Panasonic

ideas for life

Matrix System 500

WV-CU550CJ

WJ-SX550C

WJ-AD550

WV-AS500

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 CCVE 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 VTRs, monitors and peripheral products into a comprehensive CCVE 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-CS850B Series and all the on-board electronic functions of Panasonic's intelligent CCD cameras: WV-CP470/ CP240 and WV-BP140 Series.
A built-in cable compensation circuit for every input channel provides high quality picture, control and synchronization up to 1,200 m with 5C-2V 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-CU550CJ. 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 input is possible.
The on-screen graphic menu programming, enables real time system status and, user-friendly operations.
VTR 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.

MATRIX SYSTEM 500

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 accessories are processed through the receiver
- All camera inputs are equipped with cable compensation for up to 1,200 m on 5C-2V

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 friendry 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

VTRS
- Synchronized time & date between Matrix display and VTR
- VTR 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

Card Cage
WJ-AD550

Matrix Main Unit
WJ-SX550C

System Controller
WV-CU550CJ

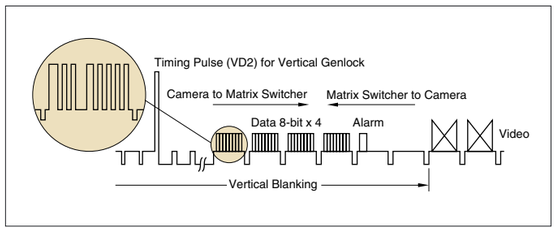
Single Coaxial Cable

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-BP330 Series** **WV-BP140 Series**
Colour Cameras	**WV-CP470 Series** **WV-CP240 Series** **WV-CL920A Series**
Integrated Dome Cameras	**WV-CS850B Series**
All Weather Dome Cameras	**WV-CW860A Series**
Vandal Proof Colour Cameras	**WV-CW474AF, WV-CW240 Series**

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-CS850B Series, intelligent cameras such as WV-CP470/CP240 and WV-BP140 Series, and pan / tilt / zoom lens functions through optional receivers WV-RC100/WV-RC150 and WV-RC170. Alarm signals received from the WV-CS850B Series or the WV-RC100/150/170 at the camera site can be transmitted to Matrix over a single coaxial cable to activate alarm events, preprogrammed in the system.



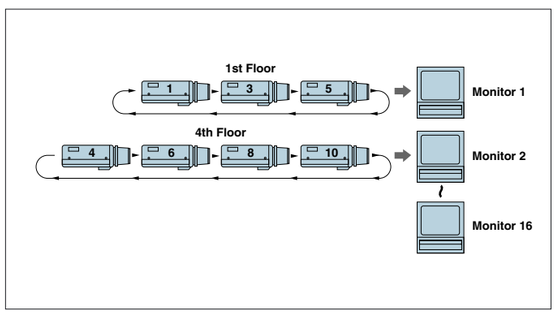
In addition, built-in cable compensation circuitry enables camera control and synchronization on 5C-2V at distances of up to 1,200m.

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 trigger or timer schedule automatically.

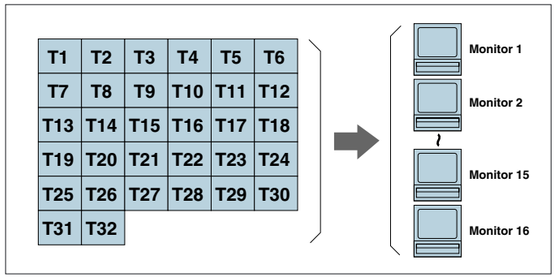
Programme Sequence

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



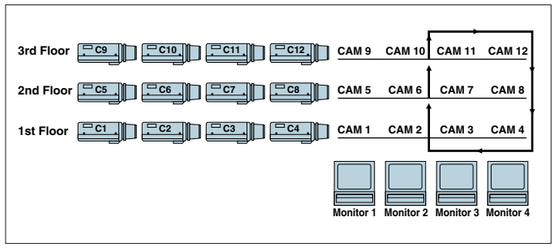
Tour Sequence

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

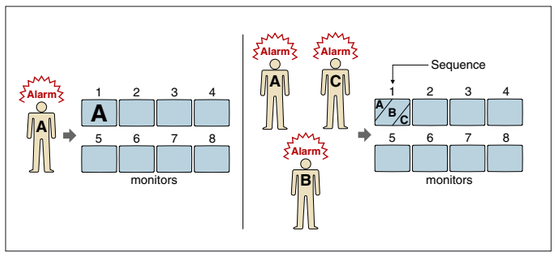
Panasonic's VD2 compatible cameras are completely synchronized to the Matrix System 500 and provide roll free switching for up to 128 cameras. It provides reliable viewing and recording to capture critical events.

Multiple Alarm modes

Three alarm modes are available.

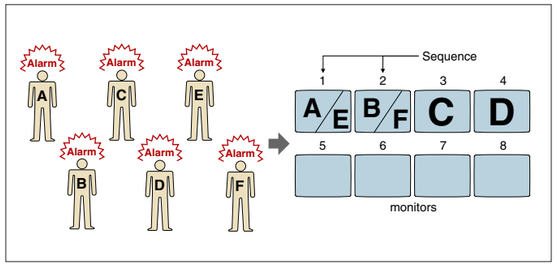
Alarm Mode 1: Any alarms to 1 monitor

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.



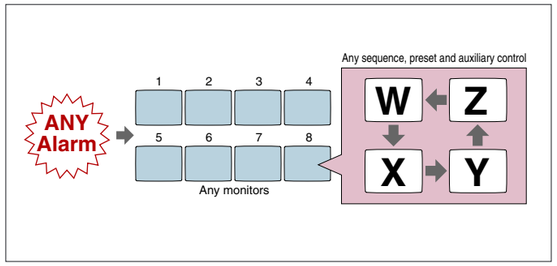
Alarm Mode 2: Any alarms to 4 monitors

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.

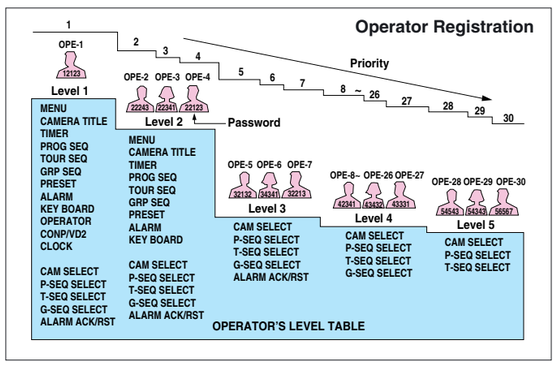


Alarm Interface

- 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/WV-RC170) over a single coaxial cable.
- VTR 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.

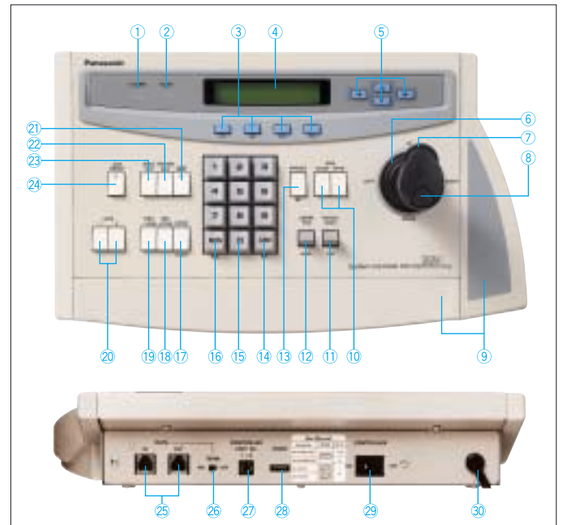
Examples of Menus

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

WV-CU550CJ; Easy-To-Operate Multiple Function Controller

The ergonomically designed controller WV-CU550CJ can be used for set up, camera control and video routing. Two line character LCD display and function keys provide simple and easy operation. The palm rest on the right hand side of the controller allows comfortable operation for long periods of time. The zoom lever and function keys positioned near the joystick make it easy to combine zooming with changes of lens angle, support one-touch camera number switching, and facilitate smooth operation of the lens autofocus feature.



① Alarm Indicator
② Busy Indicator
③ Function Buttons
④ LCD Display
⑤ Direction Buttons
⑥ Joystick Controller
⑦ Zoom Wheel Controller
⑧ Top Button
⑨ Palm Rest
⑩ Iris Control Buttons
⑪ Focus Control
⑫ Zoom Control
⑬ Auto Focus Button
⑭ Camera(Set) Key
⑮ Numeric Keys
⑯ Monitor(Escape) Key
⑰ Stop/Slow Button
⑱ Increment Button
⑲ Decrement Button
⑳ Auxiliary Buttons
㉑ Alternate Button
㉒ Forward Sequence Button
㉓ Backward Sequence Button
㉔ Alarm Acknowledge and Reset Button
㉕ Data Ports
㉖ Termination Switch
㉗ Controller Unit Number Switch
㉘ Mode Selection Switch
㉙ Controller On/Off Switch
㉚ Power Cord

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.

External Devices

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

VTR Control

VTR 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 VTR's is also possible using Panasonic time-lapse VTRs. Camera switching for time-lapse recording can be synchronized through an external timing pulse.

Card Cage
WJ-AD550

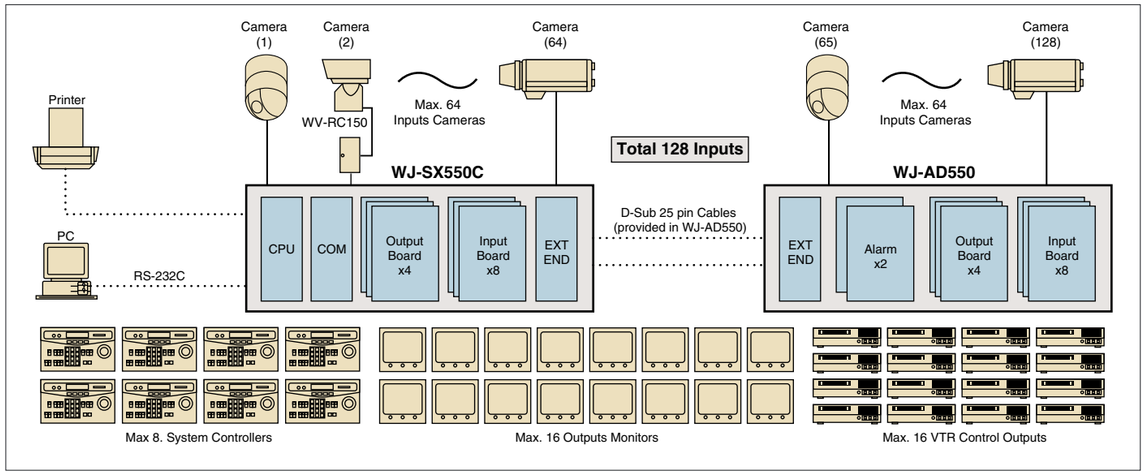
Matrix Main Unit
WJ-SX550C

System Controller
WV-CU550CJ

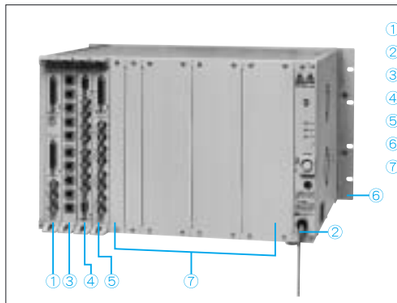
Flexible System Configuration

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-CU550CJ controllers, 16 monitors and 16 VTR control outputs can be connected to the system 500.

• System Configuration



• Standard Configuration of Main Unit; WJ-SX550C

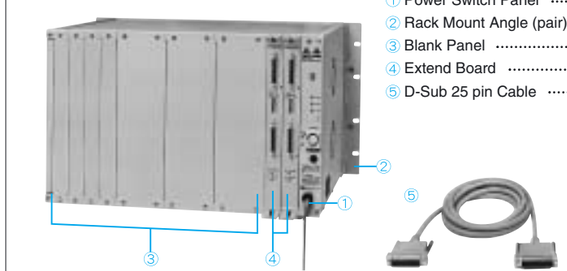


① CPU Board 1
② Power Switch Panel 1
③ Control Board 1
④ 8 ch Video Input Board (WV-PB5508) 1
⑤ 4 ch Video Output Board (WV-PB5504A) ... 1
⑥ Rack Mount Angle (pair) 1
⑦ Blank Panel 5

• Standard Configuration of System Controller; WV-CU550CJ

① System Controller (WV-CU550CJ) 1
② Controller Cable 1

• Standard Configuration of Optional Card Cage; WJ-AD550



① Power Switch Panel 1
② Rack Mount Angle (pair) 1
③ Blank Panel 7
④ Extend Board 2
⑤ D-Sub 25 pin Cable 2

• Options for the Matrix System 500

- System Controller; WV-CU550CJ
- 8 ch Video Input Board; WV-PB5508
- 4 ch Video Output Board; WV-PB5504A
- 64 ch Alarm Input Board; WV-PB5564
- Data Board; WV-PB5548
- Blank Panel; WV-Q63
- Loop-through Cable; WV-CA64

WV-PB5508 WV-PB5504A WV-PB5564 WV-PB5548 WV-Q63 WV-CA64

Matrix System 500 Specifications

Matrix Main Unit 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-CU550CJ) RS-232C: 25 pin D-Sub 25 Printer: 25 pin D-Sub 25 Time Adjust In (from VTR): 2 pin Pair-Cable VD/VS In/Out: 2 (BNC) VD Out: Video Level 4 V[p-p]/75 Ω (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) Time Event is common.
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
Power Source / Consumption	220 - 240 V AC, 50 Hz / Approx. 20 W (Max. 75 W at full board configuration)
Dimensions	480 (W) x 265 (H) x 371 (D) mm
Weight	13.5 kg
Option	Blank Panel WV-Q63

Matrix System Controller WV-CU550CJ

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, Camera Select Controller Mode Selectable Switch
Max. Cable Length	1,200 m
Ambient Operating Temperature	–10°C - +50°C
Power Source / Consumption	220 - 240 V AC, 50 Hz / 5 W
Dimensions	370 (W) x 74 (H) x 221 (D) mm

Optional Surveillance Cameras

Super Dynamic II
Colour Dome Cameras
WV-CS850B Series

Weather Proof &
Vandal Resistant
Colour Dome Cameras
WV-CW860A Series

Vandal Proof
Super Dynamic II Colour Camera
WV-CW474AF

Super Dynamic II
Colour Surveillance Cameras
WV-CP470 Series

Lens: optional

1/3-type DSP
Colour CCD Cameras
WV-CP240 Series

Lens: optional

Video Input Board WV-PB5508

Video Inputs	Number of Input: 8 (BNC) Video Level: 1 V[p-p]/75 Ω
Video Output	Number of Output: 8 (Active Loop-through) Connector Type: 9 pin D-Sub 9 x 2 Video Level: 1 V[p-p]/75 Ω
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]/75 Ω
VTR Interface	Number of Alarm Out: 4 Ext. Tim. In: 4 Number of Reset Out: 4 Recover In: 4 Connector Type: 25 pin D-Sub 25 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

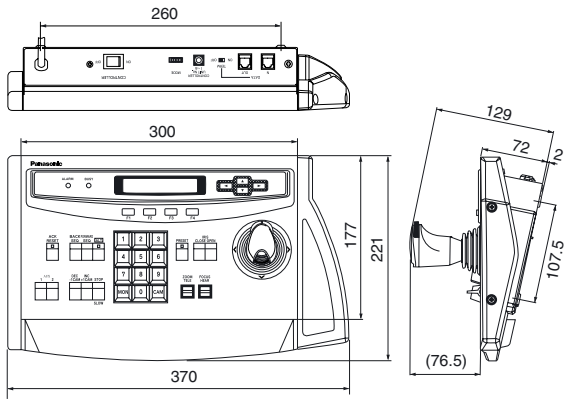
Data Input / Output (1 - 8)	RS-485 (Full Duplex or Half Duplex, selectable inside the switch) [5-pin T (A), T (B), R (A), R (B), GND] x 8 use with 2 shielded, twisted pairs data cable Transmitting Speed (Baud Rate): 1,200 - 19,200 bps
Max. Cable Length	1,200 m
Max. Number Boards	8 (Address 1 - 8, Total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

Alarm Input Board WV-PB5564

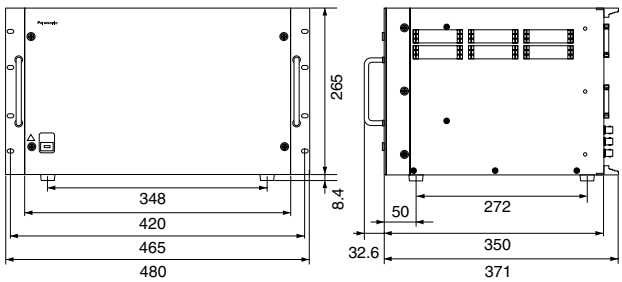
Alarm Input	Number of Alarm Input: 64 Connector Type: 37pin D-Sub 37 x 2 Type: Normal Open / Normal Close Selectable

Appearance

WV-CU550CJ



WJ-SX550C/WJ-AD550



Unit: mm

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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Panasonic

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