BIG TIME SECURITY Up to 8,192 Cameras, 1,024 Monitors. Large Scale Matrix System850

For total security solutions bigger and better than ever before.

Panasonic now introduces the Matrix System850, opening a total whole new world to your CCVE system. Matrix System850's scalable, high-density modular architecture allows users to design systems of various different sizes up to 8,192 video inputs, 1,024 video outputs and 128 System controllers, and space-saving installation.

Flexible, scalable solutions, with standard, enhanced or high-speed CPUs. The standard CPU supports up to 512 inputs and 64 outputs. The enhanced CPU doubles the inputs to 1,024, and quadruples the outputs to 256. The high-speed CPU supports outstanding 8,192 inputs and 1,024 outputs. All system components are controlled through an Ethernet 10Base-T network.

Extended coverage is made possible by cable compensation circuitry which allows cables to be extended up to 1.2km long. Video, control and synchronization signals are all transmitted over a single coaxial cable, dramatically reducing both time and costs of installation. Control data can also be transmitted via separate RS-485 twisted pair cable for further extension.

Front access and hot swapping of the boards allow easy maintenance. An optional CPU management switch allows use of a backup Main CPU (MCPU-B) which automatically takes-over the operation when the MCPU-A encounters a problem.

Advanced features include system partitioning, Sequences & Group preset and alarm activations.

Controllers, cameras, monitors, alarms etc. can be partitioned flexibly, and priority for operators, controllers and alarms-operators are also programmable.

The Matrix System850 equips Tour SEQ, Group preset and Group SEQ. Tour SEQ allows users to view a series of images from different cameras on any monitor. Group preset is a useful tool to view related spots by multiple cameras at one time. Group SEQ enhances the ability by combining multiple Group SEQs and displays them sequentially. The Matrix System850 supports flexible alarm handling. Two alarm interfaces are available such as VMD of Panasonic cameras and terminal inputs. Each alarm can be assigned to a target which includes one or more monitors, and acknowledged, reset, disarmed and armed individually.

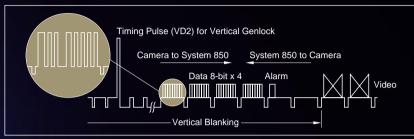
Ideal for big security needs.

Hotels, casinos, office buildings, rail and subway stations, stadiums, museums, shopping malls, and other secure installations-- wherever effective security requires a large-scale,total solution, the ideal choice is Panasonic and the **Matrix System850**.

Key Features

version 1.3

- Up to 8.192 video inputs, 1.024 video outputs, 128 System controllers
- Scalable, space-saving, high-density modular architecture
- Roll free switching thanks to Panasonic VD2 timing pulse
- Choice of three CPUs
 Standard: Up to 512 inputs, 64 outputs, and 16 System controllers
 Enhanced: Up to 1,024 inputs, 256 outputs, and 64 System controllers
 High Speed: Up to 8,192 inputs, 1,024 outputs, and 128 System controllers
- Ethernet 10Base-T network for system communication.
- Cable compensation circuitry enabling cable extension up to 1.2km long
- Control data and Timing Pulse (VD2) transmitted with video signal over a single coaxial cable or via separate twisted pair cable.



- Hot-swapping and front access maintenance
- Optional backup CPU for system reliability
- Ease of setup by Administration software
- Two grades controllers: Ethernet controller WV-CU850, RS485 Controller WV-CU350
- Flexible system partitioning
- Flexible alarm handling
- Tour SEQ, Group preset, Group SEQ
- Two alarm interfaces such as VMD of Panasonic cameras and terminal inputs.
- PC interface (Ethernet or RS232C) for system integration
- Centralized time and date generation



Major Functions

Area and System partitioning

The System850 allows users to create the Areas and partitioning.

An Area includes Monitors, Controllers, Tour SEQs, Group presets and Group SEQs.

All these items except controllers can have local number so that the user can select them by using simpler reference number such as monitor 1 instead of monitor 1.024 etc.

Flexible partitioning is also available as follows.

Controller-to-area

A Controller belongs to an area. It can not access the other areas

Only Super-user can access different areas.

Controller-to-monitor

Limits the monitors that can be selected by the Controller.

Controller-to-camera view

Limits the cameras that can be selected or controlled by the Controller.

Controller-to-camera control

Limits the cameras that can be controlled by the Controller.

Controller-to-Group SEQ

Limits the Group SEQ that can be launched by the Controller.

Controller-to-Alarm

Limits the alarms that can be controlled by the Controller.

Controller-to-Alarm I/O

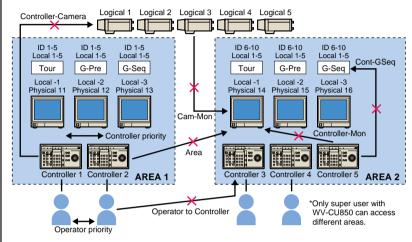
Limits the Alarm I/O ports that can be controlled by the Controller

Operator-to-Controller

Limits the Controllers that the operator can log on to.

Monitor-to-camera

Limits the cameras that can be shown on the monitor.



Priority

Operator

Each Operator has priority. When two Operators are trying to control same camera/monitor, only higher priority Operator is allowed.

Controller

Each Controller has priority. When two Controllers are trying to control same camera, only higher priority Controller is allowed.

Alarm-Operator

Each Alarm has priority. When an operator is trying to select a monitor which currently displays an alarm camera, the priority of alarm and operator effects the result.

Operator priority has higher priority than Controller priority

Alarm

The Matrix System850 supports flexible alarm handling. Each alarm is assigned to a Target which includes one or more monitors, and Tour sequences or camera spot with preset position can be programmed as alarm activation. Two alarm interfaces are supported such as VMD of Panasonic cameras and terminal inputs.

Example 1 SEQ mode

Target 1 includes monitor 1,2,3, and AL1-5 are set to Target 1 Target 2 includes monitor 4,5,6, and AL6-7 are set to Target 2

Administration software

AL1: Target 1: Cam 1: Dwell time 2 sec AL2: Target 1: Cam 2: Dwell time 2 sec

AL3: Target 1: Cam 3: Dwell time 3 sec AL4: Target 1: Cam 4: Dwell time 3 sec

AL5: Target 1: Cam 5: Dwell time 3 sec AL6: Target 2: Cam 6: Dwell time 2 sec Al 7: Target 2: Cam 7: Dwell time 2 sec

When AL1 - AL3 are activated..



When AL1, AL2, AL3 are activated successively, Cam1, 2 and 3 are displayed on Monitor 1, 2 and 3 respectively.

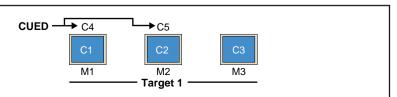
When AL1-AL7 are activated.



When AL4 and AL5 are, then activated successively, Cam1 and Cam 4 are displayed on Monitor1, Cam 2 and Cam 5 are displayed on Monitor 2 in sequence with programmed dwell time when Al 6 and Al 7 are activated Cam 6 and Cam 7 are displayed on Monitor 4 and Monitor 5 respectively.

Example 2 Hold mode

When multiple alarms are received in Hold mode,1st alarm camera is kept displayed on the assigned monitor while the system holds next alarm camera cued. The alarm camera which is cued and 1st alarm camera are displayed sequentially by selecting the alarm cued.



Tour SEQ, Group preset and Group SEQ

Combining presets with two types of sequence modes, System850 allows users to choose the combination that best suits user's building layout and work style. Sequence modes can be triggered automatically by alarms, allowing highly efficient surveillance of key points in widely distributed areas.

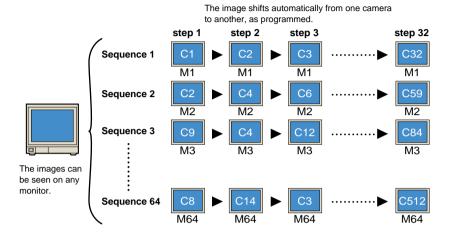
Tour Sequence

This mode automatically displays the images from programmed cameras sequentially on a monitor.

Sequences and Steps by Type of CPU

Туре	Standard	Enhanced	High-Speed
Sequences	64	128	256
Steps	32	64	128

The Standard CPU allows the use of up to 64 separate tour sequences, each including up to 32 steps. Camera positions and dwell times can be set separately for each step.



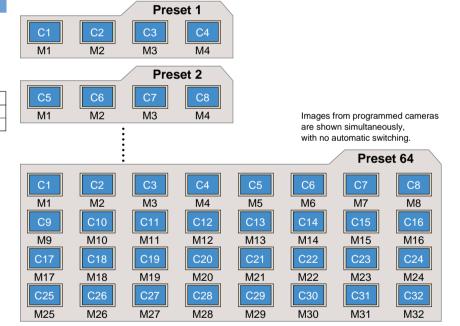
Group Preset

Images from programmed cameras are shown on a group of monitors, with no automatic switching involved.

Monitors and Presets by Type of CPU

Туре	Standard	Enhanced	High-Speed
Monitors	32	64	128
Presets	64	128	256
Presets	64	128	256

The Standard CPU allows the grouping of up to 32 monitors, in up to 64 separate preset. Camera preset position can be programmed separately for each of these presets.



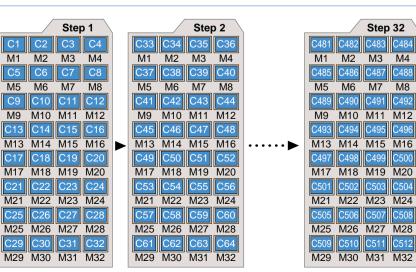
Group Sequence

Group sequence automatically shifts the images on a selected group of monitors to images transmitted from groups programmed groups of cameras.

Monitors, Sequences and Steps by Type of CPU

		•		
	Туре	Standard	Enhanced	High-Speed
	Monitors	32	64	128
	Sequences	64	128	256
	Steps	32	64	128

The Standard CPU allows the grouping of up to 32 monitors in up to 64 sequences with up to 32 steps in each sequence. Camera positions and dwell times can be set separately for each step



All of the images shown on the monitors switch simultaneously

Step 32

System Controllers

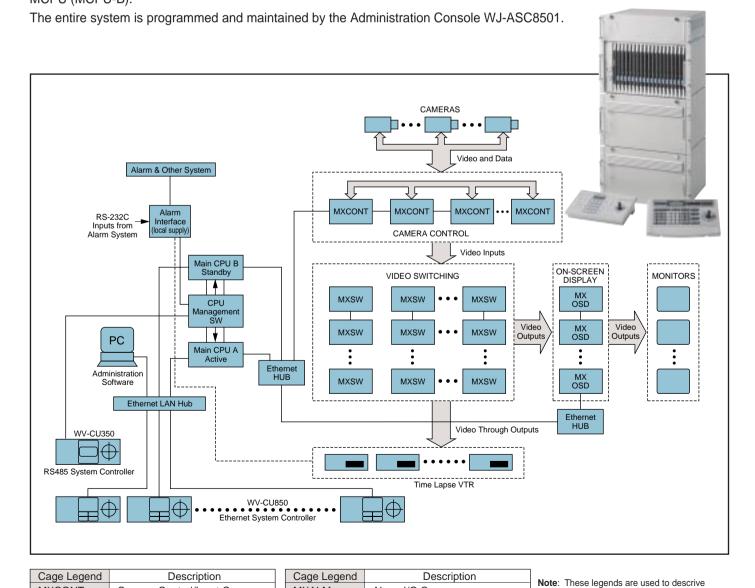
The chart bellow is the system diagram of the Panasonic *System850*. The camera video signals are input to the Camera Control/Input Cages (MXCONT) that include the Multiplex Video Input Boards (WJ-PB85X08) with the Character Generator Daughter Boards and/or the RS-485 Data Communication Boards (WJ-PB85R08). A MXCONT can have up to 128 video inputs and the system can be expanded up to 8,192 video inputs by adding MXCONTs. The signals are then supplied to the Crosspoint Switch Cages (MXSW) that include the Video Cross Point Input Boards (WJ-PB85C16) and the Video Cross

Point Output Boards (WJ-PB85M16). A MXSW can have up to 256 video inputs/32 video outputs and the system can be

expanded up to 8,192 inputs/1,024 outputs by adding MXSWs. The video signals are routed to the output terminals of the Cross Point Output Boards according to camera/monitor selection operations and supplied to the Monitor OSD Boards in the Monitor OSD/Output Cages (MXOSD). A MXOSD can have up to 128 video outputs and the system can be expanded up to 1,024 video outputs by adding MXOSDs. In the MXOSDs, system status characters are appended to the video signals and the signals are supplied to monitor displays. Cameras can be controlled by Multiplex Video Input Boards (WJ-PB85X08) via single coax or RS485 Data communication Boards (WJ-PB85R08) via RS-485.

The System850 is controlled by either Ethernet System Controller (WV-CU850) or RS-485 System Controller (WV-CU350). The system communication is managed via 10 Base-T Ethernet and an external ethernet port enables integrations with external system such as Card access, Fire alarm, and Intrusion detection.

Three grades are available for Main CPU unit such as Standard Main CPU Unit (WJ-MPU850), Enhanced Main CPU Unit (WJ-MPU855) and High Speed Main CPU unit (T.B.A.). Two Main CPU units can be equipped for system reliability. When a failure happens in one MCPU (MCPU-A), CPU Management Switch (WJ-MPS850) switches the system control to the other MCPU (MCPU-B)



Alarm I/O Cage

Loop Through/Passive Input Cage

cages by function.

They are not product names nor Model No

MXALM

MXLPT

MXCONT

MXSW

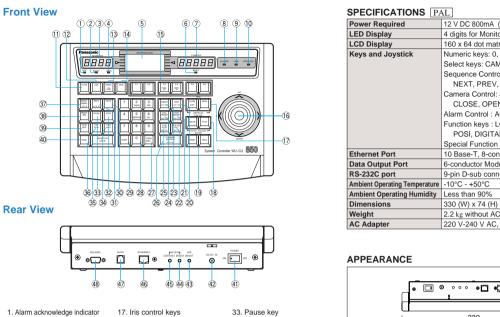
MXOSD

Camera Control/Input Cage

Crosspoint Switch Cage

Monitor OSD/Output Cage

Ethernet System Controller WV-CU850



36. Monitor key 37. Group preset key 38. Group sequence key

39. Tour sequence key

42. DC12V Input Jack 43. LED Brightness Control 44. LCD Brightness Control

35. DC 9V Input Jack

40. OSD key 41. Power Switch

- 33. Pause key 34. Forward run key 35. Reverse run key 17. Iris control keys
- 3. Monitor LED display 19. Zoom control kevs 20. Area key 21. Program preset key 4. Monitor lock indicato
- 6. Camera busy indicator
- 7 Camera I ED display
- Link indicator 10. Operate indicator
- 12. Alarm key
- 13 Alarm reset key 14. Alarm arm key 15. Function keys
- 16. Joystick controlle

11. Focus buttons

- 32. Stop key
- 28. Numeric keys 29 Shift key 30. Next key 31. Previous key

22. Digital output key

Camera position key

26 Camera/Enter key Clear/Escape key

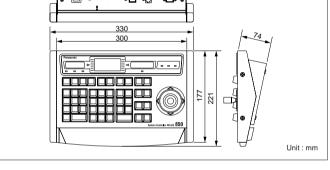
23. Log out key

45 LCD Contrast Control 48 RS-232C Por

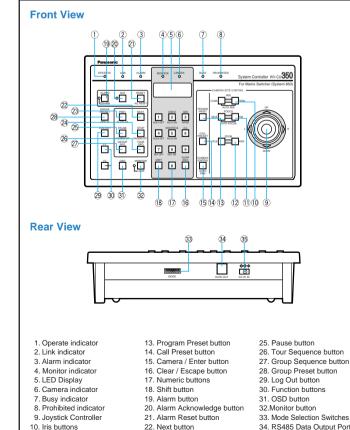
V DC 800mA (Use exclusive AC Adapter supplied with the controller.) 4 digits for Monitor, 5 digits for Camera 160 x 64 dot matrix Numeric keys: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, SHIFT, CLEAR Select kevs: CAMERA, MONITOR Sequence Control: GROUP PRESET, GROUP SEQ, TOUR SEQ NEXT, PREV, STOP, PAUSE, FWD RUN, REV RUN Camera Control: Joystick pan-tilt (Variable speed) CLOSE, OPEN, NEAR, FAR, WIDE, TELE Alarm Control : ACK, ALARM, RESET, ARM Function kevs : LOGOUT, AREA, CALL PRESET, PGM PRESET, CAM POSI, DIGITAL OUT, OSD pecial Function keys: F1, F2, F3, F4, F5, F6 0 Base-T. 8-conductor Modular Jack 6-conductor Modular Jack (RS-485, Full Duplex 30 (W) x 74 (H) x 221 (D) mm 2.2 kg without AC Adapter 220 V-240 V AC, 50Hz

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SPECIFICATIONS DAT



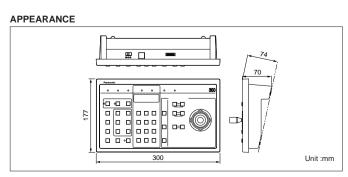
RS485 System Controller WV-CU350



23. Previous buttor

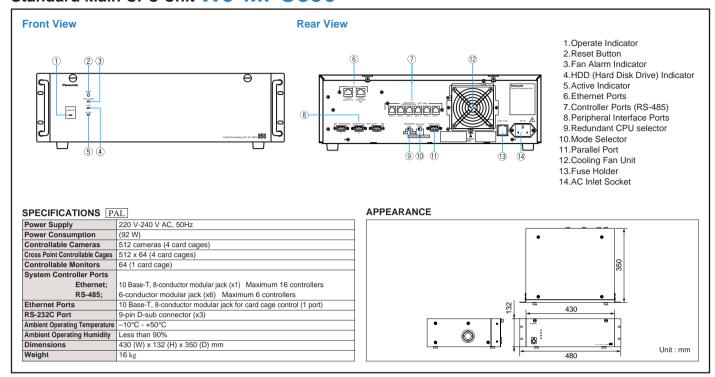
24. Stop button

Power Required	9 V DC 400 mA (use exclusive AC adaptor supplied with the controller)		
Data Output Port	6-conductor Modular Jack (RS-485, Full Duplex)		
Switching Functions	Tour Sequence / Group Sequence / Forward Sequence /		
	Backward Sequence / Forward Step / Reverse Step		
Switching Functions	Sequence: Spot / Multiscreen		
	Display Mode: Multiscreen / Still / Electronic Zoom		
Camera Functions	Electronic Shutter: On / Off, Shutter Speed Select		
	Electronic Sensitivity Up Mode Select: Auto / Manual / Off		
	ALC / ELC: ALC / ELC or Manual		
	Automatic Gain Control: On / Off		
	White balance: ATW / AWC		
	Back Light Compensation: Auto / Preset / Off		
	Site Alarm (Motion Detector): On / Off		
	Site Alarm (Motion Detector) Display Mode: On / Off		
Lens Functions	Iris: Open / Close / Preset (only with DC control lens)		
	Focus: Near / Far Zoom: Tele / Wide Auto Focus: Activate		
Housing	Wiper: On / Off, Defroster: On / Off		
Pan / Tilt	Manual Pan: Right / Left, Manual Tilt: Up / Down		
	Auto Pan: On / Off, Random Pan: On / Off, Preset, Home		
Auxiliary Switch	AUX 1 - 2: On / Off		
Ambient Operating Temperature	−10°C - +50°C		
Ambient Operating Humidity	Less than 90%		
Dimensions	300 (W) x 74 (H) x 177 (D) mm		
Weight	1.3 kg without AC Adapter		
AC Adapter	220 V-240 V AC. 50Hz		

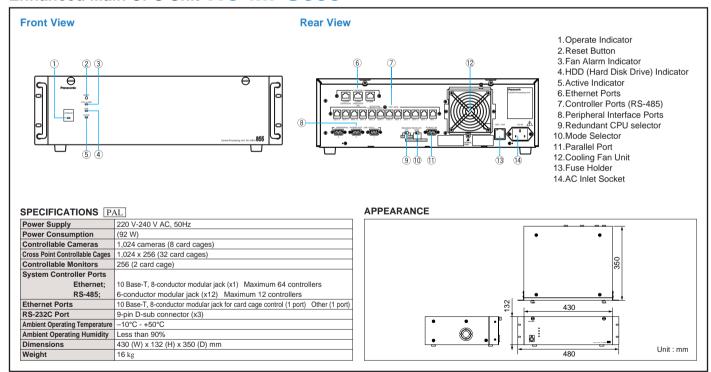


CPU Product Components Cages/Cables Product Components

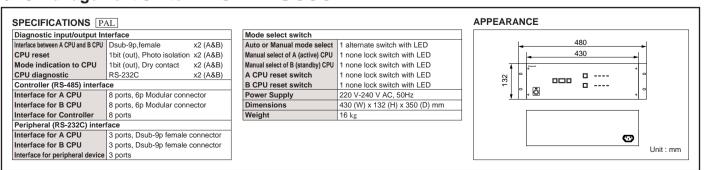
Standard Main CPU Unit WJ-MPU850



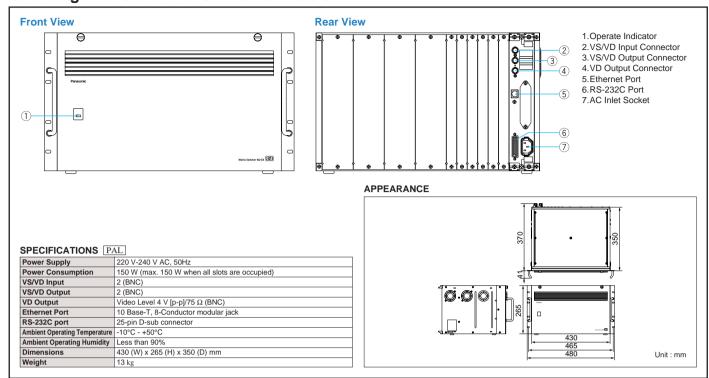
Enhanced Main CPU Unit WJ-MPU855



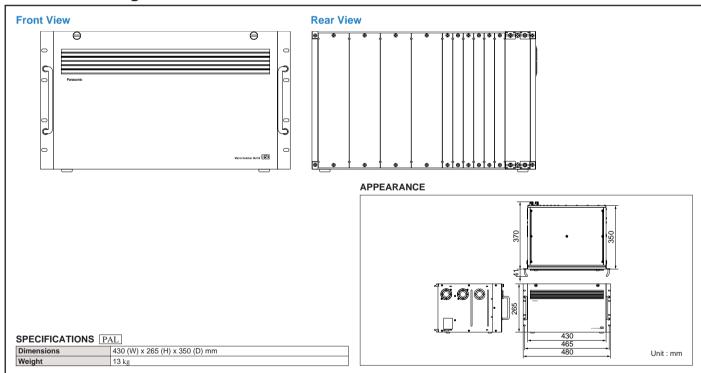
CPU Management Switch WJ-MPS850



Card Cage w/PS and LCPU WJ-SX850

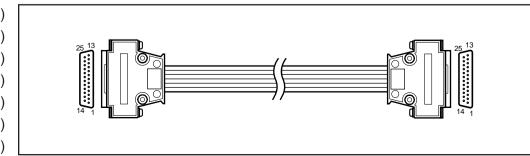


Passive Card Cage WJ-BX850



Multiple Video Cables

WJ-CA85L05 (0.5 m)
WJ-CA85L10 (1.0 m)
WJ-CA85L15 (1.5 m)
WJ-CA85L20 (2.0 m)
WJ-CA85L25 (2.5 m)
WJ-CA85L30 (3.0 m)
WJ-CA85L50 (5.0 m)

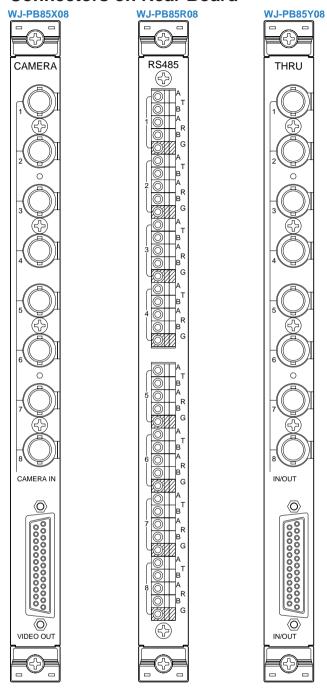


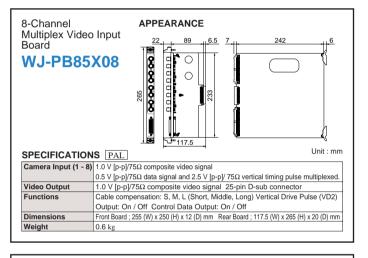
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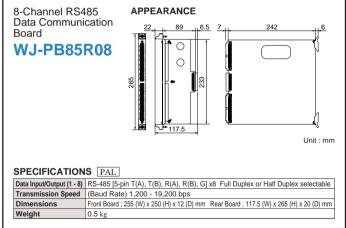
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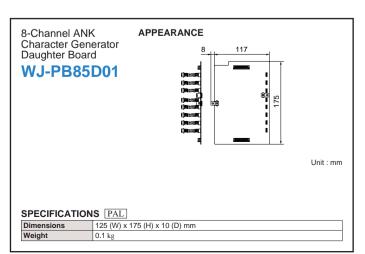
Boards Product Components

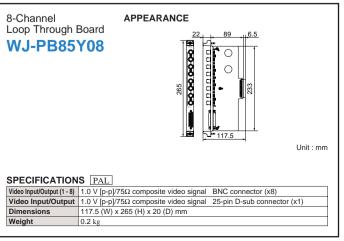
Connectors on Rear Board



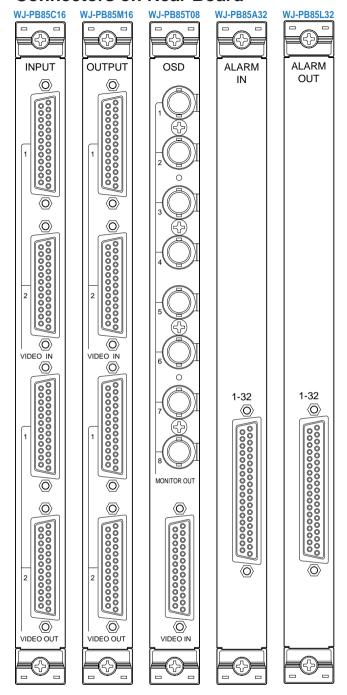


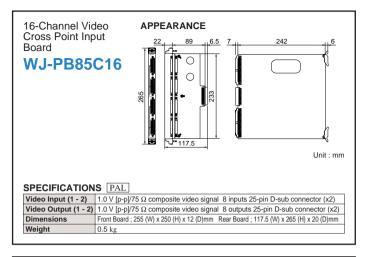


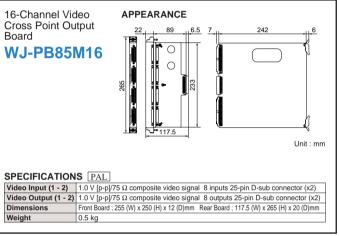


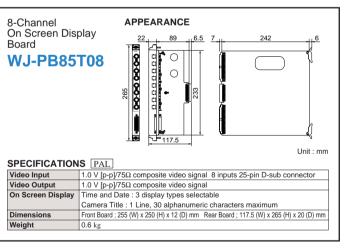


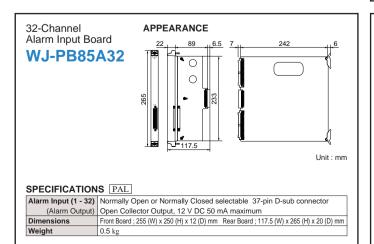
Connectors on Rear Board

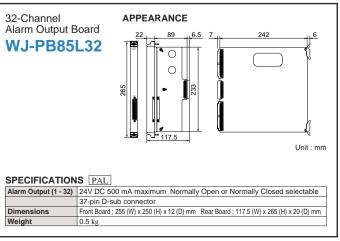












10

WJ-ASC8501





Camera setup menu





Group sequence setup menu



Alarm setup menu



The *WJ-ASC8501 administration software* is principally used to configure the system850, program its functions such as Tour SEQ, Group Preset and Alarm, and back up entire data of System850. Programming of the WJ-ASC8501 includes camera, controller, monitor, alarm I/O, alarm, operator, tour seq, group preset, group seq, card cage and grade of CPU.

Camera setup menu determines logical channel ID, control port, video port, type of the camera, cable compensation and camera title.

Group SEQ setup menu determines area, local group seq ID, and group seq steps. Corresponding monitor numbers are also displayed in the group seq setup menu.

Alarm setup menu provides logical alarm number, priority, alarm source, action of alarm, acknowledge/reset mode, arm/disarm and dwell time for multi-alarm sequence.

Alarm target menu allows you to program assignment of alarms and targets, assignment of targets and monitors and hold/sequence mode.

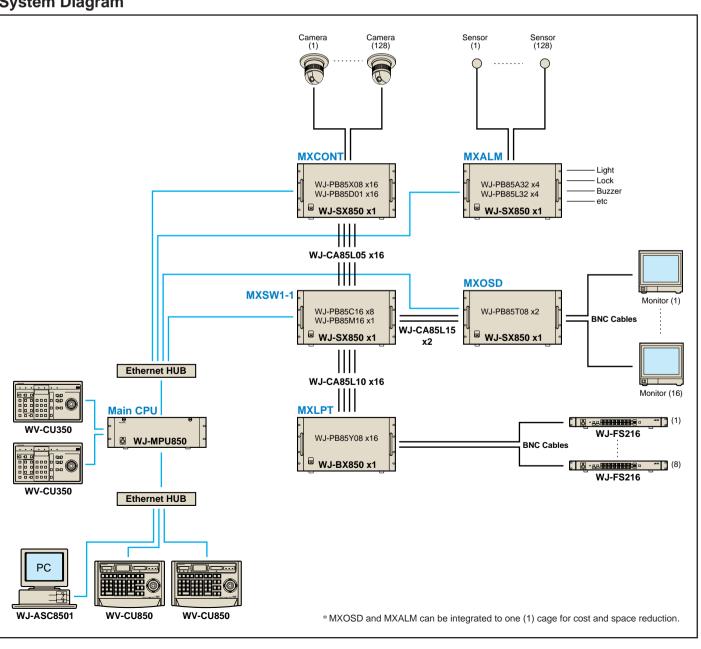
Data base manager, Account manager, AC log and Log manager are also available for advanced administration. Trademark: Windows and Windows NT are trademarks of Microsoft Corporation in the U.S.A and other countries.

MODEL No.	Description	Q'ty
WJ-SX850	Card Cage w/PS and LCPU	4
WJ-BX850	Passive Card Cage	1
WJ-PB85X08	8ch Multiplex Video Input Board	16
WJ-PB85D01	8ch ANK Character Generator	16
WJ-PB85Y08	8ch Video Loop Through Board	16
WJ-PB85C16	16ch Video Cross Point Input Board	8
WJ-PB85M16	16ch Video Cross Point Output Board	1
WJ-PB85T08	8ch Monitor OSD Board	2
WJ-PB85A32	32ch Alarm Input Board	4
WJ-PB85L32	32ch Alarm Output Board	4
WJ-MPU850	Standard Main CPU Unit	1
WV-CU850	Ethernet System Controller	2
WV-CU350	RS485 System Controller	2
WV-ASC8501	Administration Software	1
WJ-CA85L05	0.5 m Multiple Video Cable	16*
WJ-CA85L10	1.0 m Multiple Video Cable	16*
\\\\ \C \\ \\ \ \ \ \ \ \ \ \ \ \ \ \	1.5 m Multiple Video Cable	2*

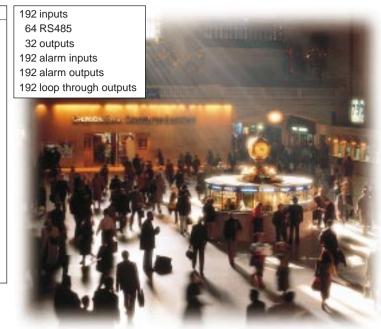
VJ-CA65L15	1.5 m Multiple video Cable
Cable Length de	pends on the cage layout.



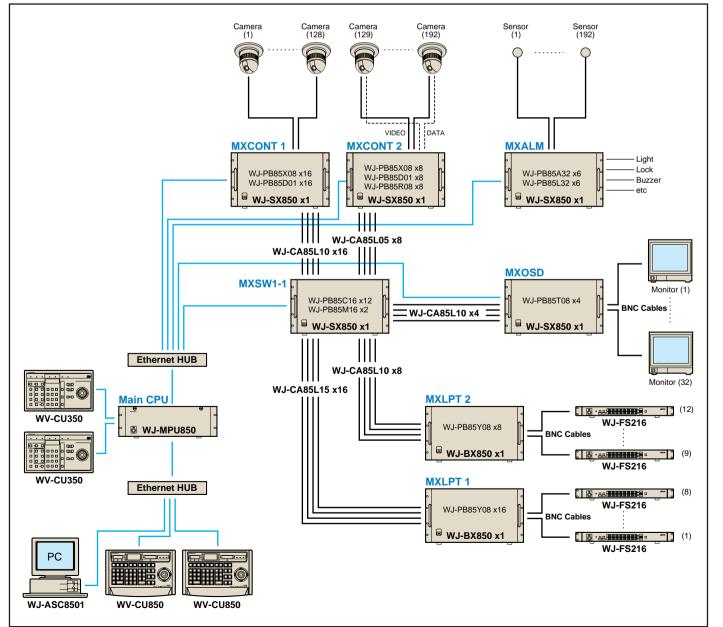
System Diagram



MODEL No.	Description	Q'ty
WJ-SX850	Card Cage w/PS and LCPU	5
WJ-BX850	Passive Card Cage	2
WJ-PB85X08	8ch Multiplex Video Input Board	24
WJ-PB85D01	8ch ANK Character Generator	24
WJ-PB85R08	8-Ch RS485 Data Communication Board	8
WJ-PB85Y08	8ch Video Loop Through Board	24
WJ-PB85C16	16ch Video Cross Point Input Board	12
WJ-PB85M16	16ch Video Cross Point Output Board	2
WJ-PB85T08	8ch Monitor OSD Board	4
WJ-PB85A32	32ch Alarm Input Board	6
WJ-PB85L32	32ch Alarm Output Board	6
WJ-MPU850	Standard Main CPU Unit	1
WV-CU850	Ethernet System Controller	2
WV-CU350	RS485 System Controller	2
WV-ASC8501	Administration Software	1
WJ-CA85L05	0.5 m Multiple Video Cable	8*
WJ-CA85L10	1.0 m Multiple Video Cable	28*
WJ-CA85L15	1.5 m Multiple Video Cable	16*



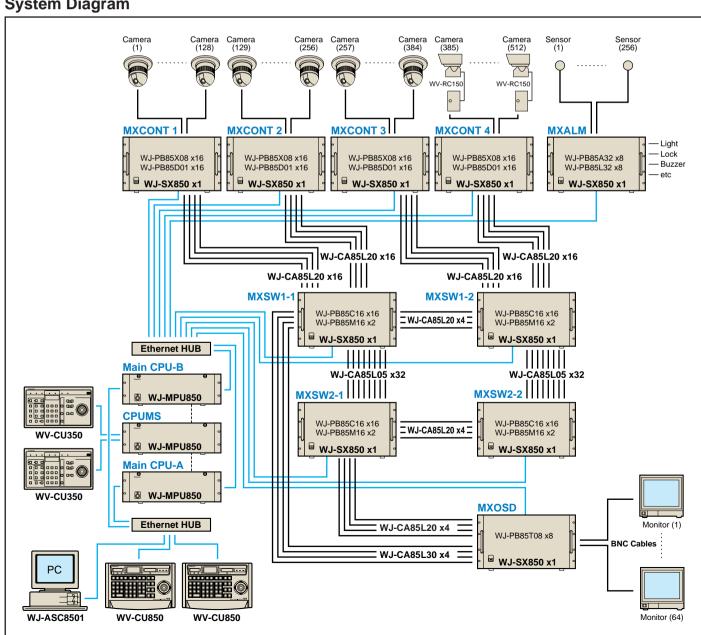
System Diagram



MODEL No.	Description	Q'ty	
WJ-SX850	Card Cage w/PS and LCPU	10	
WJ-PB85X08	8ch Multiplex Video Input Board	64	
WJ-PB85D01	8ch ANK Character Generator	64	
WJ-PB85C16	16ch Video Cross Point Input Board	64	
WJ-PB85M16	16ch Video Cross Point Output Board	8	
WJ-PB85T08	8ch Monitor OSD Board	8	
WJ-PB85A32	32ch Alarm Input Board	16	
WJ-PB85L32	32ch Alarm Output Board	16	
WJ-MPU850	Standard Main CPU Unit	2	
WJ-MPS850	CPU Management Switch	1	
WV-CU850	Ethernet System Controller	2	
WV-CU350	RS485 System Controller	2	
WV-ASC8501	Administration Software	1	
WJ-CA85L05	0.5m Multiple Video Cable	64*	
WJ-CA85L20	2m Multiple Video Cable	76*	
WJ-CA85L30	3m Multiple Video Cable	4*	
* Cable Length depends on the cage layout.			

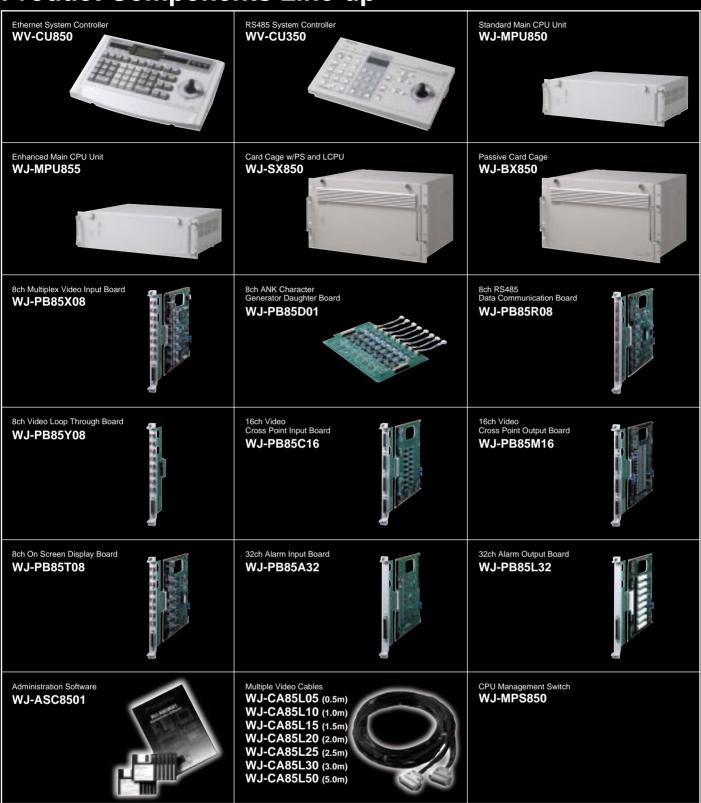


System Diagram



^{*} Cable Length depends on the cage layout.

Product Components Line-up



• 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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