KLT-IRSW-OS05A20 V2.0

OmniVision OS05A20 with IR Switch MIPI Interfaccia Messa a fuoco fissa 5MP M12 Modulo telecamera

Modulo telecamera n.	KLT-IRSW-OS05A20 V2.0	
Sensore d'immagine	OS05A20	**IR SWITCH**
EFL	2.1 mm	Input Voltage: 3.5V ~ 12V
F.NO	2.2	Operating Current: 88~300mA
Pixel	2688 x 1944	Red Line: Positive
Vista ad angolo	190°(D) 190°(H) 100°(V)	Black Line:Negative
Tipo di lente	1/2.7 pollice	
Dimensioni dell'obiettivo	24.80 x 16.00 x 21.82 mm	Operation:
Dimensione del modulo	50.00 x 30.00 mm	ON: IR Active (Day Time)
Tipo di modulo	Messa a fuoco fissa	OFF: IR Disable (Night Time)
Interfaccia	MIPI	

Connettore di accoppiamento Codice.   WP7A-S024VA1

Connettore di accoppiamento sulla scheda principale.Venduto separatamente.

OS05A20 5-megapixel product brief

available in a lead-free package

New OS05A20 Uses Nyxel™ Technology to Bring Superior Image Quality to Video Surveillance Cameras Day or Night

The 5-megapixel OS05A20 is the world's first image sensor to implement Nyxel™ technology, OmniVision's breakthrough near-infrared (NIR) technology that allows image sensors to see better and farther under low- and no-light conditions. By using Nyxel technology and a 2 x 2 micron pixel, the OS05A20 PureCel® image sensor has the unique ability to capture high-quality, high-resolution day or night, making it ideally suited for professional surveillance systems.

Nyxel technology combines thick-silicon pixel architectures with extended deep trench isolation (DTI) to improve quantum efficiency (QE) up to 3x for 850 nm sensitivity and up to 5x for 940 nm sensitivity, while maintaining all other image-quality metrics. These improvements deliver unrivaled image quality, extended image-detection range and a reduced light-source requirement, leading to lower power consumption.

Available in a 1/2.7-inch optical format, the OS05A20 is capable of capturing full-resolution 2688 x 1944 video at 60 frames per second (fps), 1080p full high definition (HD) video at 120 fps, and 720p HD video at 180 fps. The sensor comes in a 6.6 x 5.9 mm chip scale package (CSP).

Find out more at www.ovt.com.

OmniVision®

Applications

- Security Cameras
- Action Cameras
- High Resolution Consumer Cameras

OS05A20

Ordering Information

- OS05A20-H73A-Z
  (color, lead-free, 73-pin CSP)

Product Features

- 2 μm x 2 μm pixel
- optical size of 1/2.7"
- programmable controls for:
  - frame rate
  - mirror and flip
  - cropping
  - windowing
- supports output formats:
  - 10/12-bit RGB RAW
- supports images sizes:
  - 5MP (2688x1944)
  - 1080p (1920x1080)
  - 720p (1280x720)
- supports 2x2 binning
- standard serial SCCB interface
- 12/10-bit ADC
- up to 4-lane MIPI/LVDS serial output interface (supports maximum speed up to 1500 Mbps/lane)
- 2-exposure staggered HDR support
- programmable I/O drive capability
- light sensing mode (LSM)
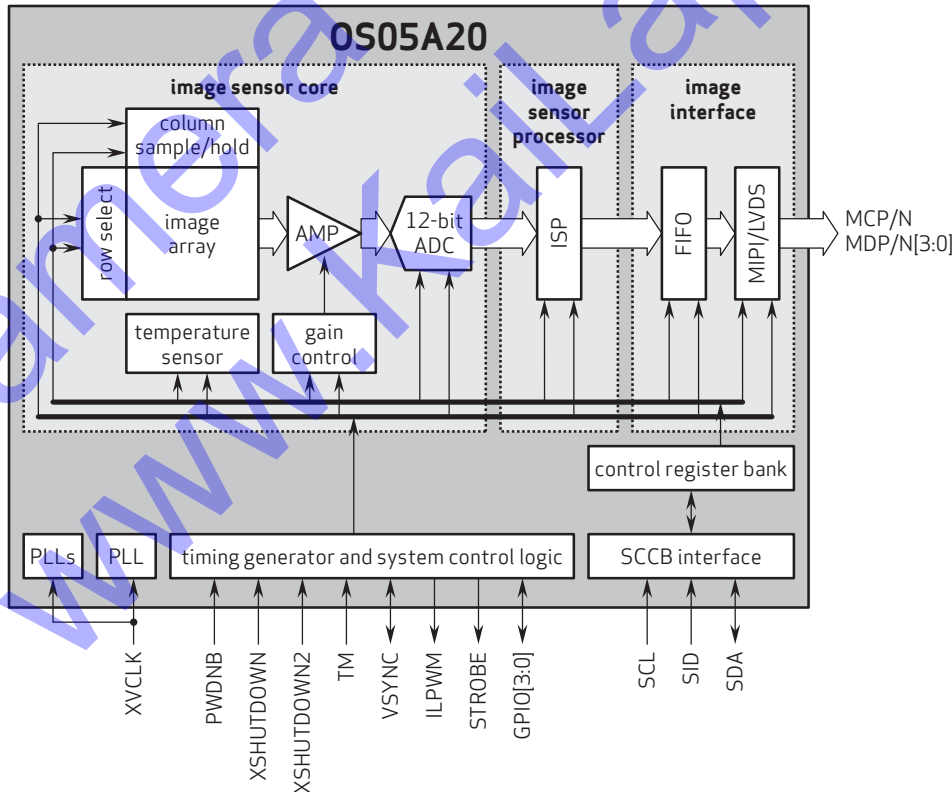- PLL with SCC support
- support for frame sync

Product Specifications

- **active array size:** 2688 x 1944
- **power supply:**
  - **core:** 1.2V
  - **analog:** 2.8V
  - **I/O:** 1.8V
- **power requirements:**
  - **active:** 170 mW
  - **standby:** 900 μA
  - **XSHUTDOWN:** 80 μA
- **temperature range:**
  - **operating:** -30°C to +85°C junction temperature
  - **stable image:** 0°C to +60°C junction temperature
- **output formats:** 10/12-bit RGB RAW
- **lens size:** 1/2.7"
- **input clock frequency:** 6 - 27 MHz
- **lens chief ray angle:** 11° linear
- **max S/N ratio:** 39 dB
- **dynamic range:** 74 dB @ 16x gain
- **maximum image transfer rate:**
  - **2688x1944:** 60 fps
  - **2688x1520:** 60 fps
- **sensitivity:** 13,000 e⁻/Lux-sec
- **scan mode:** progressive
- **maximum exposure interval:** VTS - 8
- **minimum exposure interval:** 4 t_{ROW}
- **pixel size:** 2.0 μm x 2.0 μm
- **image area:** 5434.56 μm x 3948.05 μm
- **package dimensions:** 6638.8 μm x 5935 μm

Functional Block Diagram

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