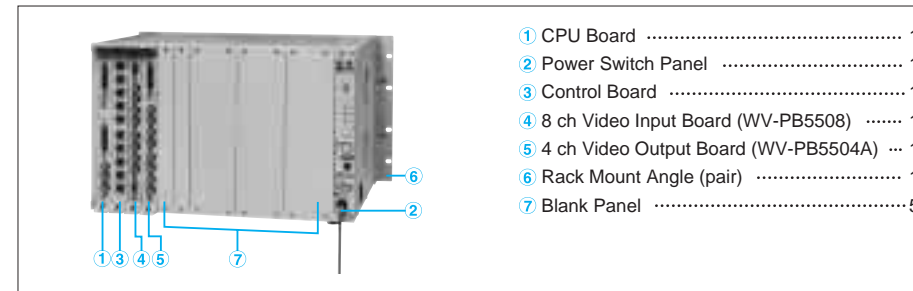
The ergonomically designed controller WV-CU550C can be used for set up, camera control and video routing. Two line character LCD display and function keys provide simple and easy operation. Optional rack mount bracket WV-Q62 is available.



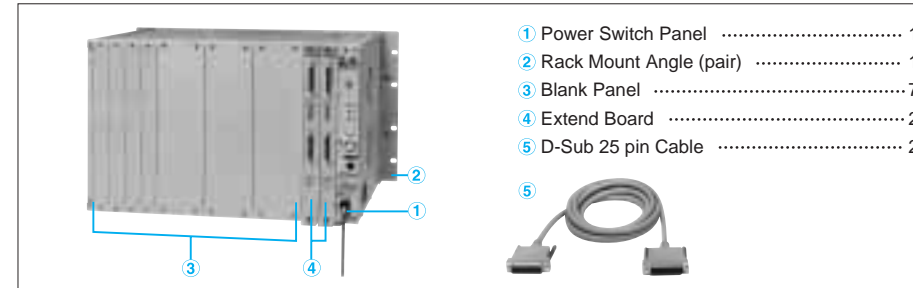
Flexible System Configuration

The Matrix System 500 has 8 inputs and 4 outputs as standard configuration. By adding 8 channel video input board (WV-PB5508), 4 channel output board (WV-PB5504A), and /or 64 channel alarm input board (WV-PB5564), the system can be expanded to meet your surveillance needs. Up to 8 WV-CU550C controllers can be connected to the system 500.

Standard Configuration of Main Unit WJ-SX550C



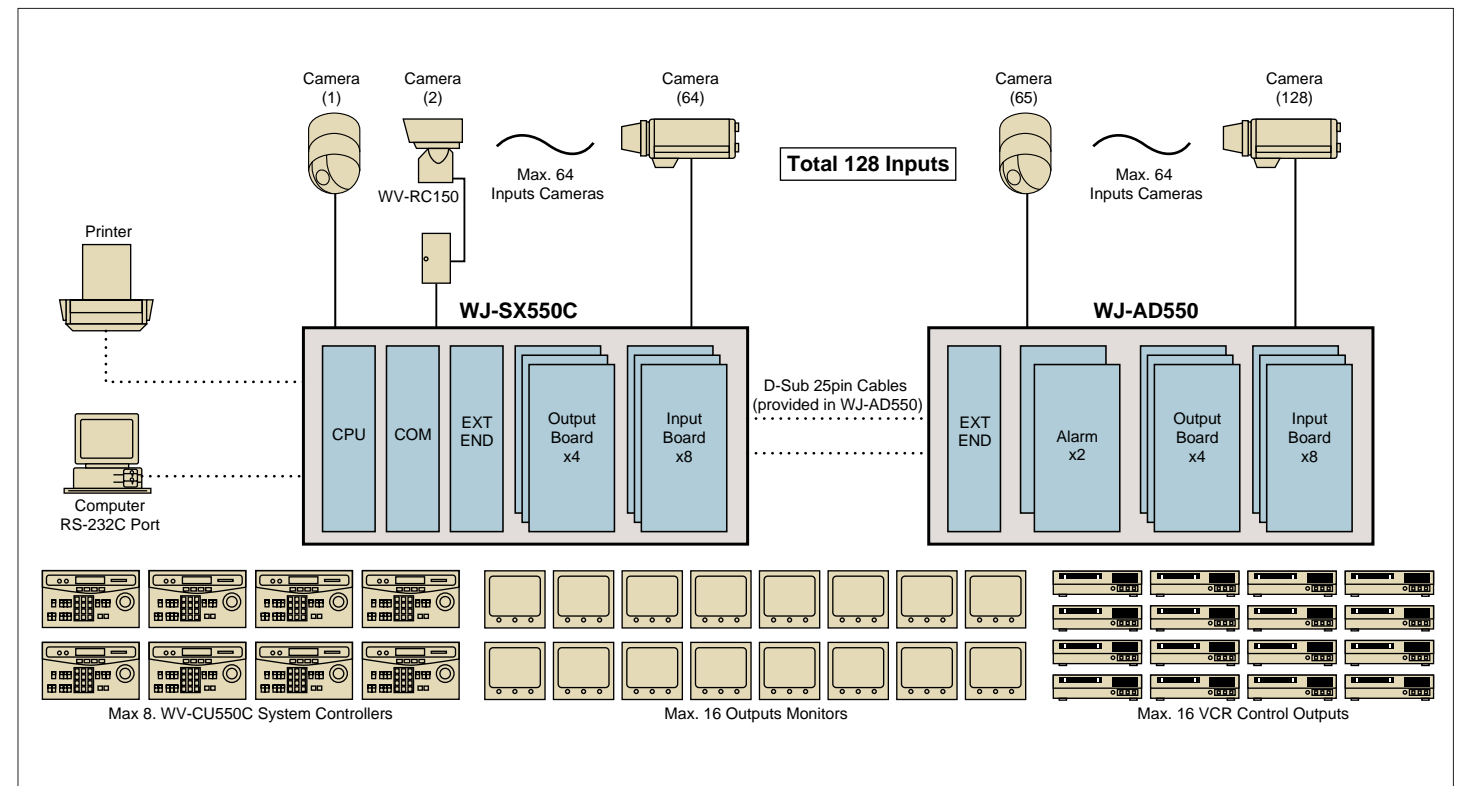
Standard Configuration of Optional Card Cage WJ-AD550



Options for the Matrix System 500



System Configuration



Matrix System 500 Specifications

Matrix Card Cage WJ-SX550C

General	Max. Number of Video Input Board: 8 (Total Input: 64) Max. Number of Video Output Board: 4 (Total Output: 16) Max. Number of Alarm Board: 1 (Total Alarm Input: 64) Max. Number of System Controller: 8 (WV-CU550C) RS-232C: 25 pin DB25 Printer: 25 pin DB25 Time Adjust In (from VCR): 2 pin Pair-Cable VD/VS In/Out: 2 (BNC) VD Out: Video Level 4 V [p-p]/75Ω (BNC)
Camera Switching	Dwell Time: Min. 1 second, Max. 30 seconds Max. Number of Sequence: Program Sequence: 16 (1 Program/1 Monitor) Tour Sequence: 32 (Any Monitors) Group Sequence: 8 (Any Monitors)
Timer Event Program	Timer Event (Start/Stop): 45/Day Formats of Timer Event Program: Day of Week +5 Special Days
Alarm Program	Max. Number of Alarm Input: 64 Max. Number of Alarm Recall: 99 Alarm Activations: Mode 1: Any Alarms to Monitor 1 Mode 2: Any Alarms to Monitor 1-Monitor 4 Mode 3: Any Alarms to Any Monitors (Max. 100 patterns) Timer Alarm: Alarm Start and Stop (Max. 10 patterns)
Operator Set-Up	Max. Operator Registration: 30 operators with 5 digits Password and Priority Access Operator Level: 5 Levels
Ambient Operating Temperature	-10°C ~ +50°C (14°F ~ 122°F)
Power Source/Consumption	120 V AC, 60 Hz / Approx. 20 W (Max. 75W at full board configuration)
Dimensions	480 (W) x 265 (H) x 371 (D) mm [18-7/8" (W) x 10-7/16" (H) x 14-5/8" (D)]
Weight	13.5 kg (29.7 lbs.)
Option	Blank Panel WV-Q63

Video Input Board WV-PB5508

Video Inputs	Number of Input: 8 (BNC) Video Level: 1 V [p-p]/75Ω
Video Output	Number of Output: 8 (Active Loop-through) Connector Type: 9 pin DB9 x 2 Video Level: 1 V [p-p]/75Ω
Function	Camera Site Control: All Inputs Cable Compensation: S, M, L (Short, Middle, Long) Vertical Drive (VD2) Output: On/Off
Option	Loop-Through Cable WV-CA64

Video Output Board WV-PB5504A

Video Output	Number of Output: 4 (BNC) Video Level: 1 V [p-p]/75Ω
VCR Interface	Number of Alarm Out: 4 Ext. Tim. In: 4 Number of Reset Out: 4 Recover In: 4 Connector Type: 25pin DB25 x 1
Character Generator	Camera ID: 30 Characters (15 x 2 lines) Character Style: White with BLack Border/Black with White Border

Data Board WV-PB5548

Data Input / Output (1-8)	RS-485 (Full Duplex or Half Duplex, selectable inside the switch) [5-pin T (A), T (B), R (A), R (B), GND] x 8 use with 2 shielded, twisted pairs data cable Transmitting Speed (Baud Rate): 1,200 - 19,200 bps
Max. Number Boards	8 (Address 1 - 8, Total 1 - 64 Data Input)

Alarm Input Board WV-PB5564

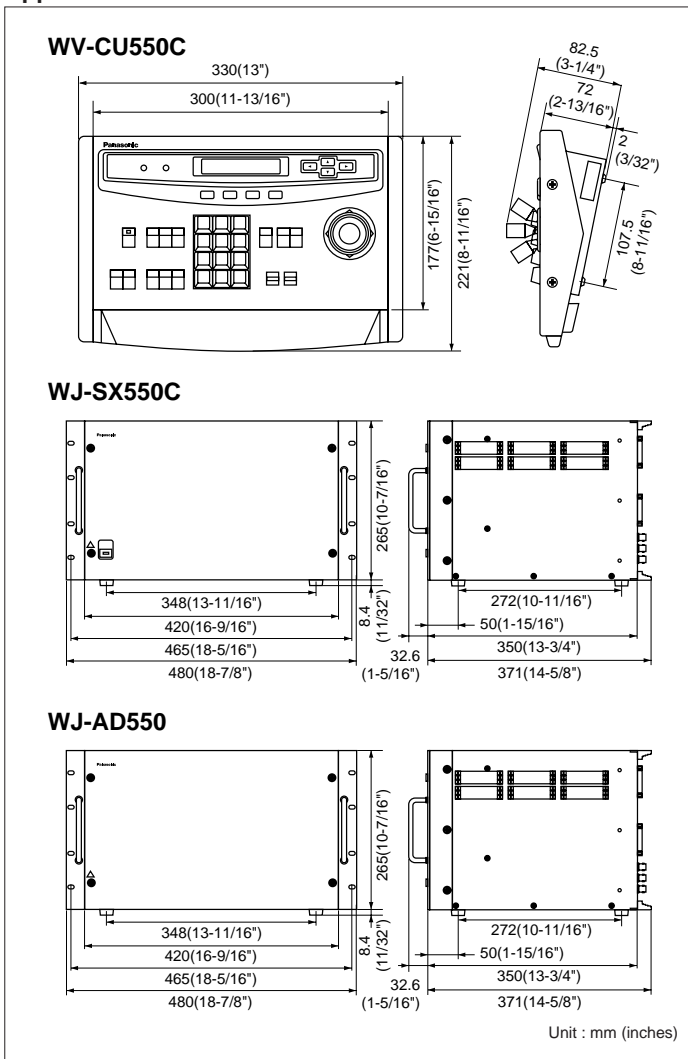
Alarm Input	Number of Alarm Input: 64 Connector Type: 37pin DB37 x 2 Type: Normal Open / Normal Close Selectable
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Matrix System Controller WV-CU550C

Communication Port	Signal: RS-485 (Two Shielded Twisted Pair) Connector Type: 6 pin Modular Type Communication Speed: 1,200 - 9,600 bps
Display	LCD: 20 x 2 lines LED: Alarm, Busy, Acknowledge
Switches and Controls	Key: Numeric Keypad, Camera Key, Monitor Key Function Key: F1, F2, F3, F4, ▲, ▼, ►, ◄ Sequence Function: ALT, Stop, Back Seq, Forward Seq, Inc, Dec Lens Function: Iris Open/Close, Focus Near/Far, Zoom Tele/Wide Joystick: Tilt Up/Down, Pan Right/Left, Preset, AF Controller Mode Selectable Switch
Ambient Operating Temperature	-10°C ~ +50°C (14°F ~ 122°F)
Power Source/Consumption	120 V AC, 60 Hz / 4 W
Dimensions	330 (W) x 74 (H) x 221 (D) mm [13" (W) x 2-15/16" (H) x 8-11/16" (D)]
Option	Rack Mount Bracket WV-Q62

*The Matrix System 500 has no capability of audio transmitting with System 100 / 200 / 300.

Appearance



- All TV pictures are simulated.
- Weights and dimensions are approximate.
- Specifications are subject to change without notice.
- These products may be subject to export control regulations.

Panasonic

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