Panasonic

ideas for life

64 Inputs Matrix Switcher System

Matrix System150

Version 2.03

16 Inputs
Matrix Switcher
WJ-SX150A

16 Inputs Multiplexer Integrated
Matrix Switcher
WJ-SX155

RS-485 System Controller
with 3D-Joystick &
Jog/Shuttle
WV-CU650

MATRIX SYSTEM 150

Controls up to 64* cameras and 4 monitors. The Matrix System150 is compact, high in quality and cost effective.

The new Panasonic Matrix System150 is ideal for small-scale surveillance applications. The Matrix Switcher can link up to 64 cameras, 4 monitors and 4 controllers. It can be combined with our dome cameras providing excellent image quality.

All of the Matrix System150's 64 channels employ Panasonic proprietary coaxial, multiplex connectors. Video signals, control data, synchronous signals (VD2) and alarm signals all travel over a single cable, reducing the number of lines required for camera installation. Cables can be as long as 1,200 m. This System also supports remote camera control using RS-485 data.

The Matrix System150 is loaded with special features including tour sequencing, alarms, video loss detection, and character displays on the monitor. All features are easy to operate using the WV-CU650 dedicated system controller.

One major feature is the ease of changing system settings using menus displayed on a personal computer. Providing direct control of all device settings as well as user management features, the system administration software bundled with the Matrix System150 imposes no extra burden on system administrators. Access to vital settings data can be restricted to a specified level of user through use of User ID (operator number) and passwords.

The Matrix System150 is ideal for schools, supermarkets, banks, parking lots, warehouses, and correctional facilities. The Matrix System150's small-scale system simplifies operation while providing all the features required for high-level surveillance.

*When cascade configuration

MATRIX SYSTEM150

Major Features and Functions

Camera

- Supports up to 64 cameras.
- All 64 channels are coaxial, multiplex cables, reducing the number of cables required and simplifying installation.
- Supports up to 64 RS-485, remote-controlled cameras.
- Pan, tilt and other cameras lens motions can be controlled either by coaxial, multiplex cable or RS-485 remote-control signals.
- Cables can be up to 1,200 m long.
- The video loss detection function automatically detects camera malfunctions.

System

- All sequence and alarm modes can be adjusted as needed.
- User management features include operator number, password, level, and priority.
- Personal computer screen displays simplify set-up and management of alarm histories.
- Supports up to 80 alarm inputs and four alarm outputs.

Monitor

- Output supports up to 4 monitors.
- Character displays show date, time, camera number, camera title, and event information.
- Alarm history display shows up to 100 most recent alarms.

External Links

- The RS-485 camera ports allow remote surveillance.
- The RS232C ports enable connection to personal computers or VTRs.

The above all photographs were taken for the purpose of explanation; actual images may differ.

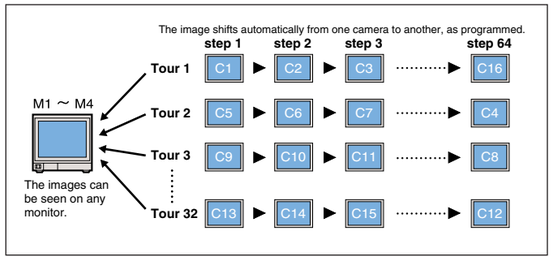
Sequencing and Alarm. Just Two of Many Features that Support Effective Surveillance.

Sequencing Increases Monitoring Efficiency

Pre-set the sequence in which to view an image from a series of different cameras. The WV-CU650 System Controller makes it possible to choose from a variety of sequence patterns with push-button ease. Just select the one that provides the most effective coverage.

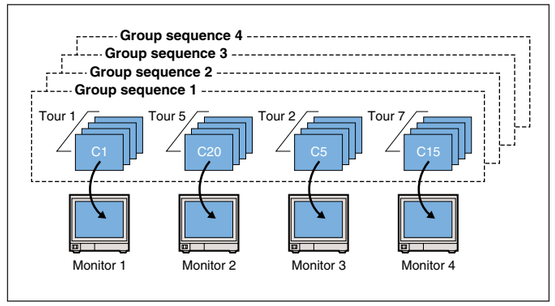
Tour Sequence

The monitor switches automatically, following a pre-set sequence from channel 1 to channel 64. Each sequence can include up to 64 steps, with each step set from one to 30 seconds in length. In addition, dome cameras can also be pre-set to precisely the viewing angle you need. Up to 32 touring patterns can be stored in memory for easy recall.



Group Sequence (Simultaneous tour sequencing)

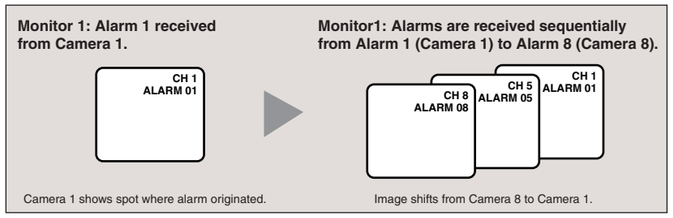
This feature allows you to activate multiple, pre-set tour sequences by pushing a single button. Each group can include up to four tour sequences. Up to four group sequences can be stored in memory.



Instant No-Escape Alarms

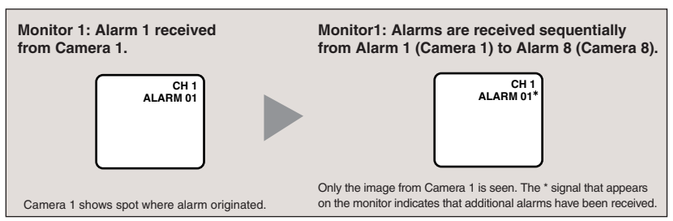
Sequence mode (In response to spot alarm)

When the alarm signal is received, the monitor and camera instantly switch to the spot from which it originates. When two or more alarms are received, the system switches instantly to the spot from which the latest alarm originates. Pressing the ACK key switches operator control to the camera from which the alarm was received.



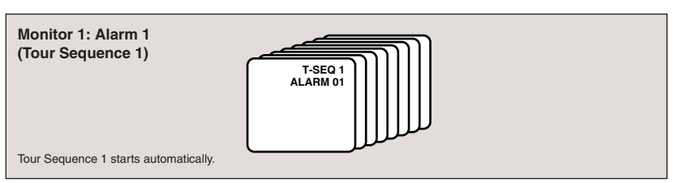
Hold mode (In response to spot alarm)

When the alarm signal is received, the monitor shows the image from the pre-set camera. When two or more alarms are received, the monitor continues to show the image of the spot from which the first alarm was received. Pressing the ACK key switches operator control to the camera from which the alarm was received.



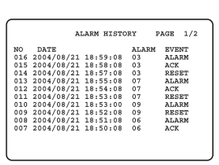
Concerning start of Sequence Alarm

The system can also be pre-set to start a tour sequence when an alarm signal is received. However, once a sequence begins, a second alarm cannot enter the monitor, as it can in sequence or hold mode.



Most recent 100 alarms display

The monitor display shows up to 100 of the most recent alarms in chronological order, allowing quick confirmation of alarm location, date, and time. Images can be recalled and reviewed with push button ease using the WV-CU650 system controller.



ALARM HISTORY PAGE 1/2

NO	DATE	ALARM	EVENT
016	2004/08/21 18:59:08	03	ALARM
015	2004/08/21 18:58:08	03	ACK
014	2004/08/21 18:57:08	03	RESET
013	2004/08/21 18:55:08	07	ALARM
012	2004/08/21 18:54:08	07	ACK
011	2004/08/21 18:53:08	07	RESET
010	2004/08/21 18:53:00	09	ALARM
009	2004/08/21 18:52:08	09	RESET
008	2004/08/21 18:51:08	06	ALARM
007	2004/08/21 18:50:08	06	ACK

Alarm history management using a personal computer

The alarm log can be output to a personal computer using the RS232C serial port, allowing use of the personal computer to manage alarm histories.

64 Channels are All Transmitted via the Same Coaxial Cable

Video signals, control data, synchronous signals (VD2), and alarm signals are all transmitted over the same coaxial, multiplex cable. Use of the same cable reduces both time and trouble required for camera installation. Each coaxial cable can be up to 1,200 m long.

1. Video signal
Transmits the image captured by the camera to the Matrix Switcher.

2. Control data
Transmits control data from the switcher to the cameras that are compatible with Panasonic coaxial control system. Transmits alarm signal from the cameras to the switcher.

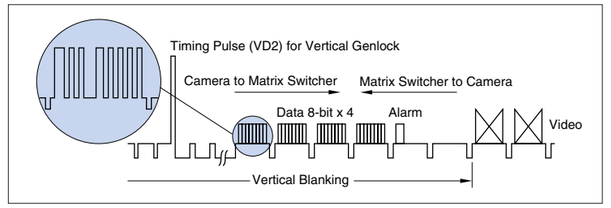
3. Synchronous signals (VD2)
Supports almost all Panasonic CCD cameras (see compatible camera list). Allows simultaneous image switching by cameras and the Matrix Switcher, preventing image distortion.

4. Alarm signals
Transmits alarm signals received from the camera to the Matrix Switcher, initiating the pre-set alarm event sequence.

VD2 Compatible Panasonic Camera List

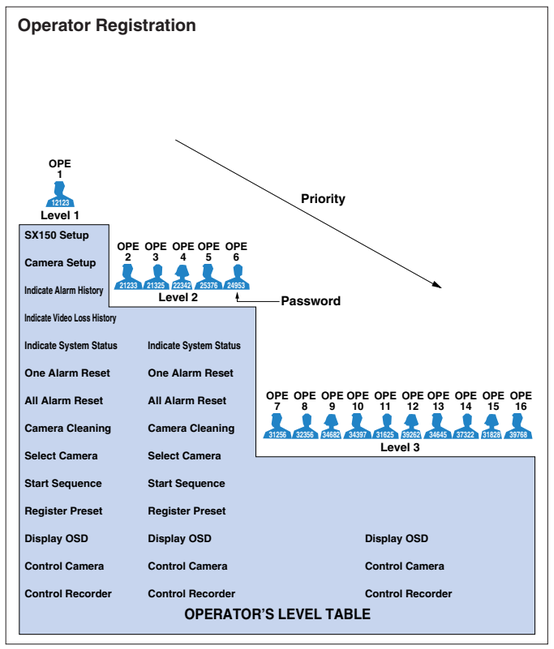
B/W Camera	WV-BP330 Series
Colour Camera	WV-CW480 Series, WV-CW240 Series, WV-CF284/294, WV-CL930 Series, WV-CL270 Series, WV-CW380 Series, WV-CP250 Series, WV-CP280 Series, WV-CP480 Series
Integrated Dome Camera	WV-CW960/970 Series, WV-CS950 Series, WV-CS570 Series

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



User Management Protects Against Misuse

This system manages user names and other user information for up to 16 users, who may use the controller itself or log in from a personal computer. Matrix System150 operation can be limited by use of five user attributes including operator number, password, level, priority, and the cameras the user is permitted to operate. This user management feature prevents improper use by outsiders or unauthorized persons.



Other Convenient Features

RS-485 Port

Up to 64 cameras can be controlled through the built-in RS-485 ports.

RS232C External Serial Interface

The RS232C port permits system set-up and alarm history management from a personal computer. It also supports time-lapse VTR and other peripherals.

Video Loss Detection automatically senses camera malfunction

This feature automatically senses loss of video signal input and displays a warning on the monitor, allowing speedy response to such problems as power outage, severed camera cables or damaged cameras.

Video Loss History Table

VIDEO LOSS HISTORY PAGE 1/2

NO	DATE	CH	EVENT
012	2004/08/21 18:59:08	03	VIDEO RECOVER
011	2004/08/21 18:58:08	14	VIDEO RECOVER
010	2004/08/21 18:57:08	09	VIDEO LOSS
009	2004/08/21 18:55:08	07	VIDEO LOSS
008	2004/08/21 18:54:08	--	SW RECOVER
007	2004/08/21 18:53:08	16	VIDEO LOSS
006	2004/08/21 18:53:00	09	VIDEO LOSS
005	2004/08/21 18:52:08	--	SW RECOVER
004	2004/08/21 18:51:08	06	VIDEO LOSS
003	2004/08/21 18:50:08	01	VIDEO RECOVER

Monitor Character Displays

Four types of information are displayed on the monitor using the built-in character generator IC.

1. Date and time
Choice of five date styles and 24-hour or 12-hour time displays.

2. Camera title
A label up to 20 characters long can be added to the camera number.

3. Monitor status
Shows monitor number, keyboard number, and sequence status.

4. Event information
Shows time and other information concerning alarm or timed events.

Example of Character Displays

The above all photographs were taken for the purpose of explanation; actual images may differ.

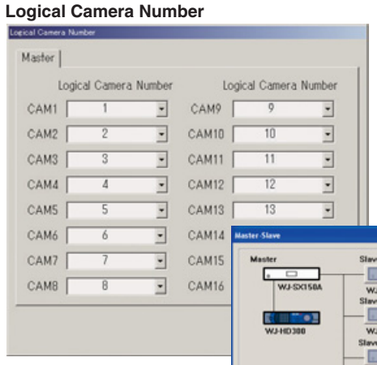
System Configuration is Simple and Trouble-Free.

Simple System Setup from a PC System Configuration Software is Included.

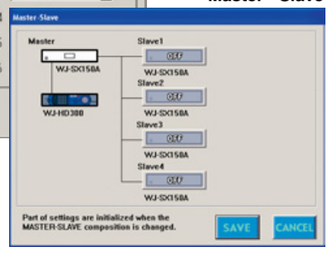
Main Menu

The main menu is the heart of the System150 Setup Utility.

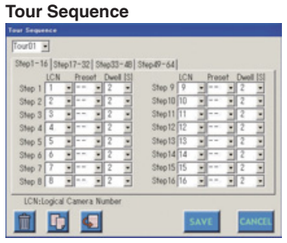
Logical Camera Number



Master - Slave

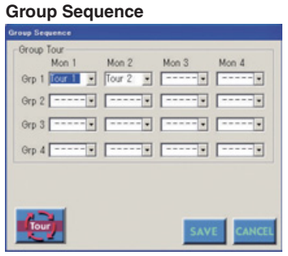


Tour Sequence



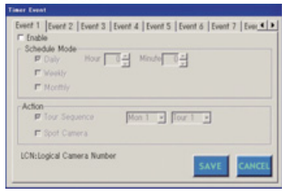
This window is used to edit a tour sequence. There are 32 tour sequences available, each with up to 64 steps. Each step needs a camera number associated pan/tilt preset position and a dwell time.

Group Sequence



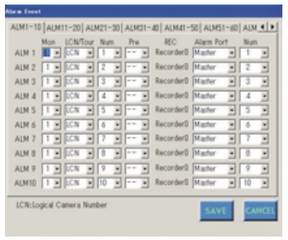
This window is used to edit a group sequence. There are 4 group sequences available, each with up to 4 monitors.

Timer Event



This window can be used to edit the time and type of action.

Alarm Event



This menu can be used to program which monitor will carry out the spot/tour sequence of a specific camera, when an alarm signal is input.

Operator Registration

This window is used to assign the camera control to the operators, according to their priorities.

Level Window

This window is used to restrict the operators' control of functions according to their levels.

Flexible and Compatible with a Wide Range of Equipment

The Matrix System150 can be connected to a WJ-HD300A Series Digital Disk Recorders equipped with a high-capacity hard disk drive to construct a featured-loaded system for long-duration recording of multiple types of high-quality images. The Filtered Search function supports searches using multiple date/time and camera channel criteria. The Playback VMD function instantly identifies scenes with movement, making it simple to find and playback critical scenes buried in large amounts of image data. Search results can be displayed as thumbnails.

WJ-HD316A Ensures High-quality, Moire-free Images

Viewing and Recording Enhancement with WJ-SX155

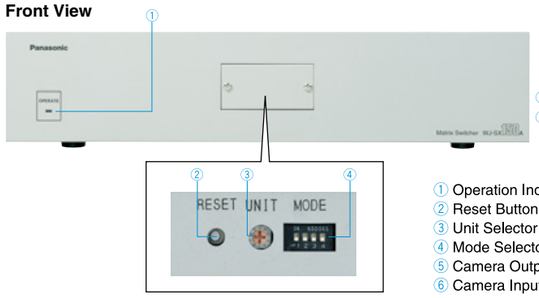
- **Quad, 9 split screen, 16 split screen for Live or Playback.**
- **Real time refresh in Live Quad screen.**
- **Minimum 2 fields switching for multiplex recoding.**
- **Camera switch input for external switching.**
- **VMD: 4 Areas, 3 Levels x 16CH.**

The above all photographs were taken for the purpose of explanation; actual images may differ.

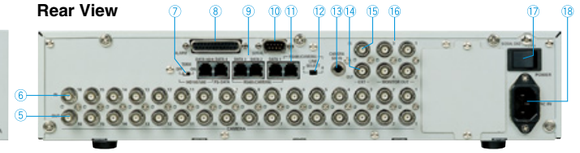
MAJOR OPERATING CONTROLS

16 Inputs Matrix Switcher; WJ-SX150A
16 Inputs Multiplexer Integrated Matrix Switcher; WJ-SX155

Front View



Rear View

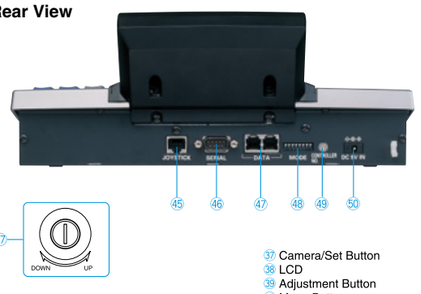


① Operation Indicator
② Reset Button
③ Unit Selector
④ Mode Selector
⑤ Camera Output Connectors
⑥ Camera Input Connectors
⑦ Termination Selector
⑧ Alarm Port
⑨ Data Ports
⑩ Serial Port
⑪ RS-485 Camera Port
⑫ Line Selector
⑬ Camera Switching Input Connector
⑭ External Output Connector
⑮ External Input Connector
⑯ Monitor Output Connectors
⑰ Power Switch
⑱ AC Inlet Socket

RS-485 System Controller with 3D-Joystick & Jog/Shuttle; WV-CU650

Front View

Rear View



① Operation Indicator
② Alarm Indicator
③ Alarm Suspend Indicator
④ Shift Button
⑤ Clear Button
⑥ Alarm Reset/Alarm All Reset Button
⑦ Alarm Acknowledge Button
⑧ Alarm/Alarm Suspend Button
⑨ Camera Function/System Function Button
⑩ Alarm Recall Button
⑪ On-Screen Display Button
⑫ Monitor Lock/Logout Button
⑬ Tour Sequence/Group Sequence Button
⑭ Sequence Pause/Sequence Stop Button
⑮ Go To Last Button
⑯ Electronic Zoom Button
⑰ Multiscreen Selection Button
⑱ Mark Button
⑲ Auxiliary 2 ON/OFF Button
⑳ Auxiliary 1 ON/OFF Button
㉑ Search/Time and Date Search Button
㉒ Defroster Button
㉓ Wiper Button
㉔ Stop Button
㉕ Play/Pause Button
㉖ Recording Button
㉗ Shuttle Ring (Outside)/JogDial (Inside)
㉘ Shuttle Hold Button
㉙ History Button
㉚ – Button
㉛ + Button
㉜ Recorder/Unit Selection Button
㉝ Preset/Program Preset Button
㉞ Camera Position Button
㉟ Numeric Buttons
㊱ Monitor/Escape Button
㊲ Camera/Set Button
㊳ LCD
㊴ Adjustment Button
㊵ Menu Button
㊶ Function Buttons
㊷ Exit Button
㊸ Enter Button
㊹ Feet
㊺ Joystick Connector
㊻ Serial Port
㊼ Data Ports
㊽ Mode Selection Switches
㊾ Controller Number Switch
㊿ DC 9V Input Jack
51 Top Button
52 Zoom Wheel Controller
53 Iris Control Buttons
54 Focus Control Buttons
55 A and B Buttons
56 3D Joystick
57 Adjusting Screw

SPECIFICATIONS PAL

16 Inputs Matrix Switcher; WJ-SX150A
16 Inputs Multiplexer Integrated Matrix Switcher; WJ-SX155

Model No.	WJ-SX150A	WJ-SX155
Power Source	220V - 240V AC, 50Hz	
Camera Input (1 - 16)	1.0 V[p-p]/75 Ω composite video signal 0.5 V[p-p]/75 Ω data signal and 2.5 V[p-p]/75 Ω vertical timing pulse multiplexed	
Camera Output (1 - 16)	1.0 V[p-p]/75 Ω composite video signal	
Monitor Output (1 - 4)	1.0 V[p-p]/75 Ω composite video signal	
External Input	1.0 V[p-p]/75 Ω composite video signal	
External Output	1.0 V[p-p]/75 Ω composite video signal	
RS-485 (Camera) Port	RS-485 6-conductor modular jack	
Data Port	RS-485 6-conductor modular jack	
Alarm Port	25-pin D-sub connector	
Serial Port	9-pin D-sub connector	
Camera Switching Input	RCA pin jack	
Ambient Operating Temperature	–10 °C ~ +50 °C	
Ambient Operating Humidity	Less than 90 %	
Dimensions	420 mm (W) x 88 mm (H) x 350 mm (D) (without rubber foot)	
Weight (approx.)	6 kg	6.5 kg

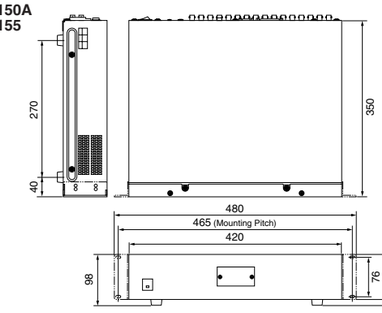
RS-485 System Controller with 3D-Joystick & Jog/Shuttle; WV-CU650 (for WJ-SX150A/SX155)

Power Source	9 V DC, 300 mA (using the supplied AC adapter)
Power Source (supplied AC adapter)	230 V AC, 50 Hz, 150 mA
Data Output/Input Port	6-conductor modular jack (RS-485, Full duplex) x2
Serial Port	9-pin D-sub connector
Controller Number	1 to 8 (rotary switch)
Ambient Operating Temperature	–10 °C ~ +50 °C
Monitor Number Selection	1 to 4
Camera Number Selection	Up to 64
Dimensions (W x H x D)	Main Unit: 290 x 111 x 221 mm 3D Joystick Unit: 134 x 146 x 218 mm
Weight (without the AC adapter)	Main Unit: 1.3 kg 3D Joystick Unit: 0.8 kg

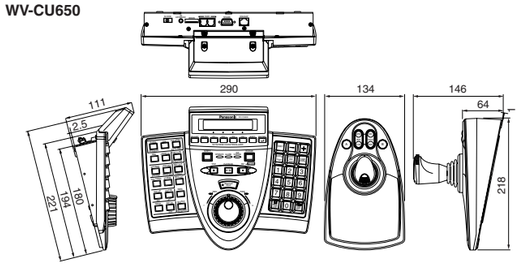
APPEARANCE

Unit: mm

WJ-SX150A
WJ-SX155

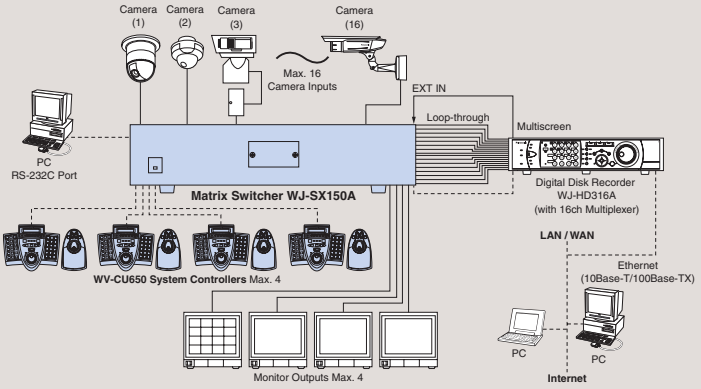


WV-CU650

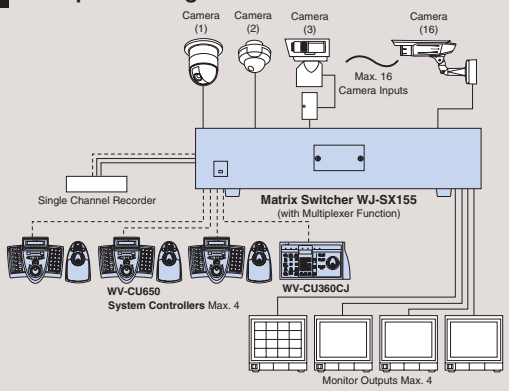


SYSTEM EXAMPLES

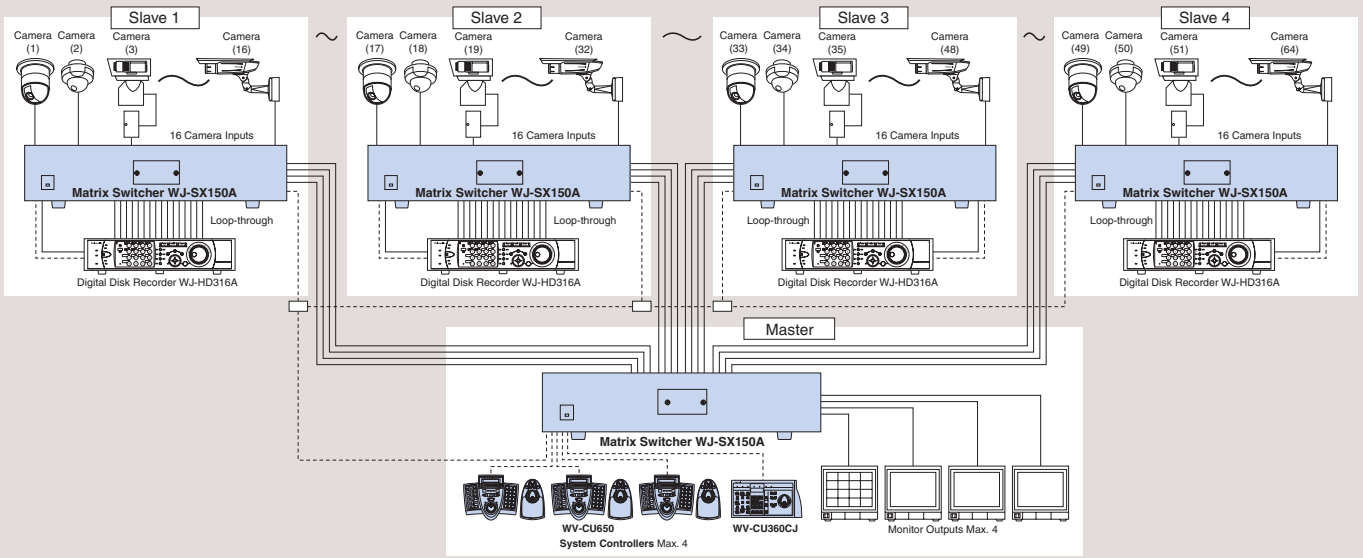
1 with optional Panasonic Digital Disk Recorder; WJ-HD300A Series



2 with optional Single Channel Recorder



3 support up to 64 Camera Systems



MATRIX SYSTEM150 PRODUCT COMPONENTS

16 Inputs
Matrix Switcher
WJ-SX150A

16 Inputs Multiplexer Integrated
Matrix Switcher
WJ-SX155

RS-485 System Controller
with 3D-Joystick & Jog/Shuttle
WV-CU650

RS-485 System Controller
with 3D-Joystick
WV-CU360CJ

Important
– Safety Precaution: carefully read the operating instructions and installation manual before using this product.

- 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.

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