

# 2011.NEW Analogue Camera Line-

## Box Type Camera

- WV-CP310/CP314 : D/N(IR)
- WV-CP300/CP304 :  
D/N(Electrical)



## Indoor Dome Camera

- WV-CF374 : D/N(IR)
- WV-CF354 : D/N(Electrical),  
Lens AF
- WV-CF344 : D/N(Electrical)



2011.December  
Security & AV Systems Business Unit  
Panasonic System Networks Company

**Panasonic** ideas for life

- ◆ **Horizontal Resolution 650TV lines (Typ. @Color/BW)**
- ◆ **High Sensitivity 0.08lx(color) @F1.4 (All models)**  
**0.008lx(BW) @F1.4 (CP310/CP314, CF374)**  
**0.05lx(BW) @F1.4 (CP300/CP304, CF354, CF344)**
- ◆ Electronic Sensitivity UP 32x max. (AUTO) / 512x max. (Manual)
- ◆ Privacy zone (up to 8 areas can be selected)
- ◆ Day/Night function D/N(IR) (CP310/CP314, CF374)  
D/N(electrical) (CP300/CP304, CF354, CF344)
- ◆ Video motion detection
- ◆ Ambient Operating Temperature  
-10 deg C ~ +50 deg C (-14 deg F ~ +122 deg F)
- ◆ **Reduce Power Consumption**  
**2.3W (CP310)** , 3.2W(CP290: conventional)  
**2.1W (CF344)** , 2.9W(CF334: conventional)



WV-CF300 series



WV-CF300 series

# Product Concept

## SR series concept

### High Picture Quality

#### SR( Superior Reality) 1 chip solution

- Intelligent Resolution ( 650 TV line)
- High sensitivity

New SR chip



### Versatile

#### Enhanced features

- Color Reproducibility
- Proactive 2D/3D-DNR
- Enhanced ABS
- Lens Distortion Compensation
- Electrical Sense Up 512x
- On Screen Display Menu

### New Eco friendly Design

#### Compact and Eco friendly design

- Less material
- Less power consumption

**Panasonic ideas for life**

CP310/CP314

CP300/CP304

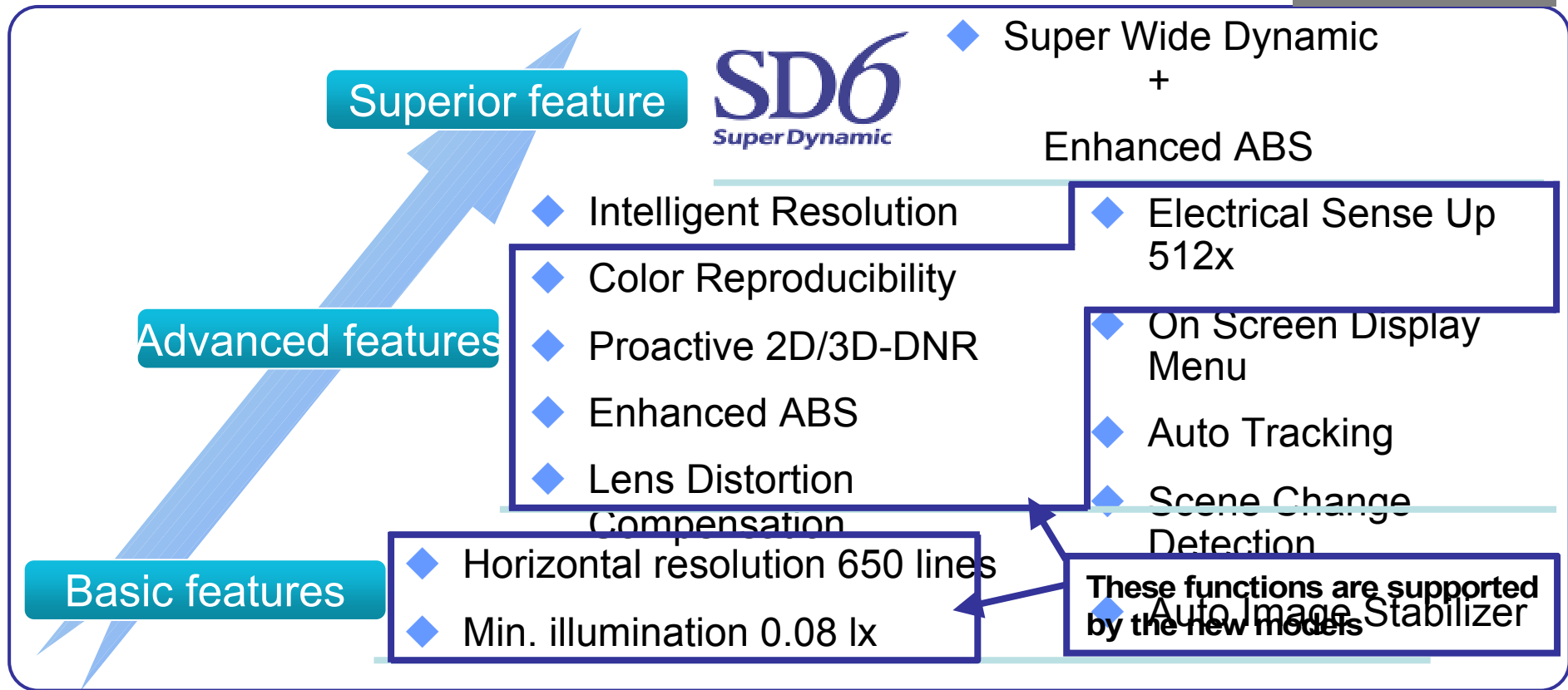
CF374

CF354

CF344

## What is SR image Processor (**Panasonic Original DSP**)

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



**Panasonic ideas for life**

CP310/CP314



CP300/CP304

CF374

CF354

CF344

4 types of box , 3 types of fixed dome cameras with same SR platform

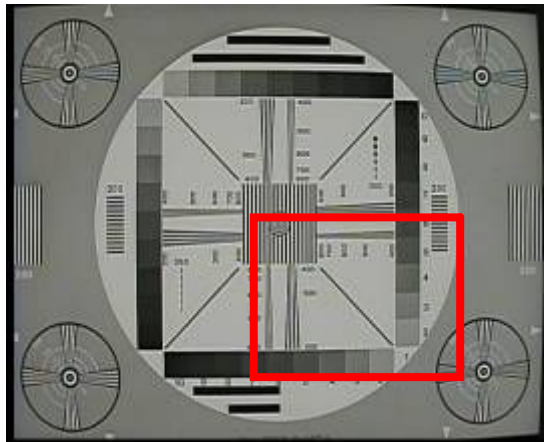
	Models		Basic features		
	New	Conventional	D/N(IR)	D/N(Electrical)	Lens ABF
<b>BOX</b> 	WV-CP314	WV-CP294	○		
	WV-CP310	WV-CP290	○		
	WV-CP304	WV-CP284		○	
	WV-CP300	WV-CP280		○	
<b>DOME</b> 	WV-CF374 (for PAL only)	WV-CF364 (for PAL only)	○		
	WV-CF354	WV-CF294		○	○
	WV-CF344	WV-CF334 WV-CF284		○	

# SR Series features :High picture quality

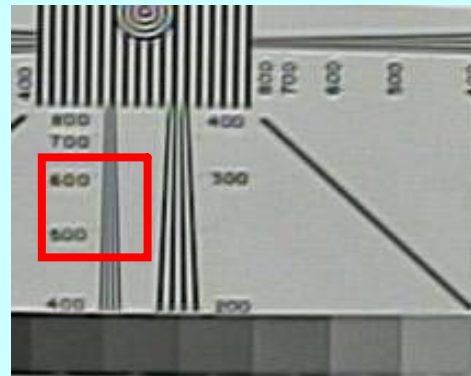
6

## 1. Horizontal 650 TV lines

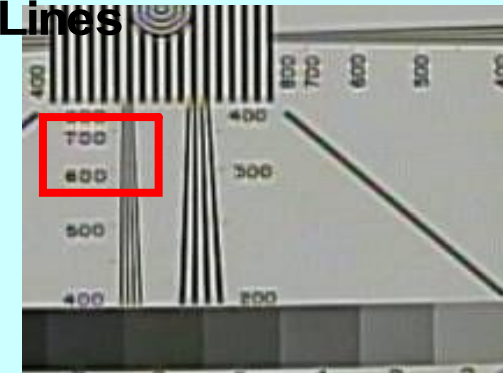
650 TV lines (Color HIGH mode, B/W mode) high resolution Image allows precise identification



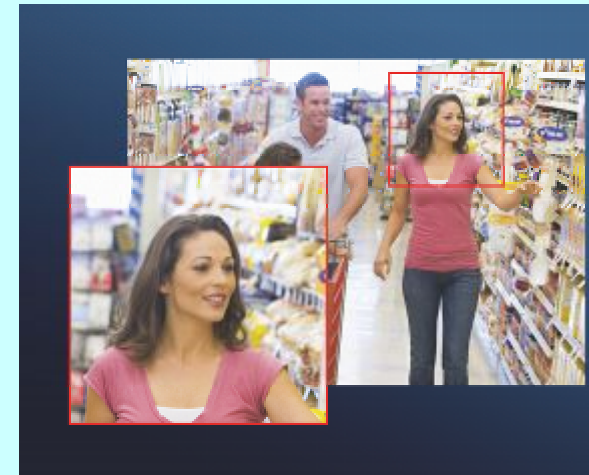
WV-CP290series 540TVLines



WV-CP300series 650TV Lines



Compared to conventional models, SR series cameras provide more clear and fineness images.



Panasonic ideas for life

CP310/CP314

CP300/CP304

CF374

CF354

CF344

## 1.High Resolutions H-650TVL

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

	Model Number	Type	CCD Size	CCD pixels Number	TV lines
Current	WV-CP280, CP284	BOX	1/3"	752 H x 582 V	540 TVL
	WV-CP290, CP294	BOX	1/3"	752 H x 582 V	540 TVL
New	WV-CP300, CP304 WV-CP310, CP314	BOX	1/3"	976 H x 582 V	650 TVL
Current	WV-CF284, CF294	Dom	1/4 "	752 H x 582 V	540 TVL
	WV-CF334, CF364	Dom	1/3"	752 H x 582 V	540 TVL
New	WV-CF374, CF354, CF344	Dom e	1/3"	976 H x 582 V	650 TVL

Since all box typed SR series cameras equipped 1/3 inch CCD (976H pixels), it makes all cameras to express H-650 TVL

## 2.Sensitivity

All SR series Camera have Electrical Sense Up Capability

Current models Sensitivity: 0.8 lux(F1.4)/Color



Enhanced x10

New SR models Sensitivity: 0.08lux(F1.4)/Color



Electric sensitivity enhancement  
x512

New SR models maximum Sensitivity  
0.00016lux(F1.4)/Color, 0.000097lux/ B/W

Compared to current models,  
SR models improved sensitivity

significantly

**Panasonic ideas for life**

## 2.Sensitivity

All SR series Camera have Electrical Sense Up Capability

	Models	Type	Day and Night	Sensitivity (color)	Sensitivity (B/W)	Electrical Sense Up			
						X32 Color	X32 B/W	X512 Color	X512 B/W
Current (F1.4)	WV-CP280, 284	BOX	Electrica	0.8 lx	0.55 lx	-	-	-	-
	WV-CP290, 294	BOX	IR	0.8 lx	0.05 lx	-	-	-	-
New (F1.4)	WV-CP300, 304	BOX	Electrica	0.08 lx	0.05 lx	0.0025 lx	0.0016 lx	0.00016 lx	0.000097 lx
	WV-CP310, 314	BOX	IR	0.08 lx	0.008 lx	0.0025 lx	0.00025 lx	0.00016 lx	0.000016 lx
Current (F1.2)	WV-CP280, 284	BOX	Electrica	0.6 lx	0.4 lx	-	-	-	-
	WV-CP290, 294	BOX	IR	0.6 lx	0.04 lx	-	-	-	-
New (F1.2)	WV-CP300, 304	BOX	Electrica	0.07 lx	0.04 lx	0.002 lx	0.001 lx	0.00014 lx	0.000078 lx
	WV-CP310, 314	BOX	IR	0.07 lx	0.007 lx	0.002 lx	0.0002 lx	0.00014 lx	0.000014 lx
Current (F0.95)	WV-CP280, 284	BOX	Electrica	0.4 lx	0.25 lx	-	-	-	-
	WV-CP290, 294	BOX	IR	0.4 lx	0.025 lx	-	-	-	-
New (F0.95)	WV-CP300, 304	BOX	Electrica	0.05 lx	0.03 lx	0.0016 lx	0.0009 lx	0.0001 lx	0.00006 lx
	WV-CP310, 314	BOX	IR	0.05 lx	0.005 lx	0.0016 lx	0.00016 lx	0.0001 lx	0.00001 lx

## 2.Sensitivity

All SR series Camera have Electrical Sense Up Capability

	Models	Type	Day and Night	Sensitivity (Color)	Sensitivity (B/W)	Electrical Sense Up			
						X32 Color	X32 B/W	X512 Color	X512 B/W
Current (F1.4)	WV-CF284 WV-CF294	Dome	Electrical	0.9 lx	0.6 lx	-	-	-	-
	WV-CF334	Dome	Electrical	0.6 lx	0.4 lx	-	-	-	-
	WV-CF364	Dome	IR	0.6 lx	0.05 lx	-	-	-	-
New (F1.4)	WV-CF374	Dome	IR	0.08 lx	0.008 lx	0.0025 lx	0.00025 lx	0.00016 lx	0.000016 lx
	WV-CF354	Dome	Electrical	0.08 lx	0.05 lx	0.0025 lx	0.0015 lx	0.00016 lx	0.000097 lx
	WV-CF344	Dome	Electrical	0.08 lx	0.05 lx	0.0025 lx	0.0015 lx	0.00016 lx	0.000097 lx

## 2.Sensitivity

All SR series Camera have improved sensitivity.  
Good picture Quality & color Reproduction are provided even under Low Light Conditi

**Under 0.08lx**



**SR series  
WV-CP300**



**Current models  
WV-CP290**

**Panasonic ideas for life**




CP310/CP314

CP300/CP304

CF374





CF354

CF344

Fixed Box		Panasonic	A	
		WV-CP300	1	2
Photo				
Resolution	Color	<b>650 TV lines</b>	600 TV lines	610 TV lines
	B/W	<b>650 TV lines</b>	600 TV lines	610 TV lines
Sensitivity	Color	<b>0.08 lux</b>	0.24lux	0.24lux
	B/W	<b>0.05 lux</b>	0.24lux	0.24lux
Day and Night		Electrical	Electrical	Electrical
Super Dynamic		--	--	--
SN ratio		52 db	52 db	52 db

# SR Series features :Comparison chart

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Fixed DOME		Panasonic	Panasonic	A	
		WV-CF344	WV-CF354	1	2
PHOTO					
Resolution	Color	<b>650 TV lines</b>	<b>650 TV lines</b>	600 TV lines	600 TV lines
	B/W	<b>650 TV lines</b>	<b>650 TV lines</b>	700 TV lines	700 TV lines
Sensitivity	Color	<b>0.08 lux</b>	<b>0.08 lux</b>	0.24 lux	0.24 lux
	B/W	<b>0.05 lux</b>	<b>0.05 lux</b>	0.24 lux	0.24 lux
Day and Night		Electrical	Electrical	Electrical	Electrical
SN ratio		52 db	52 db	52db	52db
F ratio		F1.4	F1.4	F1.2	F1.2
Focal length		<b>2.8~10 mm (3.6 x)</b>	<b>2.8~10 mm (3.6 x)</b>	2.5-6 mm (2.4 x)	2.8-11 mm (3.9 x)
angle	WIDE(H×V)	100.2 x 27.4 deg	100.2 x 27.4 deg	108 x 80 deg	94.6 x 68.4deg
	TELE(H×V)	73.3 x 20.5deg	73.3 x 20.5 deg	46 x 34deg	28.8 x 21.6deg

**Panasonic ideas for life**

**CF354** **CF344**

# SR Series features :Comparison chart

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Fixed DOME		Panasonic WV-CF374	A 1
PHOTO			
Resolution	Color	<b>650 TV lines</b>	540 TV lines
	B/W	<b>650 TV lines</b>	540 TV lines
Sensitivity	Color	<b>0.08 lux</b>	0.24 lux
	B/W	<b>0.008 lux</b>	0.024 lux
Day and Night		ICR(IR)	ICR(IR)
SN ratio		52 db	50 db
F ratio		F1.3	F1.2
Focal length		<b>2.8~10 mm (3.6 x)</b>	2.9-10 mm (3.6 x)
Angle	WIDE(H×V)	100.2 x 27.4 deg	94 x 67 deg
	TELE(H×V)	73.3 x 20.5 deg	26 x 20 deg

**Panasonic ideas for life**

**CF374**

## 3. Color reproducibility

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



Digital still camera image

Under 4500K, fluorescent light condition

WV-CP300/G



WV-CP290/G



- Natural color reproducibility
- Sharpness

**Panasonic** ideas for life

CP310/CP314

CP300/CP304

CF374

CF354

CF344

## 3. Color reproducibility

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



Digital still camera image

**Under 2300K, halogen lamp condition**

WV-CP300/G



WV-CP290/G



- Natural color reproducibility even in low light condition

**Panasonic ideas for life**

CP310/CP314

CP300/CP304

CF374

CF354

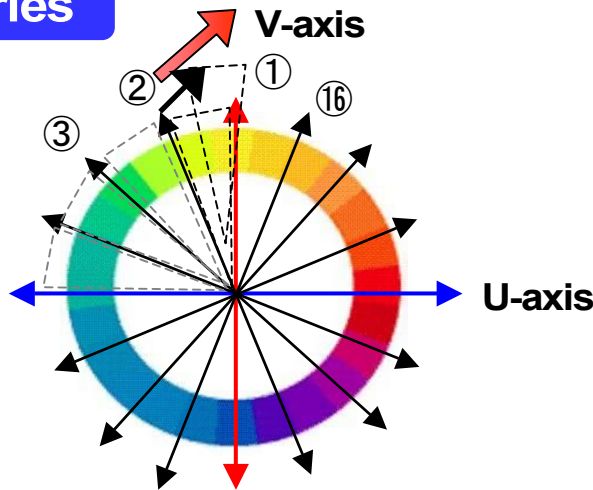
CF344

## 3. Color reproducibility

Color temperature 2500K

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

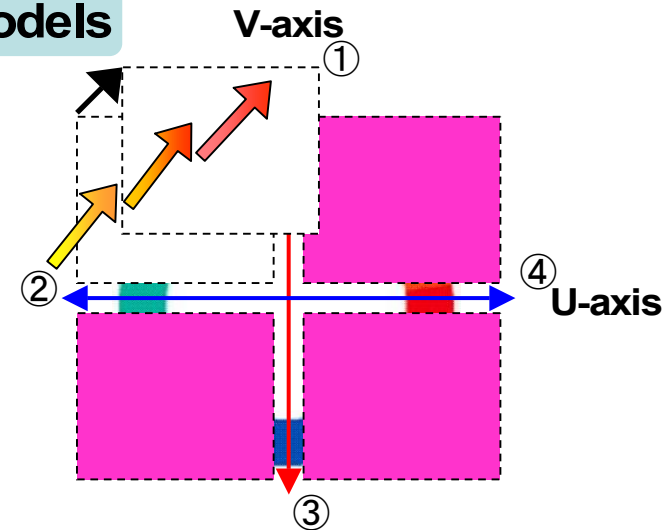
### SR series



### 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.

### Current models

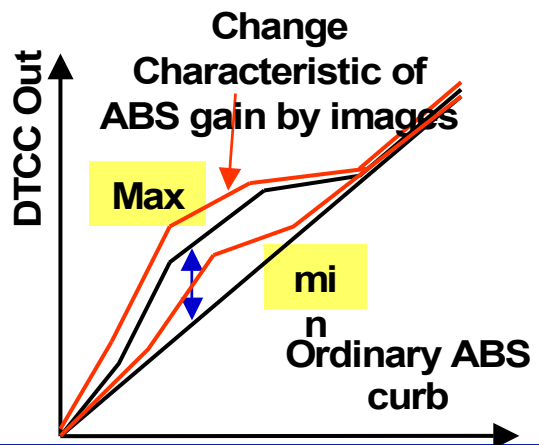
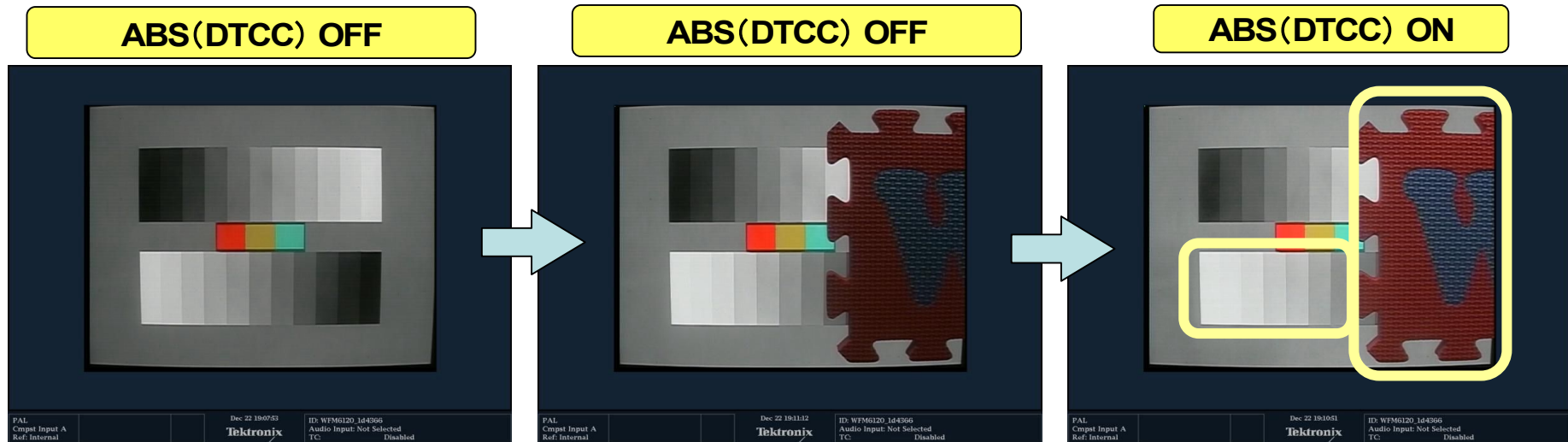


### 4 axis matrix color compensation

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.

## 1. Enhanced ABS

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



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.

## 2. Lens distortion compensation

Distortion compensation function will create distortion free images



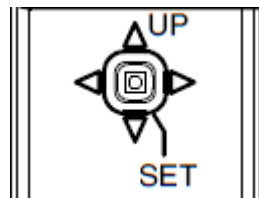
When used with Wide Angle Lens image became Fish Eye Effects



Distortion free image

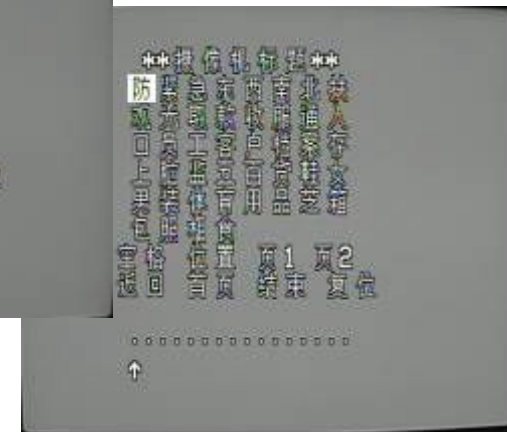
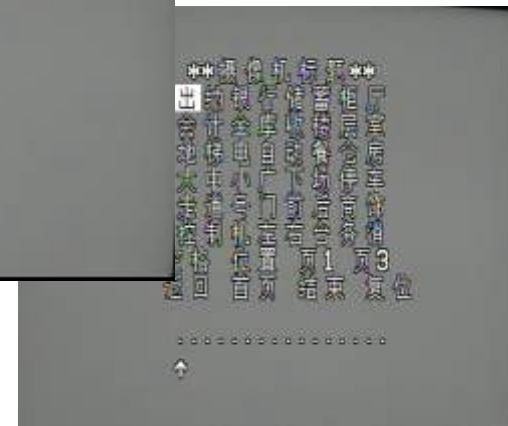
## 3. OSD Capability

SR models have On Screen Display function & have 16 words Camera Title



Jog switch in the Bottom

In the Bottom of Camera  
Jog SW (Set Up SW) is Available.  
Push 3 Sec In the Center of SW.  
Then, you can use Camera menu.  
When you push less than 3sec, you will  
enter Focus Assist menu.

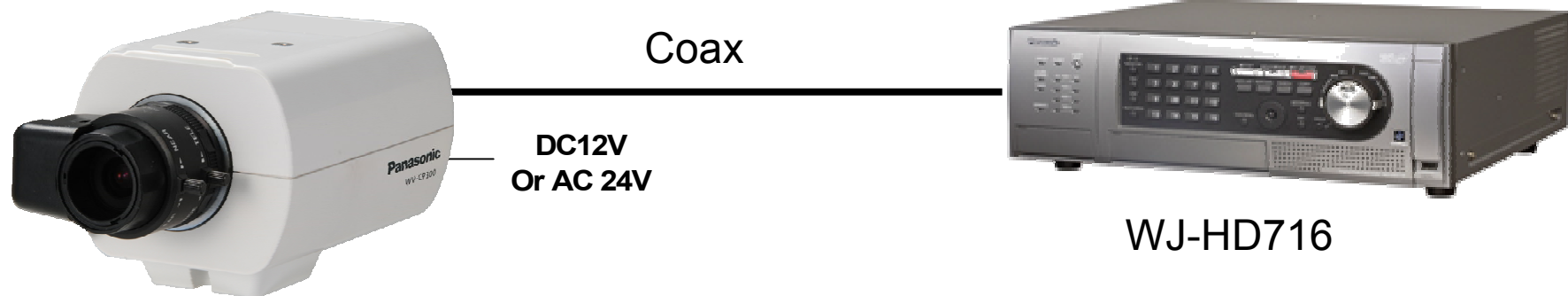


Multi Language Menu available  
Chinese, JAPANESE, ENGLISH, FRANÇAIS, ESPAÑOL,  
DEUTSCH, ITALIANO, RUSSIAN

**Panasonic ideas for life**

## 4. Single Wire Communication Function

All SR models have a single wire control (Over the Coax) Capability. After finishing installation, you can access Set Up menu from Monitoring site.

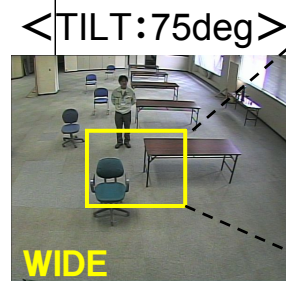
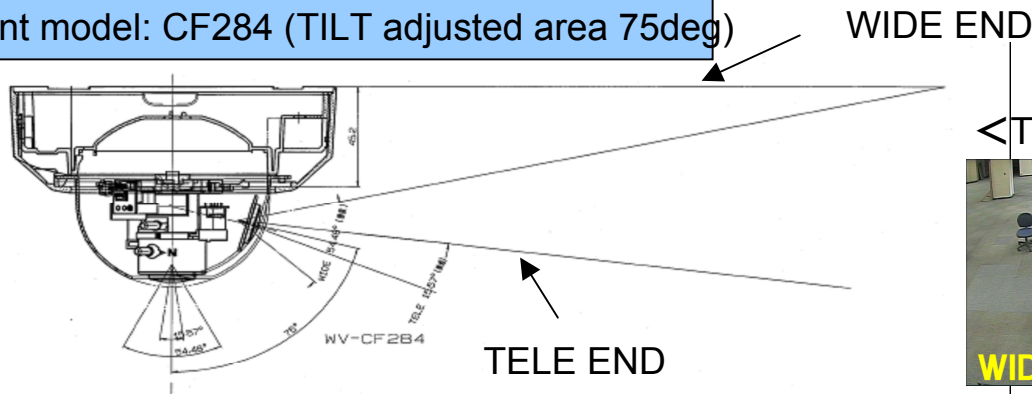


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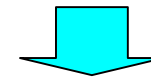
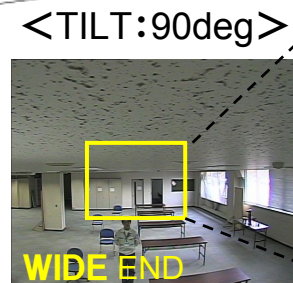
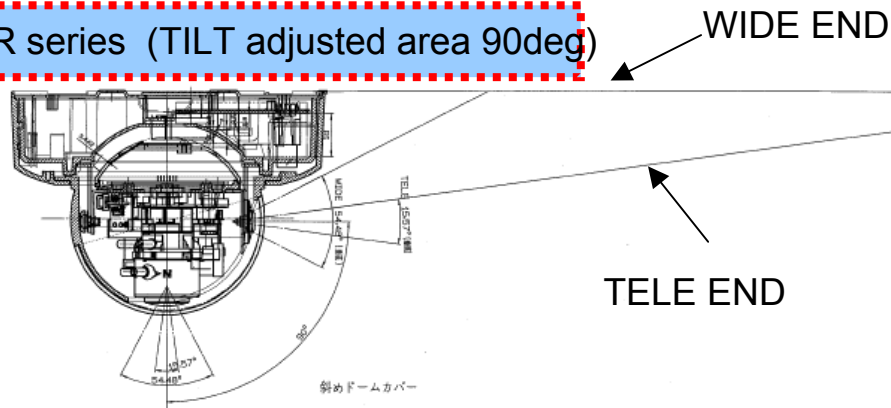
CP310/CP314 CP300/CP304 CF374 CF354 CF344

# SR Series features: Versatile function

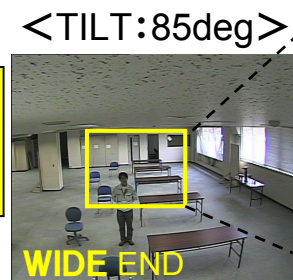
Current model: CF284 (TILT adjusted area 75deg)



SR series (TILT adjusted area 90deg)



Wide TILT adjusted area (75deg -> 90deg)  
Rotation range: +180deg to -170deg




Panasonic ideas for life

# SR Series features: Environmental friendly Eco design

## 1. Eco design


**Downsized SR series design**




AC24V/DC12V Model – 81mm  
Line Voltage Model -- 101mm

AC24V/DC12V Model – **40% smaller than current models**  
Line Voltage Model -- **27% smaller than current models**

CF284  
CF334



SR series



**Volume ration**  
CF284(CF334)  
⇒ **CF344(SR series)**  
**25%down**

SR chip makes new analog cameras to be smaller and save more energy consumption

**Panasonic ideas for life**

CP310/CP314

CP300/CP304

CF374

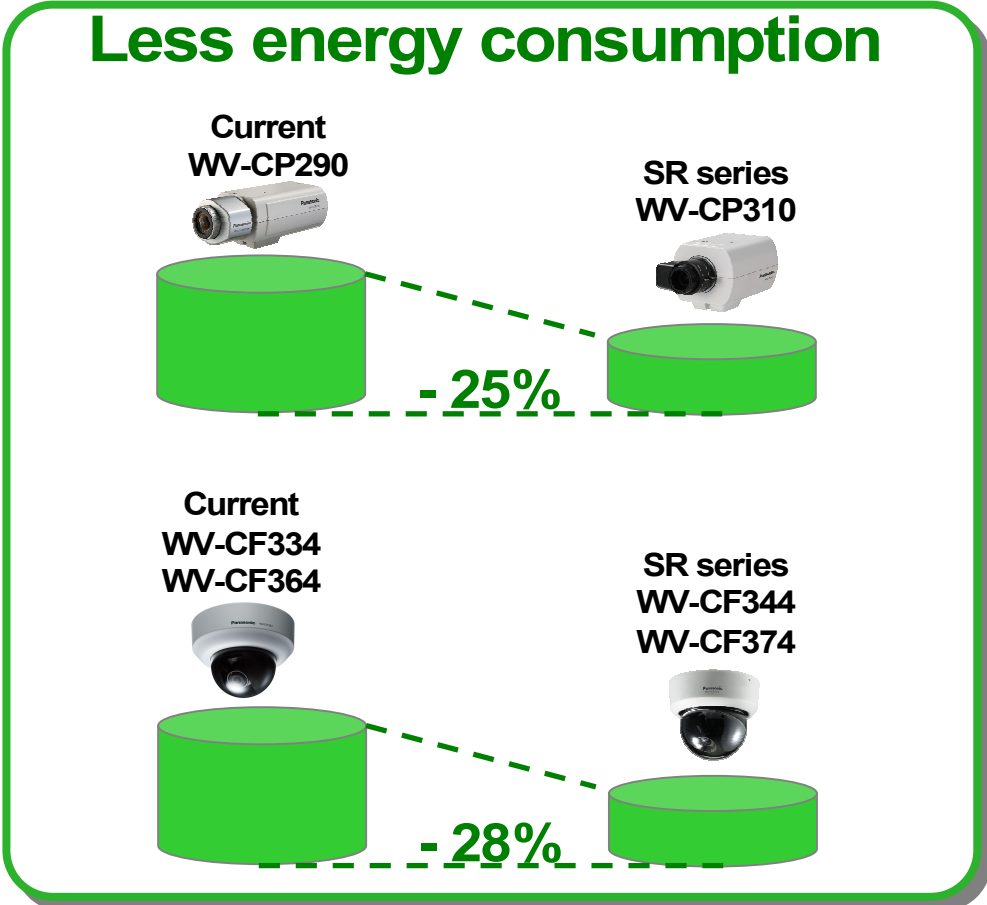
CF354

CF344

# SR Series features: Environmental friendly Eco design

## 2. Less electric energy consumption

Compared to current models, SR models cameras (box) can reduce up to 25% of the electric energy consumption.



	Current WV-CP290	New WV-CP310
AC220V	3.2W	2.3W
AC24V	2.9W	2.1W
DC12V	240mA	180mA



	Current WV-CF334	New WV-CF344
AC24V	2.9W	2.1W



	Current WV-CF364	New WV-CF374
AC24V	2.9W	2.1W



**Panasonic** Ideas for life



- CP310/CP314
- CP300/CP304
- CF374
- CF354
- CF344

# SR Series features: Comparison chart

Box	New WV-CP300	A
		
Energy use	2.3W	3.3W
30% less		

Box	New WV-CP310	A
		
Energy use	2.1W	4.1W
49% less		

Dome	New WV-CF344	A
		
Energy Use	2.1W	2.3W
9% less		

Dome	New WV-CF354	A
		
Energy use	2.1W	2.3W
9% less		

**Panasonic ideas for life**

BOX Camera		WV-CP280/CP284	WV-CP300/CP304	WV-CP290/CP294	WV-CP310/CP314	Note	
P e r f o r m a n c e	Resolutions CL / BW	540 / 540 TV Line	650 / 650 TV Line	540 / 540 TV Line	650 / 650 TV Line	← improved	
	Min-Illuminations CL / BW	0.8 lx / 0.55 lx	0.08 lx / 0.05 lx	0.8 lx / 0.05 lx	0.08 lx / 0.008 lx	← improved	
	D/N	Electric	Electric	IR	IR		
	S/N	50 dB	52 dB	50 dB	52 dB	← improved	
	Power consump tions	24V	AC 24 V : 2.7 W DC 12 V : 220 mA	AC 24 V : 2.1 W DC 12 V : 180mA	AC 24 V : 2.9 W DC 12 V : 240 mA	AC 24 V : 2.1 W DC 12 V : 180mA	← Reduced Power
		Line	AC 230 V : 3.2 W	AC 230 V : 2.3 W	AC 230 V : 3.2 W	AC 230 V : 2.3 W	Multi Voltage100-240 V
Dimensio ns	24V	67 x 65 x 139.5	71 x 55 x 81	75 x 65 x 136.5	71 x 55 x 81	← Compact Design	
	Line	67 x 65 x 139.5	72 x 55 x 101	75 x 65 x 136.5	72 x 55 x 101	← Compact Design	
F u n c t i o n	Synchronization	INT/LL/VD2	INT	INT/LL/VD2	INT	INT Only	
	Camera title	--	16 character	--	16 character	← improved	
	Light control	ALC/ELC	ALC/ALC+/ELC	ALC	ALC/ALC+/ELC	← Add New function	
	BLC	ON/OFF	48 Area	ON/OFF	48 Area	← Selectable	
	Black Stretch	ON/OFF	ON/OFF	ON/OFF	ON/OFF	← DTCC Type	
	Shutter	--	1/50~1/10000	--	1/50~1/10000	← Additional Function	
	AGC	ON	ON(H,M,L)/OFF	ON	ON(H,M,L)/OFF	← Selectable	
	Ele Sens Up AUTO/FIX	--	A:~x32 / F:~x512	--	A:~x32 / F:~x512	← Additional Function	
	White Balance	ATW	ATW1/ATW2/AWC	ATW/AWC	ATW1/ATW2/AWC	← ATW2 available	
	DNR	--	High/Low	--	High/Low	←Additional Function	
	Color/BW	AUTO/OFF	AUTO/OFF	AUTO/OFF	AUTO1/AUTO2/OFF	← CP310 include Auto2	
	VMD	--	O(Scene Change_ incl)	--	O(Scene Change_ incl)	←Additional Function No i-VMD	
	Scene file	--	2	--	2	←Additional Function	
	Privacy zone	--	Gray/Mosaic 8 Area	--	Gray/Mosaic 8 Area	←Additional Function	
	Image stabilizer	--	○	--	○	←Additional Function	
	Electronic Zoom	--	~ x2	--	~ x2	←Additional Function	
Distortion Correct	--	○	--	○	←Additional Function		

# WV-CF334/354/374 Series

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DOME Camera		WV-CF334	WV-CF344/CF354	WV-CF364	WV-CF374	Note
B a s i c	Resolutions CL / BW	540 / 540 TV Line	650 / 650 TV Line	540 / 540 TV Line	650 / 650 TV Line	← Improved
	Min Sensitivity CL / BW	0.6 lx / 0.4 lx	0.08 lx / 0.05 lx	0.6 lx / 0.05 lx	0.08 lx / 0.008 lx	← Improved
	D/N	Electric	Electric	IR	IR	
	S/N	50 dB	52 dB	50 dB	52 dB	← Improved
	Power consumptions	AC 24 V : 2.7 W DC 12 V : 220 mA	AC 24 V : 2.1 W DC 12 V : 180mA	AC 24 V : 2.7 W DC 12 V : 220 mA	AC 24 V : 2.1 W DC 12 V : 180mA	← Reduced Power
	Dimensions	Φ 129.5 x 93	Φ 108 x 94.5	Φ 129.5 x 93	Φ 108 x 94.5	← Compact Design
	Tilting range	±75deg	±90deg	±75deg	±90deg	← Improved
L E N S	Focal length	2.8~10mm	2.8~10mm	2.8~10mm	2.8~10mm	
	ABF	--	O(CF354 Only)	--	--	← WV-CF354
F u n c t i o n s	Synchronization	INT/VD2	INT	INT/VD2	INT	INT Only
	Camera title	--	16 character	--	16 character	← Improved
	Light control	ALC	ALC/ALC+/ELC	ALC	ALC/ALC+/ELC	← Add New function
	BLC	ON/OFF	48 Area	ON/OFF	48 Area	← Selectable
	Black Stretch	ON/OFF	ON/OFF	ON/OFF	ON/OFF	← DTCC Type
	Shutter	--	1/50~1/10000	--	1/50~1/10000	← Additional Function
	AGC	ON	ON(H,M,L)/OFF	ON	ON(H,M,L)/OFF	← Selectable
	Sens Up AUTO/FIX	--	A:~x32 / F:~x512	--	A:~x32 / F:~x512	← Additional Function
	White Balance	ATW/AWC	ATW1/ATW2/AWC	ATW/AWC	ATW1/ATW2/AWC	← ATW 2 available
	DNR	--	High/Low	--	High/Low	← Additional Function
	Color/BW	AUTO/OFF	AUTO/OFF	AUTO/OFF	AUTO1/AUTO2/OFF	← Selectable
	VMD	--	O(Scene Change _incl)	--	O(Scene Change _incl)	← Additional Function
	Scene file	--	2	--	2	← Additional Function
	Privacy zone	--	Gray/Mosaic 8 Area	--	Gray/Mosaic 8 Area	← Additional Function
	Image stabilizer	--	○	--	○	← Additional Function
Electronic Zoom	--	~ x2	--	~ x2	← Additional Function	
Distortion Correct	--	○	--	○	← Additional Function	
I / F	Operation	Dip-SW (No OSD)	JOG-SW (Menu OSD)	Dip-SW (No OSD)	JOG-SW (Menu OSD)	← Additional Function
	Single Coax control	--	○	--	○	← Additional Function
	Video/Monitor Out	BNC / --	BNC / Mini-Jack	BNC / --	BNC / Mini-Jack	← ADD Monitor Output

## SR series concept

### High Picture Quality

#### SR( Superior Reality) 1 chip solution

- Intelligent Resolution ( 650 TV line)
- High sensitivity

New SR chip



### Versatile

#### Enhanced features

- Color Reproducibility
- Proactive 2D/3D-DNR
- Enhanced ABS
- Lens Distortion Compensation
- Electrical Sense Up 512x
- On Screen Display Menu

### New Eco friendly Design

#### Compact and Eco friendly design

- Less material
- Less power consumption

**Panasonic ideas for life**

CP310/CP314

CP300/CP304

CF374

CF354

CF344

**Panasonic**  
ideas for life

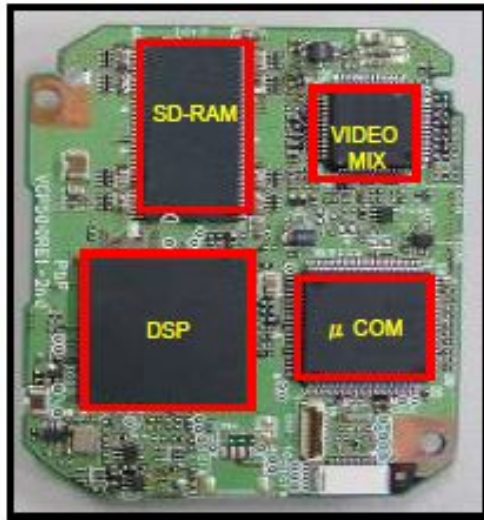
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**Panasonic** ideas for life

# Appendix

Developed High Density Processor currently used 4 IC's became Single processor.

Current Analog Camera



SR image Processor



SR chip makes new analog cameras to be smaller and save more energy consumption.

*Strong Key feature  
Delivered by  
SR Image Processor*

- ◆ Horizontal resolution 650 lines
- ◆ Min. illumination 0.08 lx
- ◆ Intelligent 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

**Panasonic ideas for life**