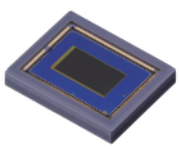
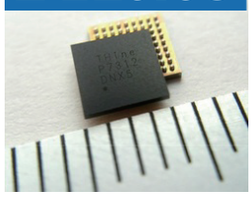
LI7050

ISP Evaluation Kit

The ISP Evaluation Kit for LI7050 is an evaluation kit for Canon's LI7050 CMOS image sensor, which uses the THP7312 provided by THine Electronics Inc. as the image signal processing (ISP) unit.





Applications

- Surveillance
- Webcam
- Dash Cam, Body Cam

ISP Features

- Sensor Correction
- Auto Exposure
- Auto White Balance
- Noise Reduction, Defect Correction
- Edge Enhancement
- Flicker Mitigation
- Small package
- Low Power Consumption

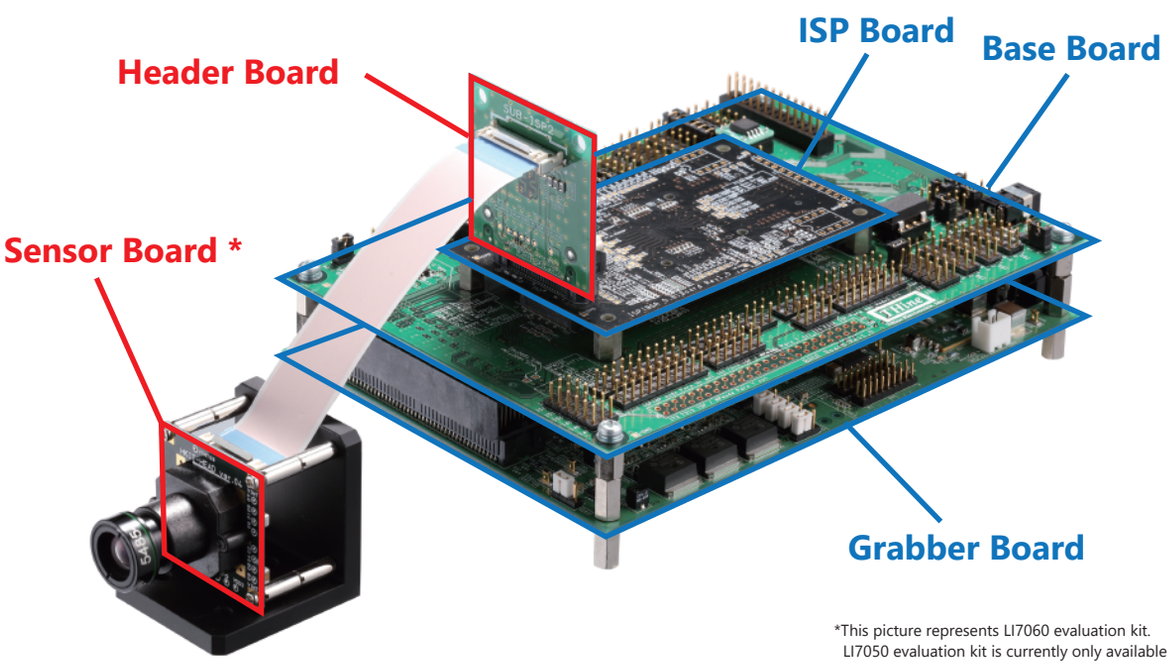
Development Tools

- Software Development Kit
- GUI Parameter Tuning
- GUI Viewer
- ISP Evaluation Board

ISP Interface

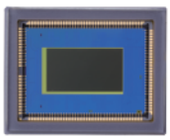
- MIPI CSI2 RAW12/10/8bit (Sensor)
- MIPI CSI2 YUV422/JPEG (Host)

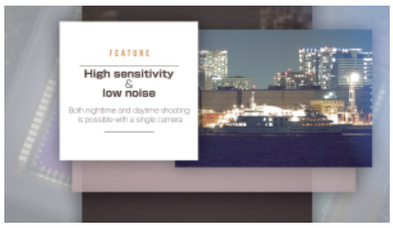
ISP Evaluation Board



*This picture represents LI7060 evaluation kit.
LI7050 evaluation kit is currently only available on C-Mount Lens.

High Sensitivity CMOS Sensor

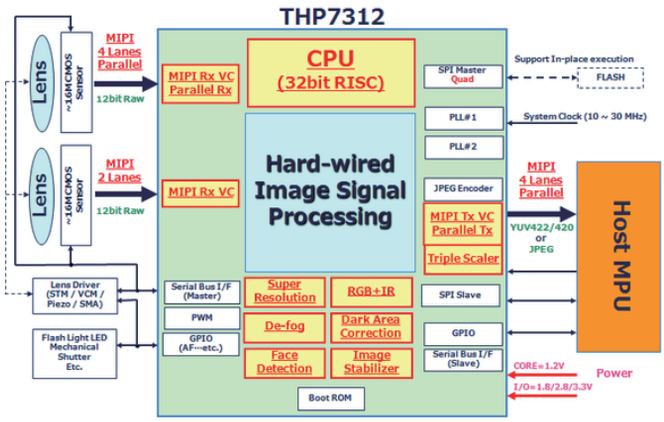




The newly developed CMOS sensor LI7050 has excellent low-noise characteristics and achieves a minimum object illumination of 0.08lx and a dynamic range of 75dB.

THine Electronics ISP

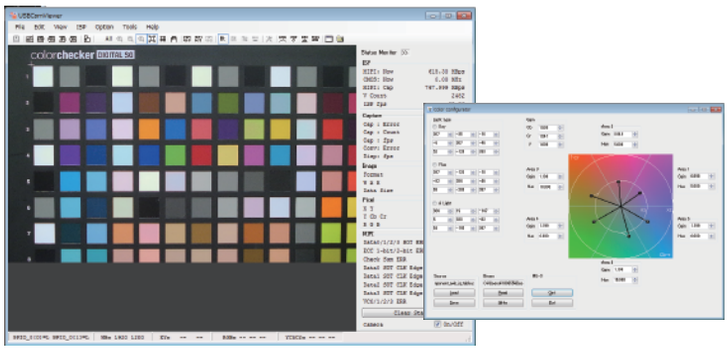
Block Diagram



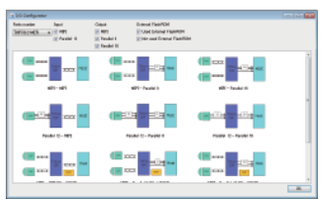
The THP7312, a high-performance image processing ISP designed by THine Electronics, is capable of high-speed image processing using a dedicated pipelined engine. A wide variety of image processing functions make it possible to maximize the performance of Canon image sensor.

GUI Parameter Tuning

It is possible to change various image processing parameters without coding the firmware, thus reducing the man-hours required for firmware development.

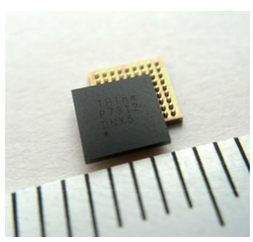


Color adjustment and gamma processing can be changed on a GUI basis. The changed settings can be saved as a binary file, written to ROM, or output as source code.



Input/output terminal layout can also be set by selecting an interface from the GUI.

Tailored for Canon CMOS Sensor



We have developed a dedicated driver that can change settings related to sensor operation such as exposure time and gain.
By linking with GUI software, it is possible to set the optimal line diagram and implement automatic exposure adjustment functions, etc., without coding the firmware.

ISP Specification	
Product Name	THine Electronics THP7312
Sensor IF	MIPI 4 lane RAW12/10/8 bit + MIPI 2 lane RAW12/10/8 bit
	LVCMOS Parallel RAW12/10/8 bit
Host IF	MIPI 4 lane YUV420/422, JPEG
	LVCMOS Parallel YUV422 or JPEG
External IF	GPIO, SPI
Supply Voltage	Core Voltage 1.2 V, IO Voltage 1.8 V / 2.8 V / 3.3 V
Dimensions	WLCSP81 (3.9 mm x 3.9 mm x 0.61 mm, 0.4 mm pitch)
	BGA81 (8 mm x 8 mm 1.2 mm, 0.8 mm pitch)

CMOS Sensor Specification	
Product Name	LI7050
Resolution	1936 (H) x 1096 (V)
Sensor Size	1/1.8 inch
Shutter Type	Electronic Rolling Shutter
Frame Rate	60 fps
Dynamic Range	75 dB
Sensor IF	MIPI CSI2
Supply Voltage	3.3 V, 1.8 V, 1.2 V
Dimensions	16.88 mm x 13.27 mm x 2.74 mm

*Any information could be changed by Canon without prior notice.

Canon

Design and Manufacturing

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For more information in our website

Canon offers this evaluation kit on loan to customers who are considering the purchase of CMOS sensors. Please contact our sales representative for more information.
To purchase this evaluation kit, it' s necessary to be purchased separetely from Canon and THine, sensor board and header board from Canon, the others from THine.

CANON CMOS Sensors Website
https://asia.canon/en/business/web/cmos-image-sensors

THine Electronics CDK Website
https://www.thine.co.jp/en/products/camera_processor/CDK/