PTZ Dome Analog Camera

WV-CW590/CW594 (Outdoor)
WV-CS580/CS584 (Indoor)

WV-CW590/CW594

WV-CS580/CS584

2011.Nov.10

Security & AV Systems Business Unit
Panasonic System Networks Company

Key Features

- **Super Dynamic 6** (Powered by New “SR” processor)
- **36x Optical Zoom Lens**
- **Horizontal Resolution 650TV lines (Typ. @Color/BW)**
- **Ambient Operating Temperature**
  CW590: -50 deg C ~ +50 deg C (-58 deg F ~ +122 deg F)
  (When power is on continuously)
  CS580: -10 deg C ~ +50 deg C (14 deg F ~ +122 deg F)
- High Sensitivity 0.5lx(color)/0.04lx(BW) @F1.4
- Electronic Sensitivity UP 32x max. (AUTO) / 512x max. (Manual)
- Digital Zoom 20x
- Panasonic Protocol, Pelco-D/P Protocol Support
- Day/Night function (IR cut filter removable)
- PAN/TILT Turning Speed 0.065deg/sec ~ 400deg/sec
- TILT Angle -5deg ~ +185deg
- IP66 Water and Dust Resistance (CW590)
- Reduce Power Consumption
  4.6W (CS580) , 13W(CS950: conventional)

WV-CW590/CW594

WV-CS580/CS584

SR image processor (Panasonic Original DSP)

- SR processor is designed for new lineup of analog camera.
- New DSP enables all models to have both superior realistic image and high cost performance.

Superior feature

SD6 Super Dynamic

- Super Wide Dynamic + Enhanced ABS

Advanced features

- Hyper Resolution
- Color Reproducibility
- Proactive 2D/3D-DNR
- Enhanced ABS
- Lens Distortion Compensation
- Electrical Sense Up 512x
- On Screen Display Menu
- Auto Tracking
- Scene Change Detection
- Auto Image Stabilizer

Basic features

- Horizontal resolution 650 lines
- Min. illumination 0.008 lx (Box and Dome, Day&Night(IR), B/W)

Super Dynamic 6

Super Dynamic 6 delivers Superior image by fusion of Super Dynamic with non-linear combination algorithm and Enhanced ABS (Adaptive Black Stretch) by DTCC (Dynamic Tone Curve Control), so can provide more natural bright and dark graduation and color reproducibility.

Super Dynamic 6 = Super Dynamic + Enhanced ABS

Iris is set for indoor. Outdoor image is washed out.

Iris is set for outdoor. Indoor Image is too dark.

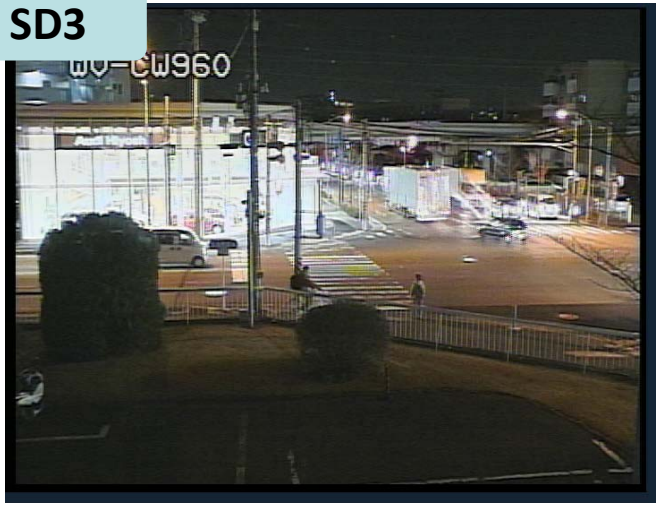
Both bright area and dark area are clearly visible.

SD6 image quality

natural bright and dark graduation in low brightness and high brightness area is improved.

SD6

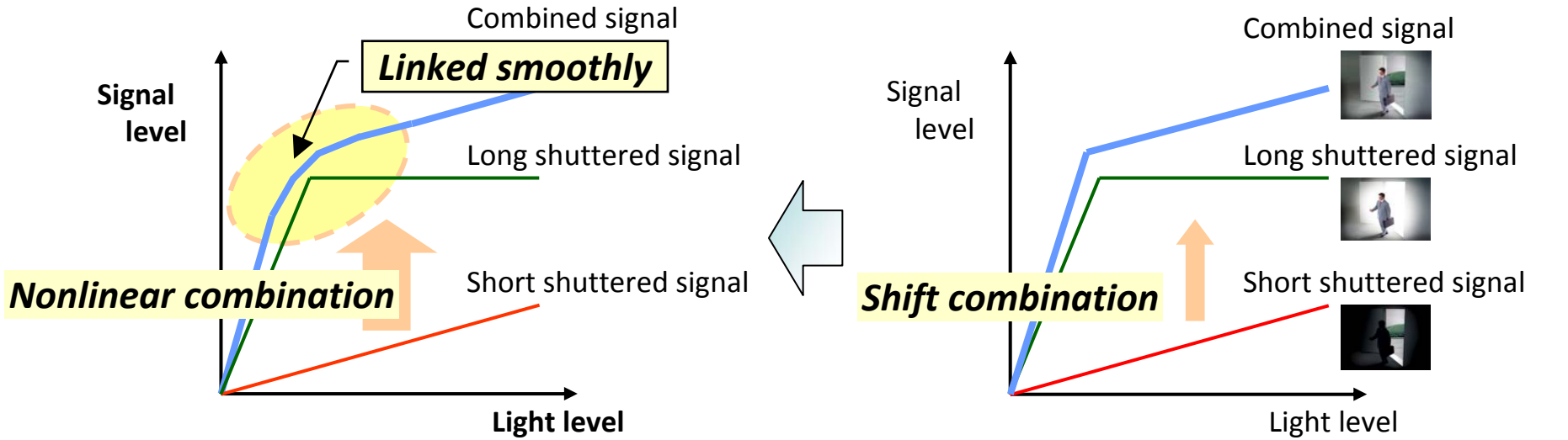
SD3

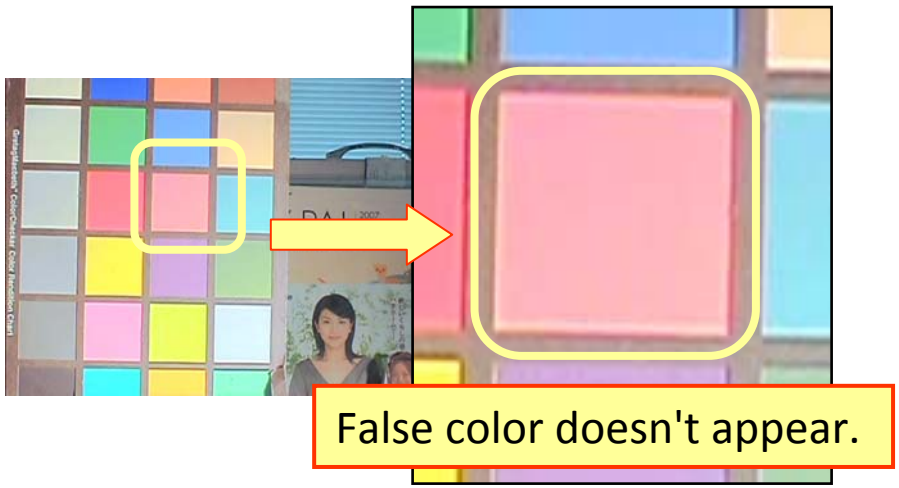


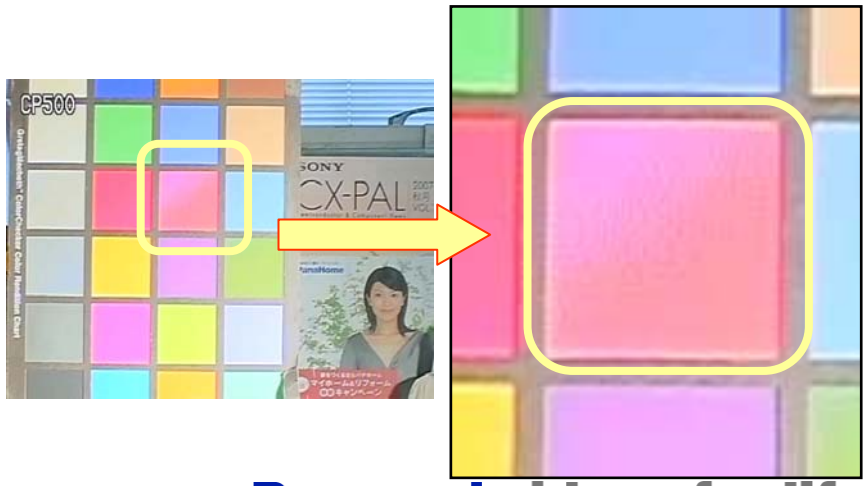
The grass and inside of building can be seen more.

SD6 Technology: Nonlinear combination

Nonlinear combination algorithm linked short shuttered signal and long shuttered signal smoothly. This technology provide more natural color reproducibility.

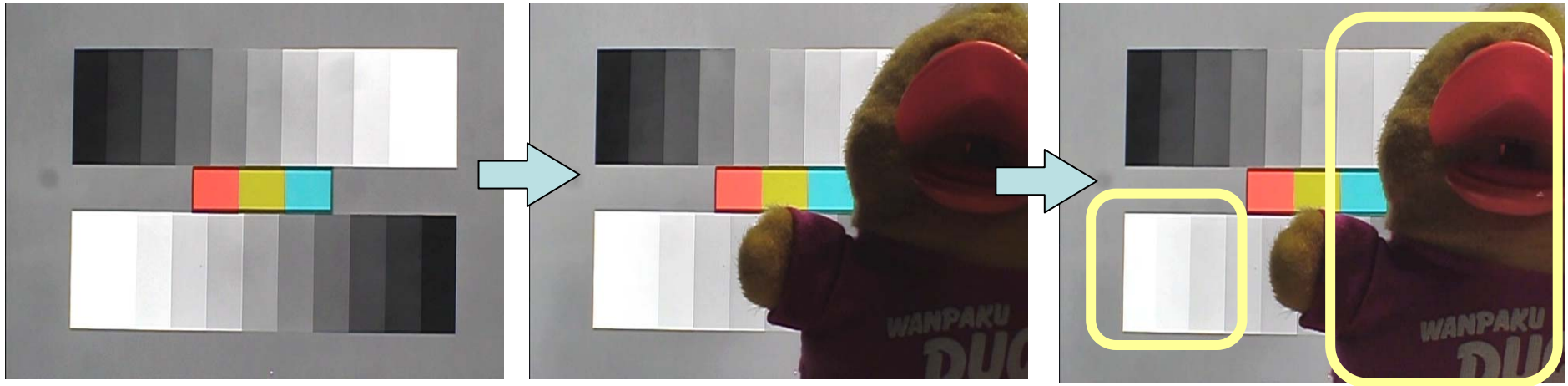






SD6 Technology: Enhanced ABS

Enhanced ABS (Adaptive Black Stretch) provide more natural bright and dark graduation depending on the situation by DTCC (Dynamic Tone Curve Control).



The gain of the background is down and the gain of the doll is raised corresponding to the image change.

Enhanced ABS in real time compensates the graduation in each pixel according to changes in the environment, and provide the best brightness for image object.

*The conventional model only processed a fixed gain to the image.

Color reproducibility

Color reproducibility has improved.
It can provide superior surveillance where color reproducibility is important such as casinos.

at Color temperature 2500K

New

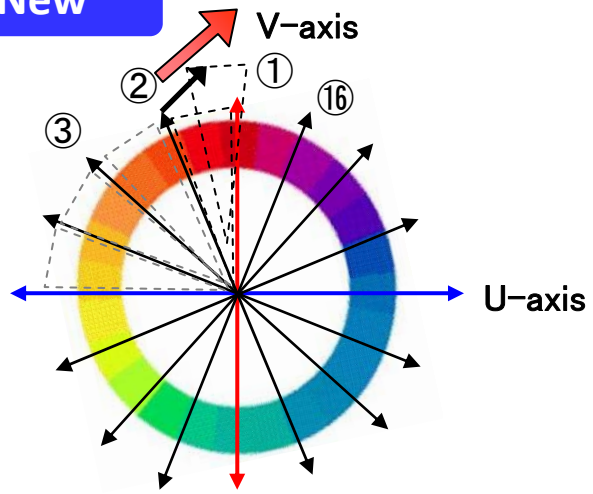
Color reproducibility of game sheet has improved.
And Card suits can be identified.

Conventional

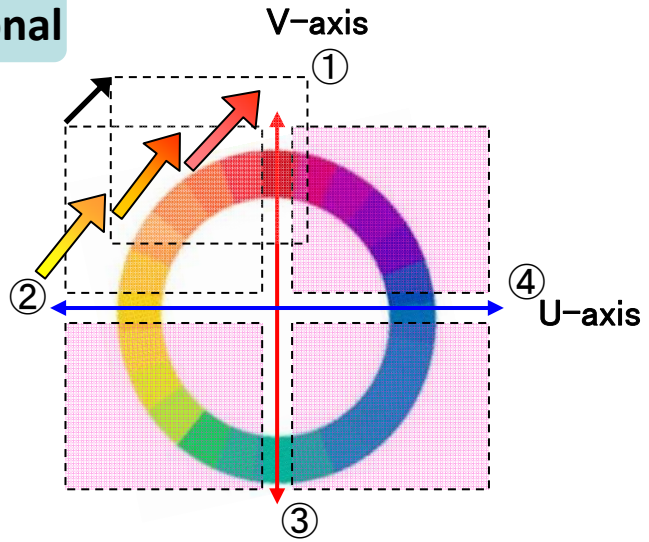
Color reproducibility technology

**By the wider range of color adjustment with 16 axis matrix,
The color reproducibility has improved.**

New



Conventional



16 axis matrix color compensation

In new color reproducibility algorithm, to adjust red, it doesn't influence orange and yellow.
Because the red color space is separated from orange and yellow.
Therefore, this provides the wider range of color adjustment naturally.

4 axis matrix color compensation

For example, to adjust red, it is necessary to convert the orange and yellow as same, because the entire color space from yellow to red has to be converted.
Therefore, the range of the color adjustment is limited.

High Sensitivity

Color reproducibility at low light condition has improved with natural white balance.

at 0.5lx

New

Color reproducibility has improved with reducing reddish in color.

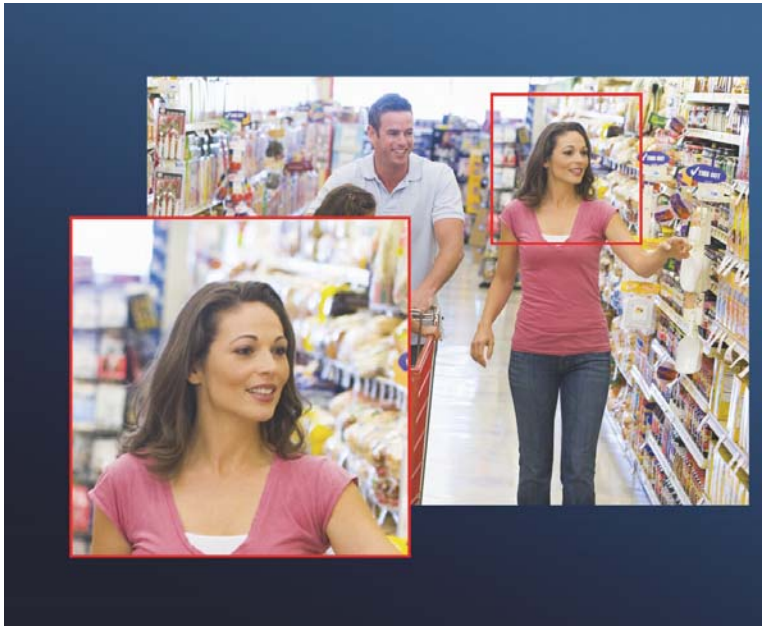
Min. illumination of CW590 is 0.5lx at color

Conventional

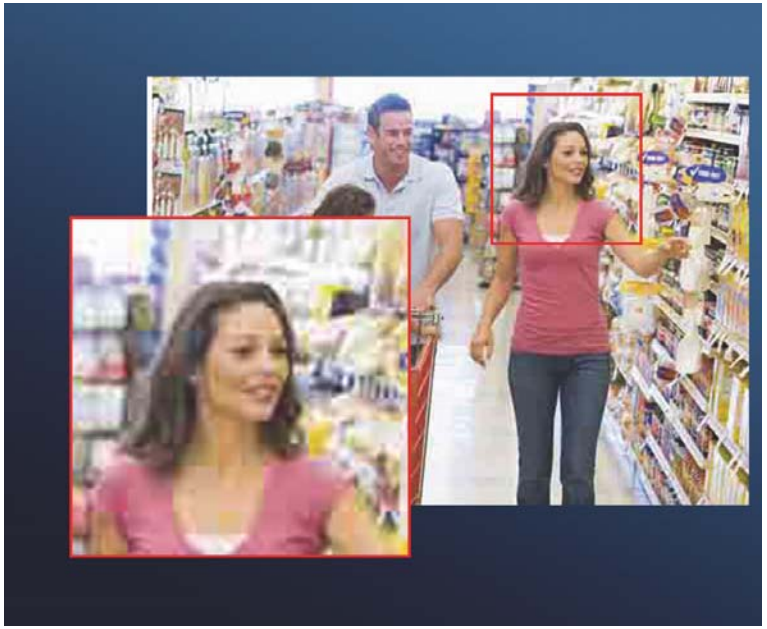
Min. illumination of CW960 is 0.5lx at color

High Resolution

650 TV lines (Color, B/W) high resolution Image allows precise identification



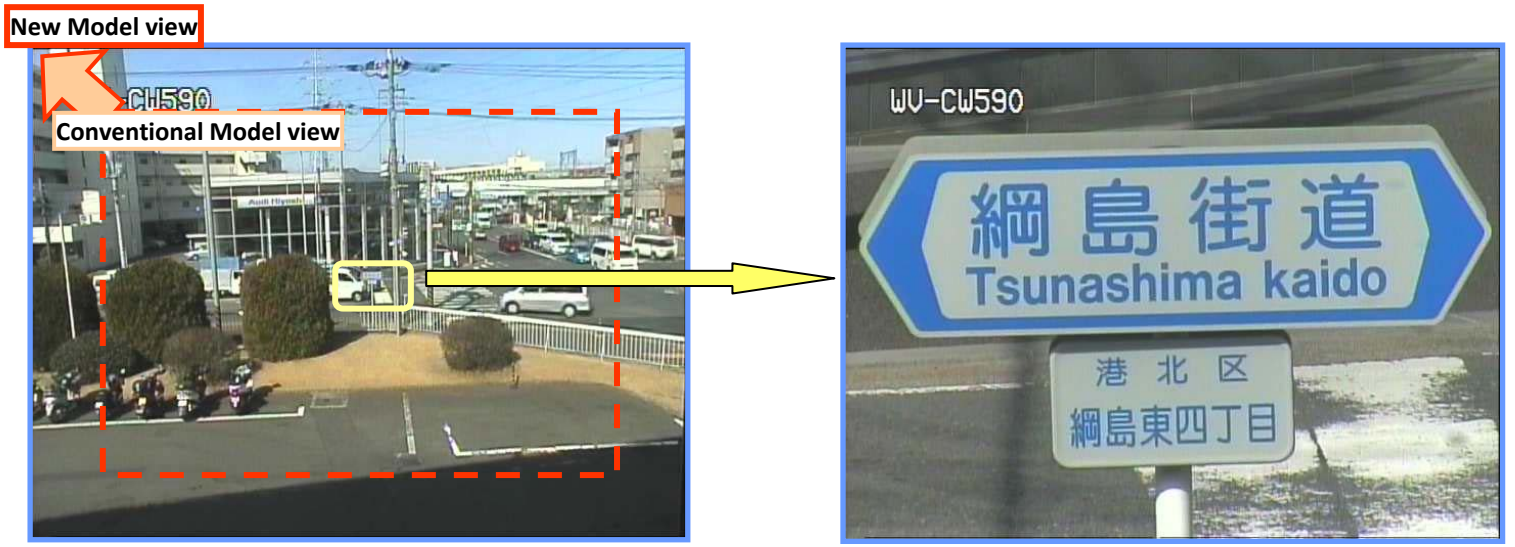
The person can easily be identified with clear detail.



Details are unclear.

36x Optical Zoom

36x optical zoom can provide wider surveillance view



Wide(1x) *The red dotted line is a view area of conventional model CW960. Tele(36x)

	New	Conventional
Zoom Ration	Optical: 36x, Digital: 20x	Optical: 30x, Digital: 10x
Focal Length	3.3 mm ~ 119 mm	3.8 mm ~ 114 mm
Angular Field of View	H: 1.7° (Tele) ~ 60.2° (Wide) V: 1.3° (Tele) ~ 46.0° (Wide)	H: 1.9° (Tele) ~ 52.0° (Wide) V: 1.4° (Tele) ~ 40.0° (Wide)
Zoom Speed	approx. 6.0 seconds (Tele ~ Wide)	approx. 6.0 second (Tele ~ Wide)
Focusing Range	1.5 m (4.9 ft.) ~	1.5 m (4.9 ft.) ~ ∞

Hyper Resolution

Hyper resolution detects and optimizes signal processing that the outline parts and texture areas are enhanced to look more finely detailed.

At 46x zoom of figure. (36x optical and 1.3x electronic zoom)

Hyper Resolution ON

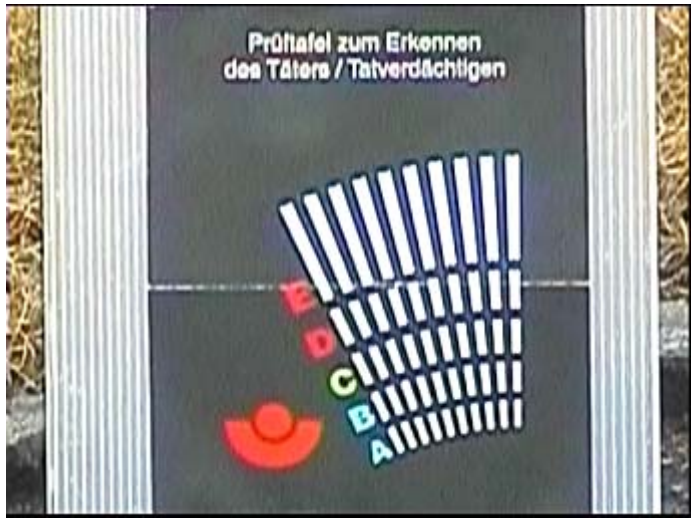
This feature is normally ON. Not selectable.

Hyper Resolution OFF

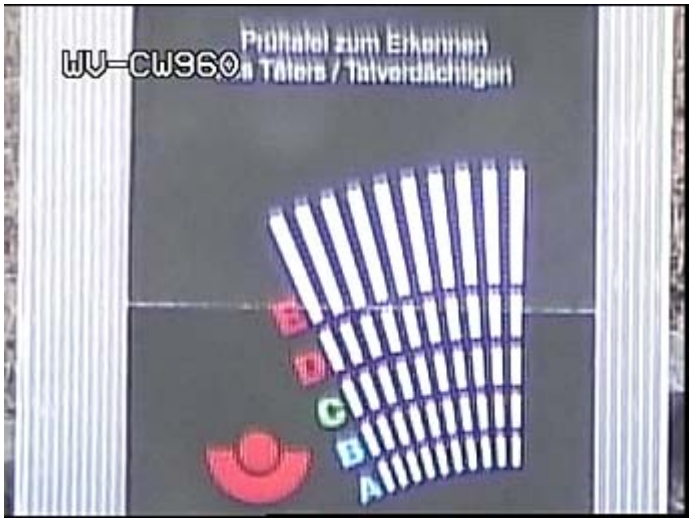
Hyper resolution

Hyper resolution detects and optimizes signal processing that the outline parts and texture areas are enhanced to look more finely detailed.

New
Optical zoom x36 and Ele-zoom x2 with Hyper resolution



Conventional
Optical zoom x30 and Ele-zoom x2

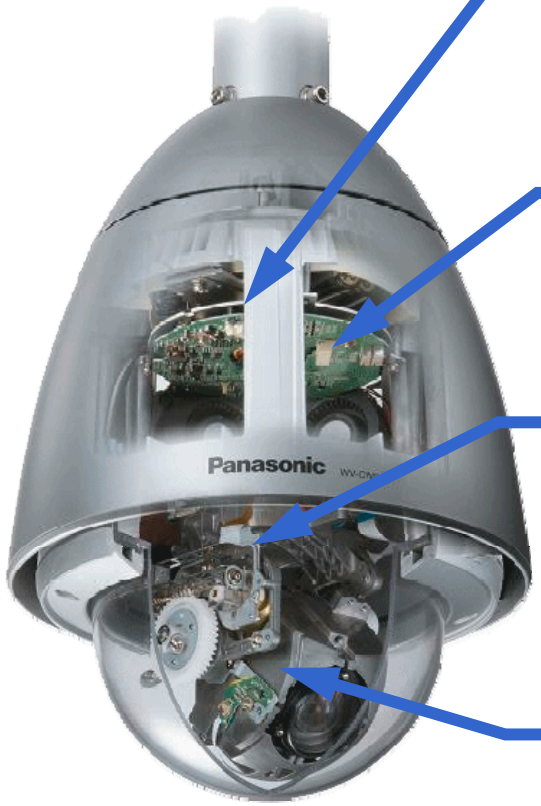


IP66 Water and Dust Resistance

CW590 is IP66 rated Water and Dust Resistant.
We have testing measure equivalent to IEC60529.

Higher reliability and maintenance free

Higher reliability for long term usage without any additional repair cost



Slip ring: 3.7 million operation
→7 years* (preset by one minute)

Fan: Approx. 70,000 hours
(Ambient Temperature at 25 deg C)

PT mechanism: 3.7 million operation
→7 years* (preset by one minute)
→7 years* (auto pan 12deg/sec)

Lens: 3.7 million operation
→7 years* (preset by one minute)

** It does not mean warranty period is 7 years*

Ambient Operating Temperature

Ambient Operating Temperature (CW590)
-50 deg C ~ +50 deg C (-58 deg F ~ +122 deg F)

-50 deg C
(-58 deg F)

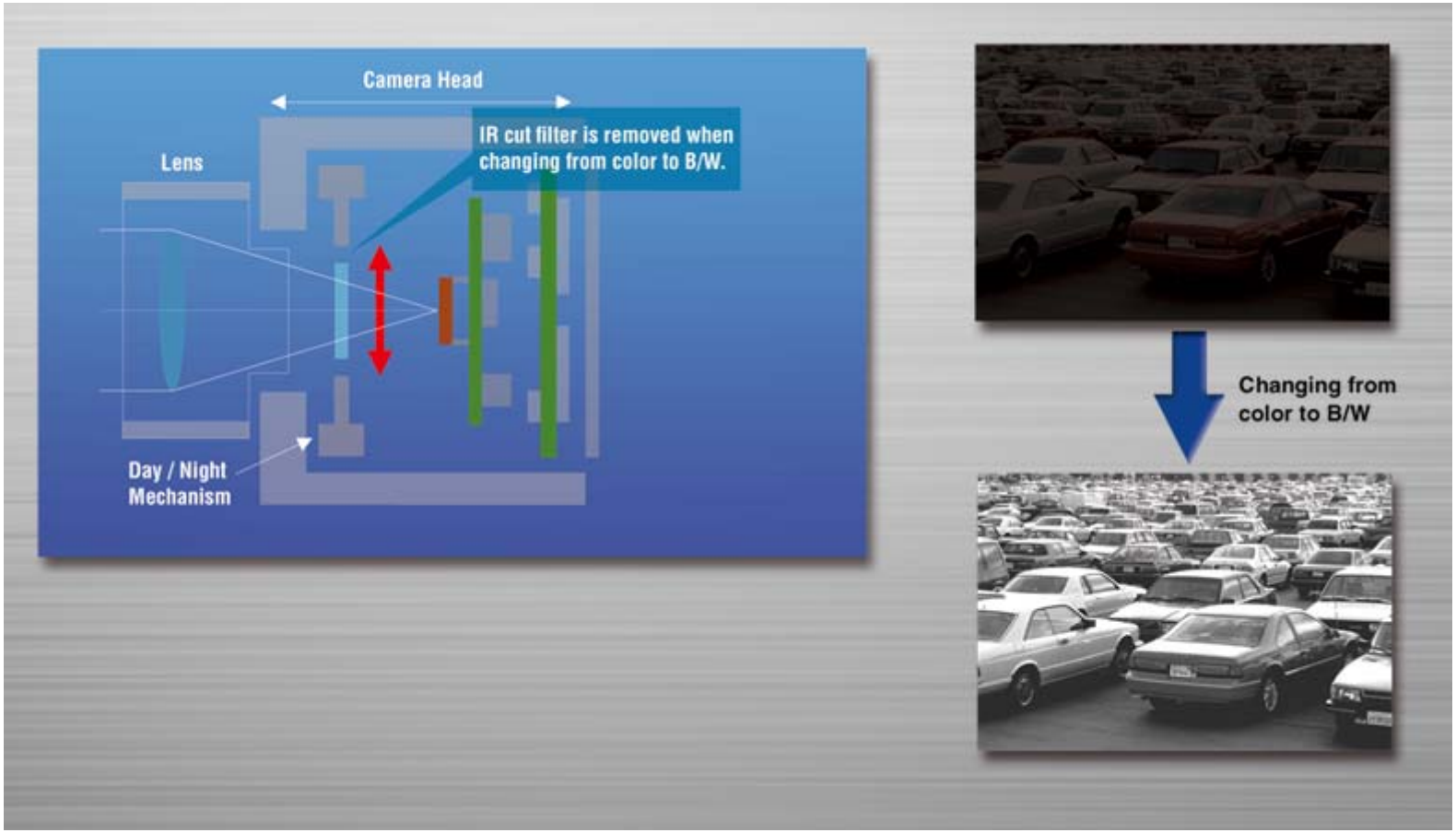
+50 deg C
(+122 deg F)

When power is on continuously (however, the camera's interior temperature is -10 deg C or higher)

Day Night Function

Day/Night feature automatically switches the camera from color to B/W and vise versa depending on the illumination, an ideal solution for 24-hour surveillance.

With moving IR cut filter, high sensitivity and accurate focus are ensured.



Proactive 2D+3D Digital Noise Reduction

2D-DNR for motion area and 3D-DNR for static area are effectively combined, realizing a clear low noise Image with less motion blur and resolution deterioration.
Additionally, with combining the edge of moving object of 2D-DNR image and 3D-DNR image, the edge noise of moving object is more improved.

AGC OFF: Image is too dark

AGC ON: Image is too noisy

Conventional DNR:
Motion blur on moving subject.

Motion adaptive DNR:
Clear image without motion blur.

Auto Image Stabilizer

Auto image stabilizer digitally cancels the vibration on images
by the advanced digital signal processing.
It enables the camera to be installed where vibration or window is a concern.

Stabilizer: OFF

Stabilizer: ON

Scene Change Detection

Scene change detection can be detect interference to the camera and sends an alarm.

It can detect manual change in the camera angle, removal of the camera lens, defocus, blockage of the camera lens with cloth or paint.

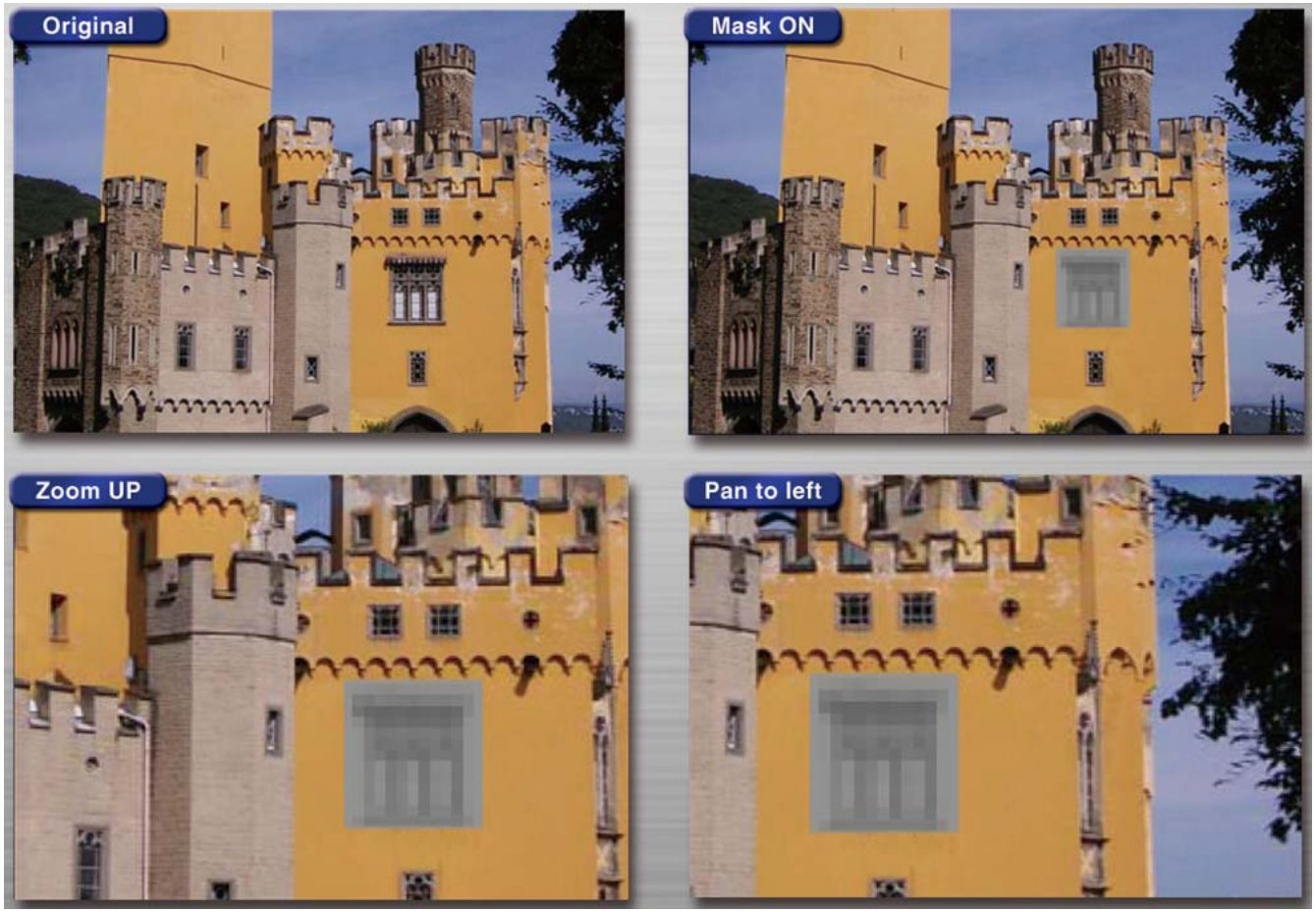
Lens defocused

Splay painted

Lens covered by cloth

Privacy Zone

Privacy zone masking provides the ability to masking sensitive areas of the image from view.



Specification

	WV-CW590	WV-CW960
Appearance		
Image Sensor	1/4 CCD	1/4 CCD
Effective Pixels	PAL : 976H × 582V NTSC : 976H × 494V	PAL : 752H × 582V NTSC : 768H × 494V
Horizontal Resolution	650TVL	540TVL(CL)/570TVL(BW)
Synchronization	INT	INT/LL/VD2
Minimum Illumination (F1.4)	0.5 lx (C/L) 0.04 lx (B/W)	0.5 lx (C/L) 0.04 lx (B/W)
Ele. Sensitivity UP	Max. x512	Max. x32
Day/Night	Real-Day/Night	Real-Day/Night
Optical Zoom	x36	x30
Digital Zoom	Max. x20	Max. x10
Panning Speed	400deg/s	400deg/s
Preset Position	256pos.	256pos.
Control I/F	Co-axial/RS-485	Co-axial/RS-485
Alarm I/O	IN : 4ch / OUT : 2ch	IN : 4ch / OUT : 2ch
Power Consumption (220~240V AC model)	80W	90W
Operating Temperature	-50～50 deg C	-40～50 deg C
Etc.	Auto Tracking, IP66	Auto Tracking, IP66

Specification

	WV-CS580	WV-CS950
Appearance		
Image Sensor	1/4 CCD	1/4 CCD
Effective Pixels	PAL : 976H × 582V NTSC : 976H × 494V	PAL : 752H × 582V NTSC : 768H × 494V
Horizontal Resolution	650TVL	540TVL(CL)/570TVL(BW)
Synchronization	INT	INT/LL/VD2
Minimum Illumination (F1.4)	0.5 lx (C/L) 0.04 lx (B/W)	0.5 lx (C/L) 0.04 lx (B/W)
Ele. Sensitivity UP	Max. x512	Max. x32
Day/Night	Real-Day/Night	Real-Day/Night
Optical Zoom	x36	x30
Digital Zoom	Max. x20	Max. x10
Panning Speed	400deg/s	400deg/s
Preset Position	256pos.	256pos.
Control I/F	Co-axial/RS-485	Co-axial/RS-485
Alarm I/O	IN : 4ch / OUT : 2ch	IN : 4ch / OUT : 2ch
Power Consumption (220~240V AC model)	4.6W	13W
Operating Temperature	-10～50 deg C	-10～50 deg C
Etc.	Auto Tracking	Auto Tracking

Panasonic
ideas for life

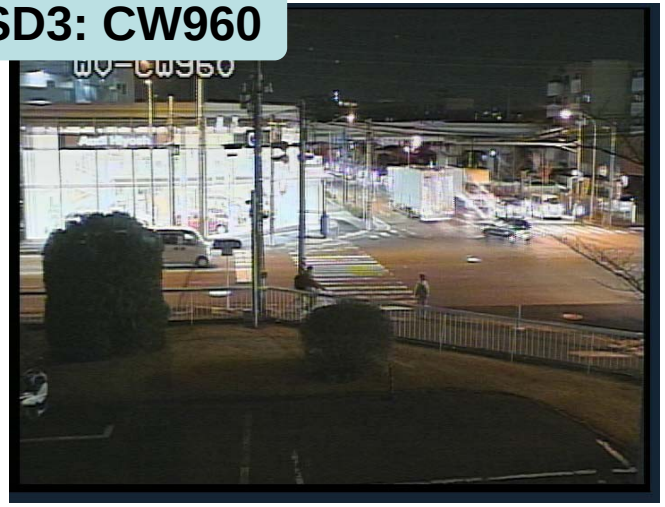
Appendix

SD6 image quality

The grass and inside of building can be seen more.

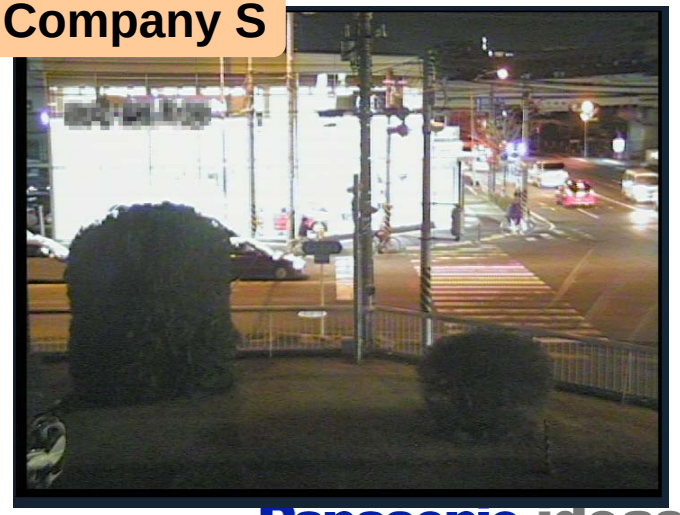
SD6: CW590

SD3: CW960



SD5: CP500

Company S



Color reproducibility

Color reproducibility has improved.
It can provide superior surveillance where color reproducibility is important such as casinos.

CW590

CW960

CP500

Company S

Color temperature 2500K

High Sensitivity

Color reproducibility at low light condition has improved with natural white balance.

CW590

*1/4 inch CCD

CW960

*1/4 inch CCD

CP500

*1/3inch CCD

Company S

*1/4inch CCD

at 0.5lx