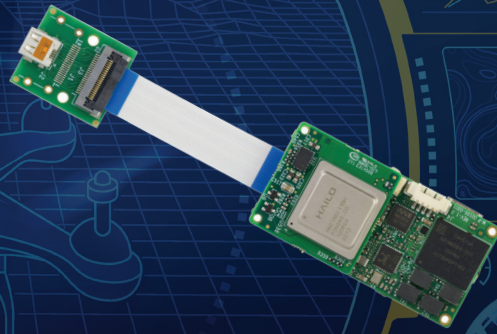




# Jupiter-Drones

## Drone-oriented dual channel SD/HD H.265 codec



An advanced drone-oriented dual channel H.264/5 codec, Jupiter-Nano handles multiple streams simultaneously and supports end-to-end 100msec ultra-low-latency streaming over networks using Maris SW player for Windows, Linux and Android. Jupiter-Drones streams over wired and wireless networks, supporting Unicast, Multicast, Broadcast in UDP, RTP, RTSP with Forward Error Correction (FEC) support.

Capabilities include video and audio capture, encoding, decoding, transcoding and display, and video raw-data pre-processing.

Optional AI acceleration addon module within the same factor, which includes powerful Hailo-8, 26 TOPS AI Accelerator enabling high AI accuracy detection & tracking as well as hosting customers AI processes.

### Markets and applications

#### Professional Civilian

Autonomous vehicles, agriculture and visual inspection

#### Homeland Security

Search and rescue, border protection, intelligence gathering

#### Defense

Target recognition, observation, and situational awareness

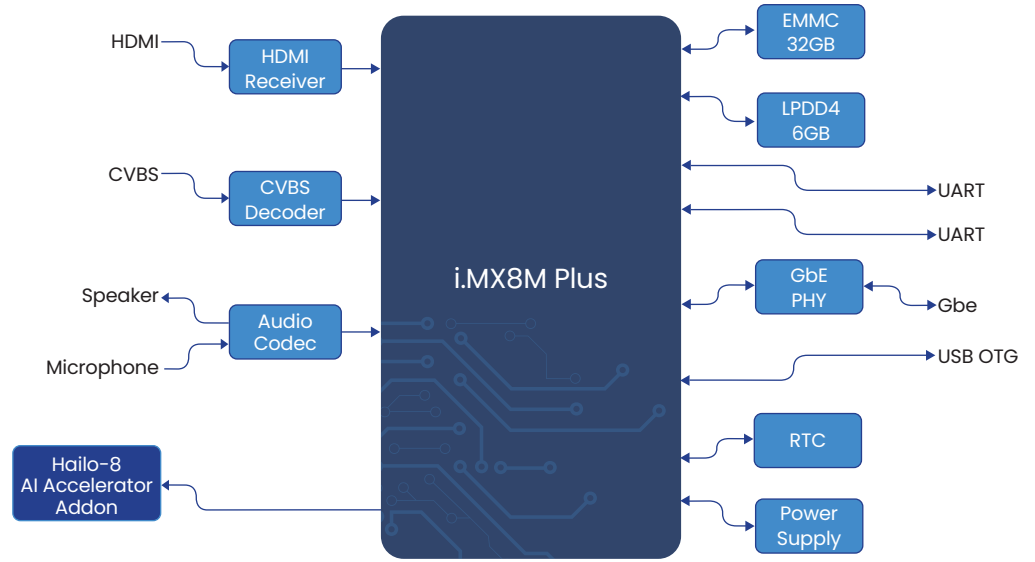
### Key Benefits

- Compact form factor
- Reliable HDMI connection
- Handles multiple streams simultaneously

### Key Features

- Acts as h.264/5 Encoder or Decoder and handles multiple video streams simultaneously
- Video and audio capture, encoding, decoding, transcoding and display
- Video raw-data pre-processing, including scaling and graphics overlay
- Transport Stream (including metadata container generation)
- Video, audio and data simultaneous local recording and playback
- Streaming over wired and wireless networks, supporting Unicast, Multicast, Broadcast in UDP, RTP, RTSP with Forward Error Correction ("FEC") support
- Optional AI acceleration addon module within the same factor, which includes powerful Hailo-8, 26 TOPS AI Accelerator enabling high AI accuracy detection & tracking as well as hosting customers AI processes.
- Support end-to-end 100msec ultra-low-latency streaming over networks using Maris SW player for Windows, Linux and Android

## Block Diagram



## Technical Specifications

SoC	NXP i.MX 8M Plus
Memory	6GB LPDD4 32GB EMMC
Video in	analog, HDMI and USB video inputs
Display	HDMI on main board
Audio in	Microphone
Audio out	Speaker
H.264/5 codec	VBR & CBR Encoding performance: 8 x D1 4 x 1080p60 2 x 1080p60 + 4 x D1 Decoding resolutions: 1 x 1080p60
Network	GbE
Storage media	32GB EMMC
Serial interfaces	Dual UART
USB	USB - OTG
Dimensions	25.4 x 50.8 mm
Operating temperature	-40°C to +85°C
Power	<4W 5-12V

Ref. M-P-00186-IV1.0 Date: October 2024