

1/ 3.06" 13.4M pixel CMOS Image Sensor
MN34130

SmartFSI®



Photos courtesy of Myomanji-temple, Kyoto

* This picture is SAMPLE picture.

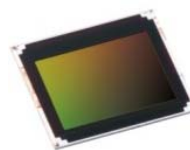
What's SmartFSI® ?

This photograph shows the ambience of a traditional Japanese tea room with its scarlet red carpet and outside is the beautiful green garden of Kyoto. **SmartFSI®** captures the moment with exceptional clarity, displaying natural colors under different lighting conditions. Just like human eye would see...

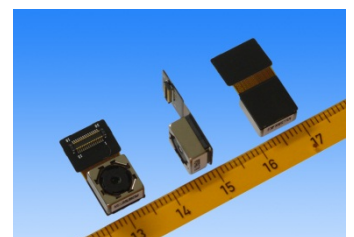
SmartFSI® delivers comparable picture quality to that of a DSC. Can take the same picture quality as your digital still camera?

Features

- **SmartFSI®** superior to BSI evolves mobile devices.
- High picture quality equal to DSC, allowing you to take a night view photo beautifully and vividly in detail
- Multi-fab supply for high-performance chip
- High CRA of up to 35~40 degrees, allowing a low-profile module



Chip Image



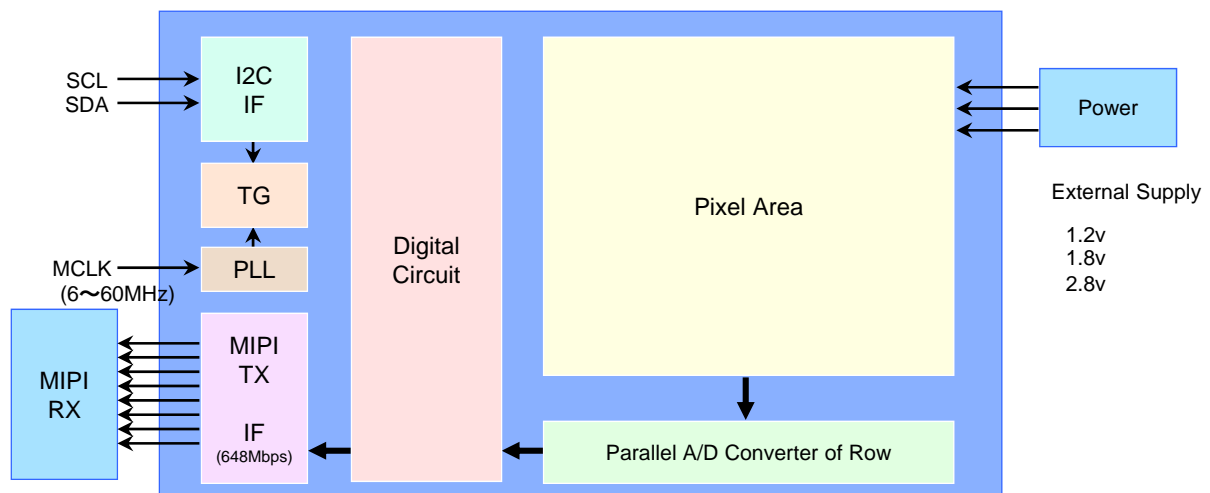
Camera Module Image

* "SmartFSI" is a registered trademark or trademark of Panasonic Corporation.

■ Specifications

Parameter	Content
Scan mode	Progressive scan
Optical size	1/3.06 type 4:3aspect
Number of effective pixels	4224 (H) x 3168 (V) = 13,381,632 (pixel)
Number of active pixels	4208 (H) x 3152 (V) = 13,263,616 (pixel)
Total number of pixels	4280 (H) x 3312 (V) = 14,175,360 (pixel)
Pixel size	1.12 (H) μm x 1.12 (V) μm
Actual imaging area dimensions (active pixel area)	4712.96 (H) μm x 3530.24 (V) μm
Color filter arrangement	R,G,B Bayer Pattern
Power supply voltage	2.8V / 1.8V / 1.2V
Master clock	6MHz ~ 60MHz TYP 18MHz Jitter \pm 200ps
Bit number of internal ADC	10bit
Output signal type	MIPI DDR method 648 Mbps
Register I/F	CSI-2 (I2C I/F)
Output frame rate per second	Full scan mode MIPI 4Lane 10bit format : 15.0 fps Full HD mode (V2/2mix_ch2/2mix Mode) MIPI 4Lane 10bit format : 60.0 fps
Electronic shutter (Full scan)	Full scan mode (15.0 fps) 1 / 15.02 s ~ 1 / 52174 s (1/52174 step)
Variable gain	Analog gain 0dB ~ +24dB 0.09375dB/step Digital gain 0dB ~ +18dB 0.09375dB/step
Functions	Full scan mode H/V cropping
	Preview H: 1/2 ~ n/7 sub-sampled, weight considered mix mode V: 1/2 ~ n/7 sub-sampled, weight considered mix mode
	HD movie mode 1080/60p (V2/2mix_ch2mix_H/V cropping mode) 1080/30p (V2/2mix_ch2mix_V cropping mode) 720/60p (V3/3mix_ch3mix_V cropping mode) Vertical and horizontal flip mode, Xenon/LED Flash control, Support Mechanical shutter, OTP 512Byte, Power on Reset

■ Block Diagram



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