

ATOMAS Micro

OEM IP Video

Full HD 1080p60 H.264 IP Encoder Module

The ATOMAS Micro encoder module is a feature-rich IP video encoder designed for a wide range of OEM camera designs. The unique miniaturized form factor of the ATOMAS Micro makes it especially well suited for integration to small HD camera modules.



Features

- HD parallel video interface
- High profile H.264 video compression
- Supports input resolutions at up to 12 megapixels
- IP video streaming at up to 1080p60
- Local recording to SD card
- Onvif Profile S compliant
- Web-based administrative user interface
- 5.5VDC to 14VDC power input range
- Optional PoE power input module
- Low latency IP video streaming
- On-board RTC and hardware watchdog

HD Parallel Video Interface

The ATOMAS Micro is the smallest module in the ATOMAS series and is designed for direct connection to any parallel video input source, such as small form factor CMOS cameras and sensor modules. This combination allows for significant reduction in the size of finished products and is therefore ideal for a wide range of applications.



High Performance Video Engine

The ATOMAS Micro features a powerful video codec engine capable of generating multiple H.264 IP video streams at different quality settings. For instance, in dual streaming, it can generate a primary stream at full HD (1080p60) as well as a secondary stream at D1 30 FPS - and with a latency of less than 80ms.



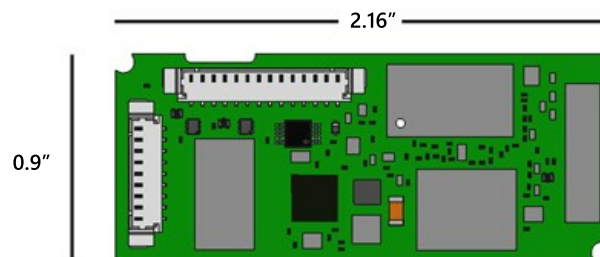
Full Embedded Software Stack

The ATOMAS Micro comes with an extensive list of embedded software functions including: RTSP streaming, administrative web interface, Onvif Profile S, local recording, mobile viewer for smartphones and tablets.

Target Applications

- Video surveillance cameras
- Industrial image processing
- Handheld or mobile devices
- UAV / military applications

DIMENSIONS



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Standard / Integrated Interfaces

| | |
|-----------------|-----------------------------------------------------------------------------------------------------------------------|
| Network | 1 x 10/100 Base-T Ethernet |
| Video Interface | 45-pin parallel video interface * Parallel 16bit (YCbCr422) * Matches SONY FCB Micro specifications |
| Serial Port | 1 x UART * Software accessible * Interface possible to PTZ controller |
| I/O | 2 x GPIO 1 x Board Reset Signal 1 x Dual Color Status LED Signal 1 x Mobile Host Storage Controller (SD/MMC) |

Video Performance

| | |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video Resolution | Supports sensor inputs at up to 12 megapixels |
| Video Compression | H.264/MPEG-4 AVC (up to high profile) MPEG4 Part 2 JPEG |
| Still Images | Still image capture at up to 12 megapixels |
| H.264 Performance | Total D1@390 fps or Full HD 1080p@65 fps Examples: 1 x 1080p60 fps + 1 x D1 @ 30 fps 2 x 1080p30 fps + 1 x D1 @ 30 fps (SONY FCB Micro limited to 1080p@30 fps) |
| Video Latency | Can reach less than 80ms latency |
| Image Processing | Lens distortion correction Motion adaptive deinterlacing Arbitrary image resizing and scaling ratio 2D/3D noise reduction Edge enhancement Frame difference motion detection Privacy masks ROI based video compression |

System

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|------------------|------------------------------------------------------------------------|
| Operating System | Linux |
| HW Watchdog | Auto-boot, OS supervision, temperature monitoring, software monitoring |
| Other | Realtime Clock (RTC) |

Storage

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|----------|-----------------------------|
| Internal | 1GB NAND Flash |
| External | External Storage via SD/MMC |

Protocols

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|------------|--------------------------------------------------------|
| Networking | IPv4/v6, UDP, TCP, IGMP, ARP, DHCP, DNS, NTP |
| Streaming | RTSP, RTP, HTTP, Web Sockets |
| Management | HTTP, HTTPS, Bonjour, ONVIF, PSIA, ION API, SNMP, SMTP |
| Security | Basic / Digest Authentication, SSL |

Software

| | |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Web GUI | System configuration and maintenance Live video and PTZ control Cross-browser support Smartphone and tablet support |
| Programming Interface | ION API, ONVIF Profile S |
| System Monitoring | Video signal, storage medium, temperature, memory, CPU, network |
| Media Recording | Recorded ASF audio/video to SD/MMC |
| Software Update | Fault-tolerant, remote accessible |
| Alarm Triggers | I/O input, motion detection, system monitor |
| PTZ Control | Full Pelco D implementation Can interface to PTZ controller (UART) Programmable preset tours User-defined custom commands |
| Other Features | Email notifications (on event or schedule) Text overlay OEM rebranding / customization |

Mechanical / Environmental

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|-----------------|-------------------------------------------------------------------------------------|
| Dimensions | 2.16 inch x 0.9 inch (main board) |
| Power Input | 5.5VDC to 14VDC PoE (option, via sister board) |
| Operating Temp. | Dependent on customer mechanical design * All components are -40C to 85C (Tcase) |
| Warranty | 2 Years Standard |