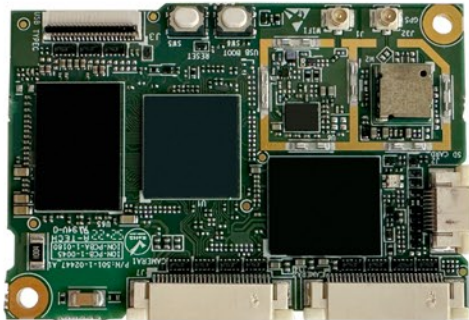


ATOMAS-IOT-MICRO

OEM IP Video

Dual Camera 4K IoT Video Encoder Module

The ATOMAS-IOT-MICRO module is a feature-rich IoT video encoder designed for a wide range of OEM camera designs. The unique miniaturized form factor of the ATOMAS-IOT-MICRO makes it especially ideal for integrations that require high quality video and IoT features in a compact form factor.



Features

- Two 4-Lane MIPI CSI video inputs
- Simultaneous encoding / streaming of two cameras
- Supports up to 4K30 resolution
- HEVC / H.264 / MJPEG video compression
- Local recording to microSD card
- Onvif Profiles G,S,T
- Powered by Qualcomm Octa-core SoC
- Optional IoT features: Wi-Fi, Bluetooth, GPS

Simultaneous Dual Camera Support

The ATOMAS-IOT-MICRO is designed for direct connection to MIPI camera modules hosting sensors such as SONY, Omnivision and more. Two cameras can be processed simultaneously and published via Onvif and other IP API's for streaming / recording. When combined with wide-angle cameras, the ATOMAS-IOT-MICRO can also support full 360° stitching on back-to-back camera configurations.



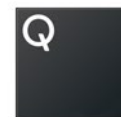
High Performance Video Engine

The ATOMAS-IOT-MICRO features a powerful Qualcomm IoT SoC capable of delivering premium features for building advanced smart camera and IoT use cases. When used to manage up to two cameras, the ATOMAS-IOT-MICRO offers powerful computing for on-device camera processing and machine learning (AI) with exceptional power and thermal efficiency.



IoT Enabled for Endless Possibilities

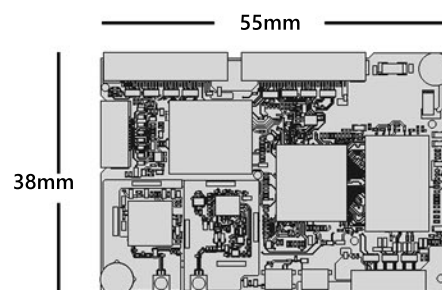
The ATOMAS-IOT-MICRO offers the latest in IoT and networking connectivity functions including: Ethernet, Wi-Fi, Bluetooth, GPS, 9-axis IMU and much more.



Target Applications

- Video surveillance cameras
- 360° camera systems
- AI camera applications
- UAV / UGV applications
- Robotics applications

DIMENSIONS



ATOMAS-IOT-MICRO

OEM IP Video

Dual Camera 4K IoT Video Encoder Module

Standard / Integrated Interfaces

Network	1 x 10/100 Base-T Ethernet Wi-Fi: 2.4G/5GHz, 802.11a/b/g/n/ac (optional) Bluetooth: BT 5.0 (optional) GNSS: GPS, BeiDou, GLONASS, QZSS (optional)
I/O & Audio	1 x UART (TTL) + 1 x I2C + 1 x SPI 1 x Board Reset Signal + 1 RGB Status Signal 2 x Antenna Connectors (Wi-Fi / BT, GNSS) 1 x VRTC (3.0V) 1 x 3.3V Out, 1 x 1.8V Out 1 x I2S for audio 1 x USB 3.1
Video Input 1	4-lane MIPI CSI-2 video interface * For use with compatible video adapter boards
Video Input 2	4-lane MIPI CSI-2 video interface * For use with compatible video adapter boards * Supports synchronization signal with Input 1

Video Performance

Video Resolution	Supports sensor inputs at up to 12MP
Video Encoding	HEVC / H.264 / MJPEG (up to 4K30FPS total)
Video Latency	Can reach less than 120ms latency
Image Processing	2D/3D noise reduction Edge enhancement Frame difference motion detection Privacy masks

System

Processor	Qualcomm Octa-Core IoT SoC
Operating System	Embedded Linux
HW Watchdog	Auto-boot, OS supervision, temperature monitoring, software monitoring
Other	Realtime Clock (RTC) & Temperature Sensor On-board 9-axis IMU

Storage

Internal	8GB eMMC
External	External storage via microSD <i>* Requires optional microSD adapter board</i>

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

Software

Web GUI	System configuration and maintenance Live video and PTZ control Cross-browser support Smartphone and tablet support
Programming Interface	ION API, ONVIF Profiles 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	38 mm x 55 mm
Power Input	5.5VDC to 14VDC
Operating Temp.	Dependent on customer mechanical design <i>* All components are -25C to 85C (Tcase)</i>
Storage Temp.	Components are rated for -30C to 70C when in storage
Warranty	2 Years Standard

Available Adapter Boards

MIPI Camera Adapter Boards
Audio Adapter Board for Stereo Audio In / Out
SD Card Adapter Board for Storage
USB 3.1 Adapter Board