

ATOMAS-IOT-DUAL

OEM IP Video

Multi-Camera IoT Video Encoder Module

The ATOMAS-IOT-DUAL is a feature-rich IP video encoder module with IoT capabilities, suited for a wide range of camera designs. The compact form factor of the ATOMAS-IOT-DUAL makes it especially ideal for integration to dual camera systems combining LVDS zoom blocks, MIPI sensor modules and thermal blocks.



Features

- Three video input - MIPI, LVDS, Digital
- Two simultaneous video inputs / cameras
- Glueless connection to LVDS zoom blocks
- HEVC / H.264 / MJPEG video compression
- Resolutions up to 4K30
- Local recording to microSD card
- Onvif Profile G,S,T
- Optional IoT features: LTE, Wi-Fi, GPS, Bluetooth

Simultaneous Dual Camera Support

The ATOMAS-IOT-DUAL is designed for direct connection to the leading LVDS zoom camera blocks, such as SONY and KT&C, with additional support for MIPI and digital video sources such, such as a thermal cameras. Two cameras can be processed simultaneously and published via Onvif and other IP API's for streaming / recording.



High Performance Video Engine

The ATOMAS-IOT-DUAL features a powerful video codec engine capable of generating multiple HEVC / H.264 IP video streams at different quality settings. In single input mode, it can generate HD streams at 4K30fps; in dual input mode it can generate streams at up to 2K30fps for each input.



IoT Enabled for Endless Possibilities

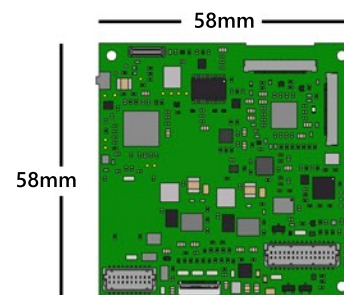
The ATOMAS-IOT-DUAL offers the latest in IoT and networking connectivity functions including: Ethernet, 4G LTE, Wi-Fi, GPS, Bluetooth, CAN Bus, 9-axis IMU and much more.



Target Applications

- Video surveillance cameras
- Thermal / visible camera systems
- Advanced PTZ camera systems
- UAV / military applications
- Robotics applications

DIMENSIONS



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Standard / Integrated Interfaces

Network	1 x 10/100 Base-T Ethernet 3G / 4G LTE (optional) Wi-Fi: 2.4G/5GHz, 802.11 a/b/g/n/ac (optional) Bluetooth: BT 4.2LE (optional) GNSS: GPS / BeiDou / GLONASS (optional)
I/O & Audio	2 x Dry Contact Inputs, 1 x I/O Output Pin 3 x PWM GPIO 1 x RS-485, 1 x UART (TTL), 1 x I2C 1 x Board Reset Signal 4 x uFL Antenna Connectors (LTE,Wi-Fi,BT,GNSS) 1 x VRTC (2.0V to 3.25V) 1 x 3.3V Out (max. 0.1A), 1 x 5V Out (max. 0.5A) 2-ch Audio Line In / 2-ch Audio Line Out 1 x CAN Bus (optional)
Video Input 1	LVDS interface * Matches SONY FCB specifications
Video Input 2	4-lane MIPI CSI-2 video interface * For use with compatible video adapter boards
Video Input 3	Digital video interface * For use with compatible IONODES video adapter boards

Video Performance

Video Resolution	Supports sensor inputs at up to 24MP
Video Encoding	HEVC / H.264 / MJPEG (up to 4K30FPS)
Video Latency	Can reach less than 120ms latency
Image Processing	2D/3D noise reduction Edge enhancement Frame difference motion detection Privacy masks

System

Processors	Qualcomm Snapdragon Processor Supervisory MCU for fault-protection
Operating System	Embedded Linux / Android
HW Watchdog	Auto-boot, OS supervision, temperature monitoring, software monitoring
Other	Realtime Clock (RTC) & Temperature Sensor 9-axis IMU (optional)

Storage

Internal	16GB eMMC
External	External storage via microSD * Requires optional microSD / SIM combo adapter board

Protocols

Networking	IPv4/v6, UDP, TCP, IGMP, ARP, DHCP, DNS, NTP
Streaming	RTSP, RTP, HTTP, Web Sockets
Management	HTTP, HTTPS, Bonjour, ONVIF, ION API, SNMP, SMTP
Security	Basic / Digest Authentication, SSL
Web GUI	System configuration and maintenance Live video and PTZ control Cross-browser support Smartphone and tablet support
Programming Interface	ION API, ONVIF Profile G,S,T
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	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

Dimensions	58 mm x 58 mm
Power Input	9VDC to 15VDC
Operating Temp.	Dependent on customer mechanical design * All components are -40C to 70C (Tcase)
Storage Temp.	Components are rated for -40C to 70C when in storage
Warranty	2 Years Standard