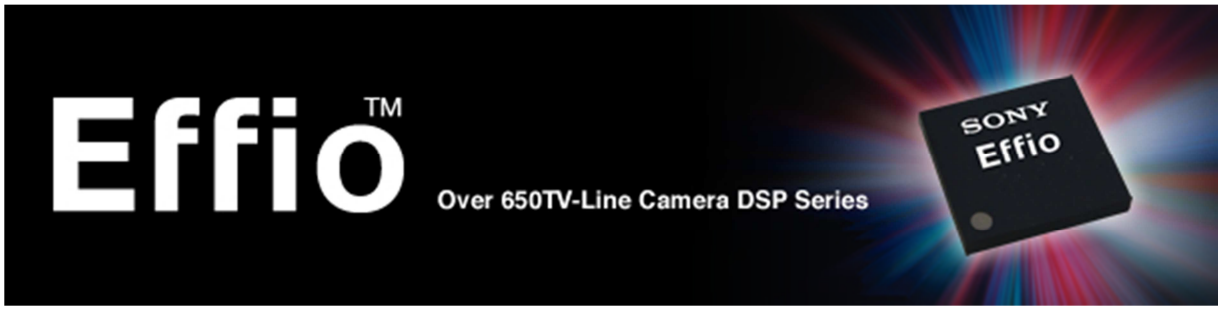


What is "Effio"?

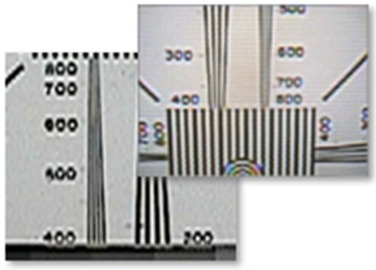
Enhanced Features and Fine Image Processor

"Effio" means "Enhanced Features and Fine Image Processor", and it is a Sony signal processor which realizes high resolution, high S/N ratio and high color reproduction for security camera.

"Effio" Promises You No.1 Image Quality & Performance

Over 650TVL

· High-resolution processing



High S/N ratio

· Noise reduction using smoothing filter with edge preservation

High color reproduction

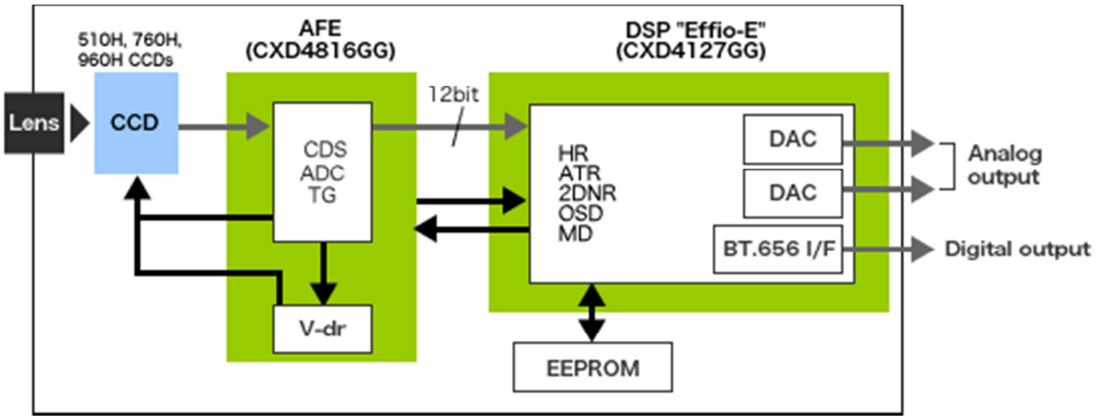
· White balance processing with wide-range color temperature support and high-saturation processing

"Effio" Series

	"Effio" CXD4112AGG	NEW! "Effio-E" CXD4127GG
Product Name	Wide dynamic range model for 960H CCD	Entry-level model for 960H CCD
System Configuration	CCD: 760H, 960H CCDs AFE: CXD4813GG DSP: "Effio" (CXD4112AGG) LPDDR	CCD: 510H, 760H, 960H CCDs AFE: CXD4816GG DSP: "Effio-E" (CXD4127GG)
Key Features	·Horizontal resolution of over 650 TVL ·Wide dynamic range ·2D and 3D noise reduction ·OSD ·Motion detection ·DC/Video servo ·Digital zoom ·Slow shutter ·Face detection ·Dual analog and digital outputs ·Synchronization: LL, VSL, VBSLHP/HR, HRVR	·Horizontal resolution of over 650 TVL ·ATR (Adaptive Tone Reproduction) ·2D noise reduction ·Preset OSD menu (8 languages) ·Motion detection ·DC/Video servo ·Dual analog and digital outputs ·HLC (High light compensation) ·Low power consumption

"Effio-E" System Block Diagram and Main Specification

System Configuration



Specifications

Item		"Effio-E" system
Supported CCDs		510H, 760H, 960H CCDs
System Configuration		2 chips (DSP/AFE)
Main Functions	Horizontal Resolution	Over 650 TVL
	ATR	Yes
	Noise Reduction	2D-NR
	Day & Night	Yes
	Privacy Mask	8 masks
	HLC	Yes
	AFD	Yes
	Motion Detection	Yes
	OSD Menu	8 languages
	White Pixel Detection and Compensation	Static and Dynamic
	Automatic Adjustment of Mechanical Iris	Yes
	External Synchronization	Line-Lock
Outputs	Analog Output	Y/C Separate video, Composite video
	Digital Output	-ITU-R BT.656 Compliant (27MHz) -CCD image size (CCD drive frequency)
	Dual Analog and Digital Outputs	Yes
Power Supply Voltages		CXD4127GG: 3.3V, 1.2V CXD4816GG: 3.3V, VH, VL
Packages		CXD4127GG: LFBGA 97Pin CXD4816GG: LFBGA 80Pin

960H CCD Image Sensor

Product Name	ICX662AKA ICX663AKA "Super HAD CCD II"	ICX668AKA ICX669AKA "Super HAD CCD II"	NEW! ICX672AK ICX673AK "EXview HAD CCD II"

Image Size	Type 1/3	Type 1/4	Type 1/3
Pixels	480k 570k	480k 570k	480k 570k
Effective Pixels	976(H) x 494(V) 976(H) x 582(V)	976(H) x 494(V) 976(H) x 582(V)	976(H) x 494(V) 976(H) x 582(V)
Unit Cell Size [µm]	5.0(H) x 7.4(V) 5.0(H) x 6.25(V)	3.75(H) x 5.56(V) 3.75(H) x 4.69(V)	5.0(H) x 7.4(V) 5.0(H) x 6.25(V)
Sensitivity [mV] (F5.6)	1600	1400 1350	2450 2400
Saturation Signal [mV]	800	600 540	1400
Smear [dB] (F5.6)	-105	-105	-110
Supply Voltage [V]	+15/-7.5 (typ.)	+15/-7.5 (typ.)	+15/-7.0 (typ.)
H Transfer Voltage [V]	3.3 (typ.)	3.3 (typ.)	3.3 (typ.)

*CCD = CCD image sensor

Super HAD CCD Ⅱ™

*"Super HAD CCD Ⅱ" is a trademark of Sony Corporation.
The "Super HAD CCD Ⅱ" is a version of Sony's high performance CCD HAD (Hole-Accumulation Diode) sensor with realized sensitivity (typical) of 1000mV or more per 1µm^2 (Color: F5.6/ BW: F8 in 1 s accumulation equivalent.)

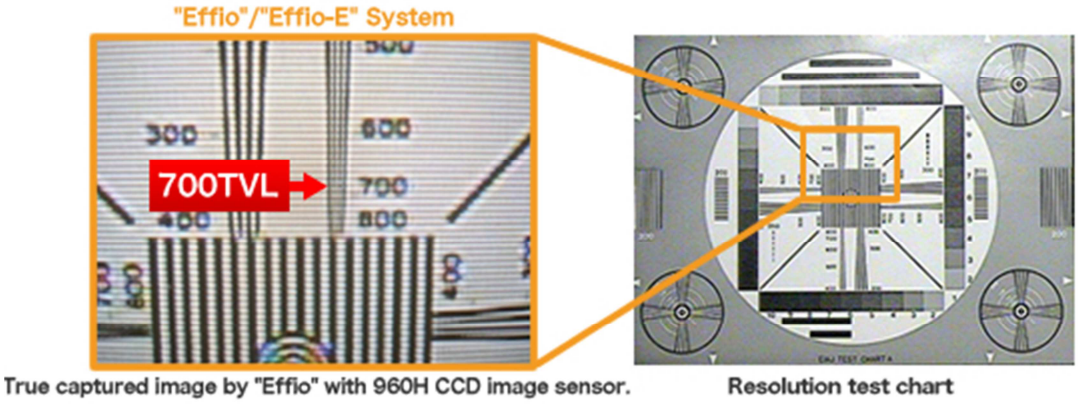
EXview HAD CCD Ⅱ™

*"EXview HAD CCD Ⅱ" is a trademark of Sony Corporation. The "EXview HAD CCD Ⅱ" is a CCD image sensor that realizes sensitivity (typical) of 1000mV or more per 1µm^2 (Color: F5.6/ BW: F8 in 1 s accumulation equivalent) and improves light efficiency by including near infrared light region as a basic structure of Sony's "EXview HAD CCD".

Advanced Features

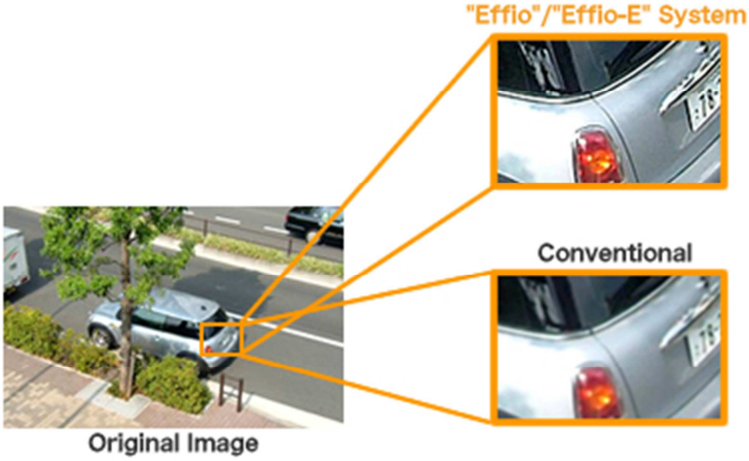
High Resolution

- Higher horizontal resolution of over 650TVL by 960H CCD image sensor



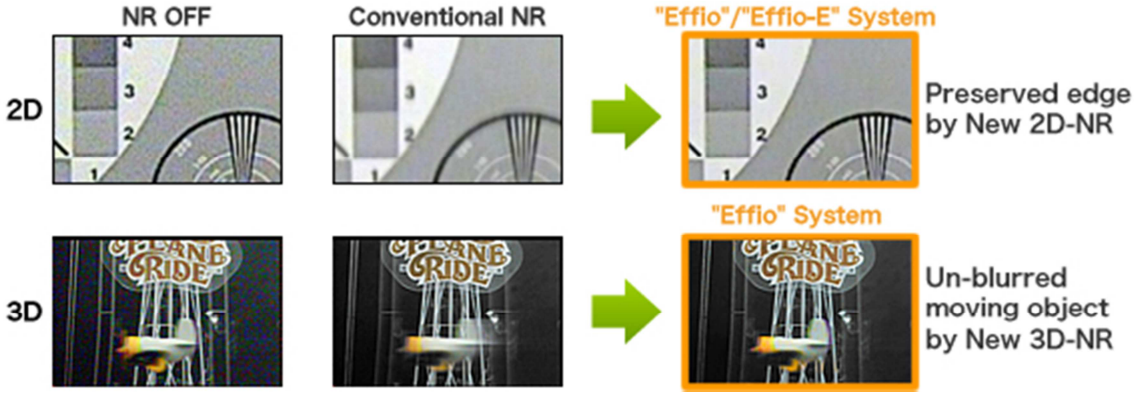
Confirmed maximum resolution to achieve the 700TVL.
Measurement method is refered to JEITA (TTR-4602B).
http://www.jeita.or.jp/english/

- More fine image after E-Zoom operation



Noise Reduction

- Noise reduction keeping image sharpness



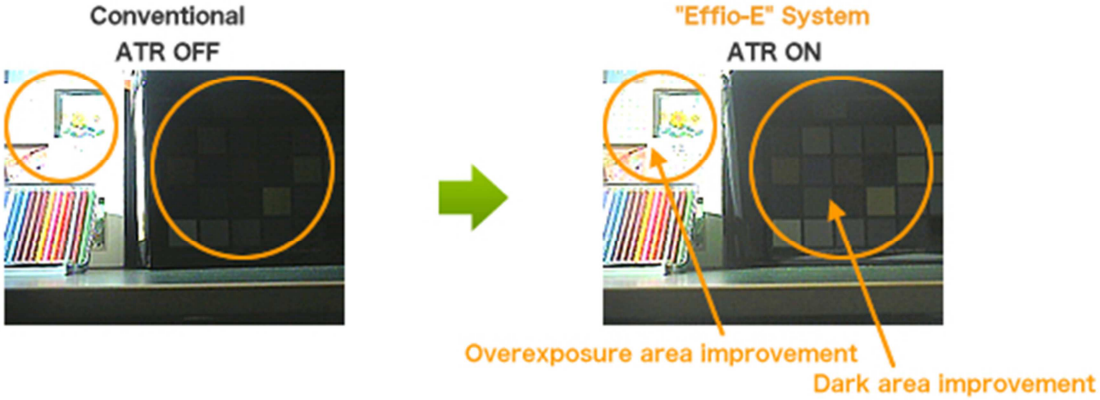
- Excellent NR performance under low light condition

High Color Reproduction

- More excellent color reproduction
- Wide range ATW [1,800 K to 10,500 K]

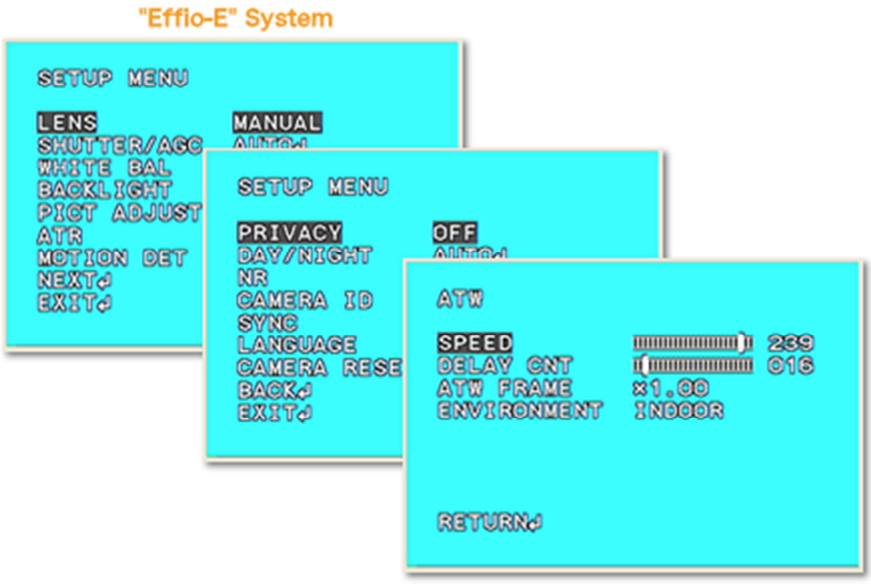
ATR (Adaptive Tone Reproduction)

- Gradation compensation to improve image contrast
- Improvement of loss of dark detail and overexposure area



Preset OSD Menu

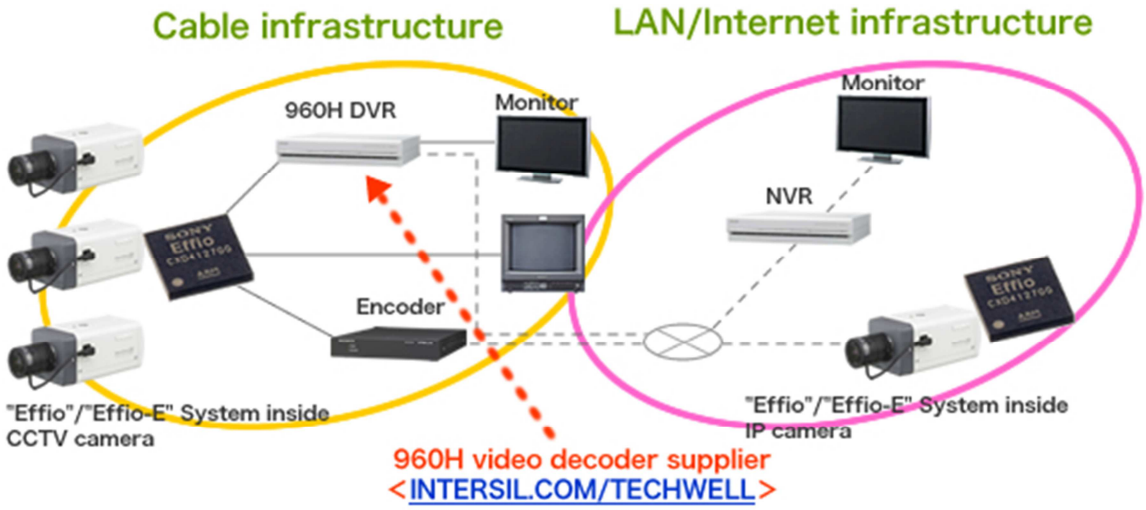
- "Effio-E" OSD function provides preset menus in 8 languages. (EN, FR, DT, ES, POR, CN, RUS, JP)



Innovative CCTV System by 960H World

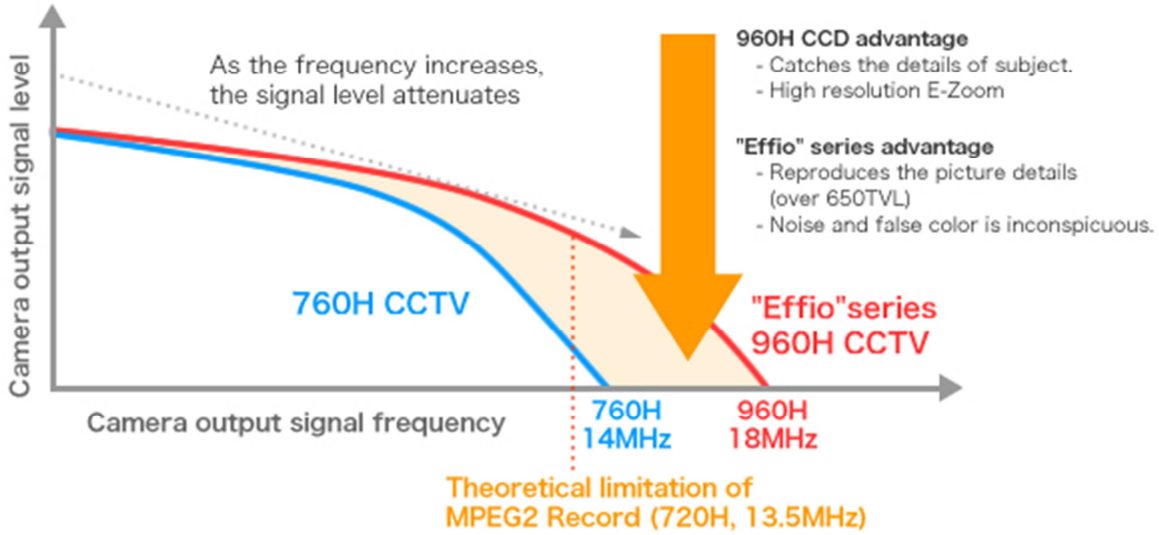
Create 960H World! with "Effio" Series

- Provides higher picture quality and higher performance for video quality and real-time monitoring by keeping the robust security CCTV system stability as it is.
- High picture quality and high performance of "Effio" Series are with high affinity to the fusion of LAN/Internet infrastructure.



960H−"Effio" Series Technical Advantage

- The number of 960H CCD image sensor (ensures the amount of information in the input stage) and "Effio" Series superior signal processing technique (high resolution video output) maintains image information to the utmost limits.



Concept of Frequency-dependent Attenuation of Camera Output Signal

*CCD = CCD image sensor