

# T31ZX



## 5MP H.265 video processor

T31ZX is a smart video application processor targeting Battery-Powered video devices like consumer camera, security camera, web camera, video analysis and so on. This SoC introduces a kind of innovative architecture to fulfill both high performance computing and high quality image and video encoding requirements addressed by video devices. T31ZX provides high-speed CPU computing power, excellent image signal process, fluent 5MP resolution video encoding. T31ZX is one of the world well know cost-effective video processor. There are plenty successful applications in variety video markets, and endorsed by many famous brands.

### FEATURES

- 1.4 GHz Xburst1 CPU with 64KB+128KB cache
- SIMD128 ISA
- 700MHz lite MCU core
- Professional ISP, extremely low light enhanced
- Advanced 2D/3D de-noise, 3A, DRC
- Maximum 5M(2592\*1900)@25fps H.265/H.264 video encoder, JPEG encoder
- 1Gb(128MB) DDR inside
- AES/RSA/SHA/TRANG
- Rich interfaces, I2C/I2S/SPI/USB/SDIO/DMIC/RMII/ADC
- Internal audio codec
- 400mW power consumption at typical application
- QFN88 package
- Typical AI algorithms available: smart tracking, person detection, baby cry detection ...

- Fastboot on Linux OS, TTFF < 300ms
- Mature solution and reference design ready for: IPCamera, home camera, web camera ...

### BENEFITS

- **Cost-effective** – world well known cost-effective video processor, endorsed by many famous brands.
- **Professional video quality** – starlight vision, low bitrate live video stream.
- **Lite-AI capability** – lite neural network algorithms powered by SIMD128 ISA.
- **Low power consumption** – 22nm process, long term on-chip consumption optimization.
- **300ms fast video** – less than 300ms boot up time base on standard Linux OS.

### APPLICATION/SOLUTIONS

Especially Battery Powered devices like:

- Consumer/home/IoT camera – All IPCamera based products, smart phone watch
- Surveillance camera – security cameras, IPC&NVR
- Battery camera – pure battery powered cameras
- Web camera – Usb cameras, video conferencing cameras
- Car recorder – single lens vehicle driving video recorders

### ORDERING INFORMATION

#### SAMPLES

Order Part #	Package
T31ZX	QFN88

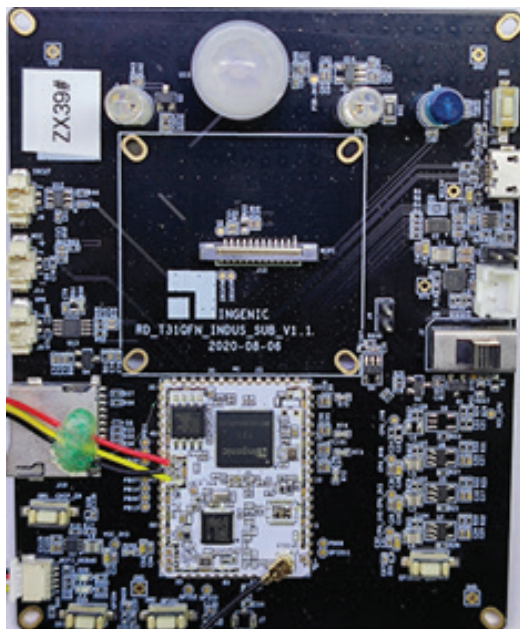
#### EVALUATION BOARD

Part Number
T31-INDUS-EB

## CHIP IMAGE

Too big, not fit for here, please reference to datasheet.

## EVALUATION BOARD

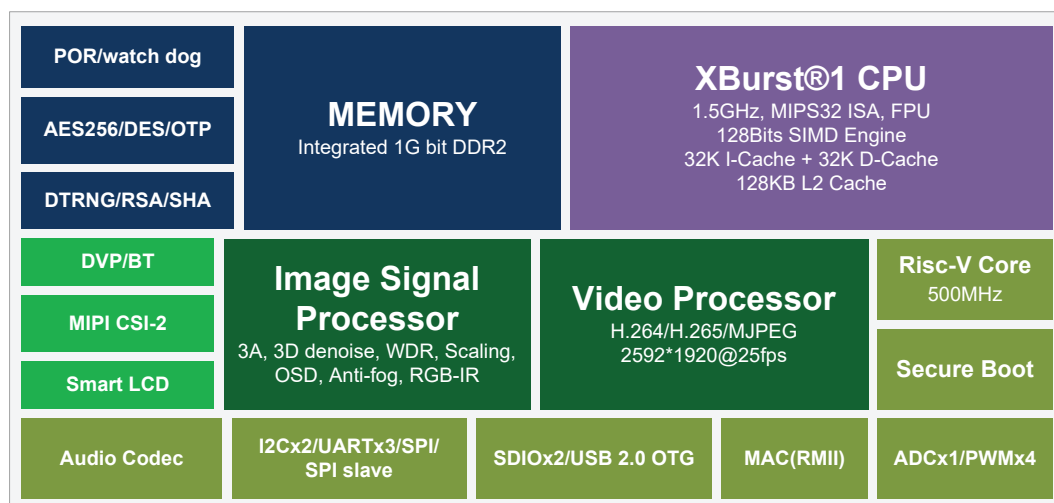


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## SYSTEM DIAGRAM

Please see hardware reference design.

## BLOCK DIAGRAM

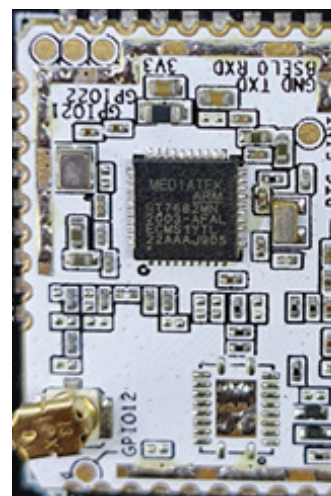


Questions or feedback may be sent to:

Lior Broner

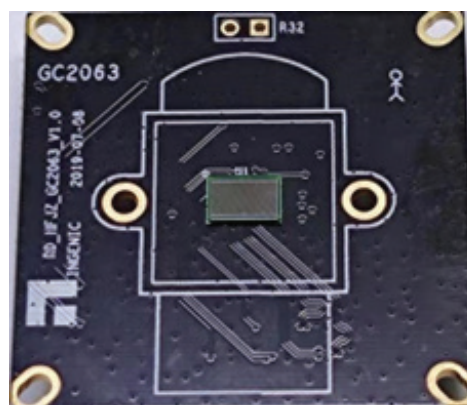
[lbroner@lumissil.com](mailto:lbroner@lumissil.com)

## WIFI MODULE IMAGE



MT7682

## SENSOR BOARD IMAGE



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