

Jasper

Miniature Tactical Intelligence Gathering Unit



Jasper is a miniature tactical intelligence gathering unit that combines multi-input video capture with an AI-accelerated H.265 video engine for up to 1080p60 encode/decode. It records to microSD and streams over IP using adaptive, narrowband-optimized encoding to maintain quality on constrained links.

Modular communications using LoRa, Wi-Fi, RF data link, LTE+GPS add-on modules and standard I/O (USB-C, RS-232/485, GPIO, mic-in) allow for rapid integration across deployments.

Markets and Applications

Intelligence Gathering

Real-time data capture, encoding, and analysis for defense and HLS environments

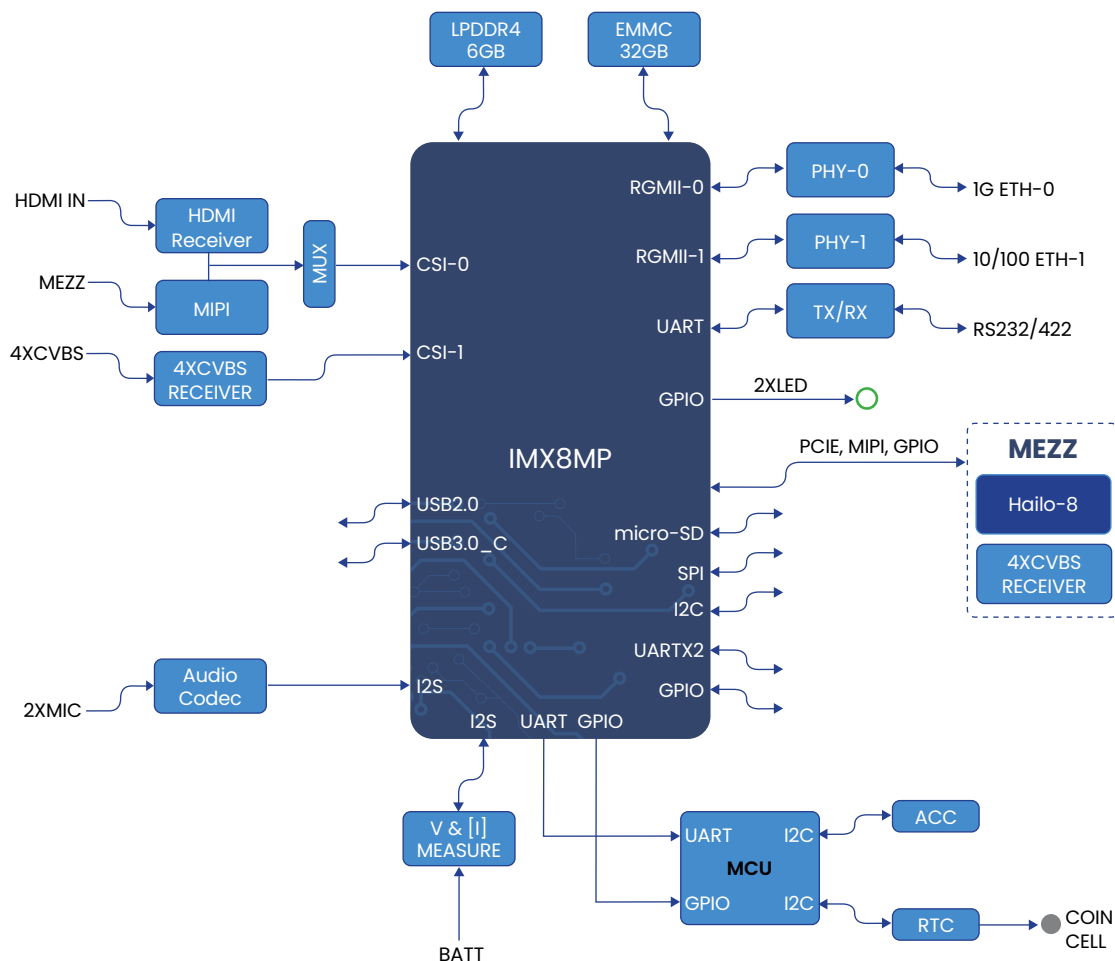
Key Benefits

- Ultra-compact, ultra-low power
- Reliable AI-based video over narrowband communication
- Multi-sensor flexibility
- Modular communications

Key Features

- Acts as H.265 encoder/decoder and handles multiple video streams
- AI-based encoding with onboard AI accelerator optimized for narrowband links
- Adaptive wireless communication with dynamic encoding
- Local recording and IP streaming, with audio input support
- Multiple video sources supported (IP, digital, and analog)
- Modular communications expansion: LoRa, Wi-Fi, RF data link, LTE+GPS
- Miniature, ultra-low-power design for tactical deployments
- Local encrypted streaming and recording

Block Diagram



Technical Specifications

Video engine	Multi-stream HD video; H.265 1080p60 encode / 1080p60 decode
AI & encoding	AI-based encoding optimized for narrowband and dynamic encoding
Recording	Onboard recording to microSD;
Streaming	IP Streaming
Video inputs	HDMI, MIPI, 8× CVBS, IP camera, USB
Communications	Adaptive wireless; expansion cards: LoRa, Wi-Fi, RF data link, LTE+GPS
Interfaces	USB-C, RS-232/485, 2× GPIO, Microphone input
Power	3.5–18 VDC input; max <5W
Operating temperature	–40° to +85° C
Dimensions / weight	50 × 63 × 14 mm; ~200 g

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