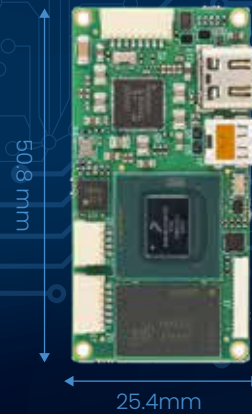# Jupiter-Nano
Dual channel SD/HD H.265 codec

50.8 mm

25.4mm

An advanced 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-Nano 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.

Markets and applications

Professional Civilian
Autonomous vehicles, agriculture and visual inspection

Homeland Security
Search and rescue, border protection, intelligence gathering

Defense
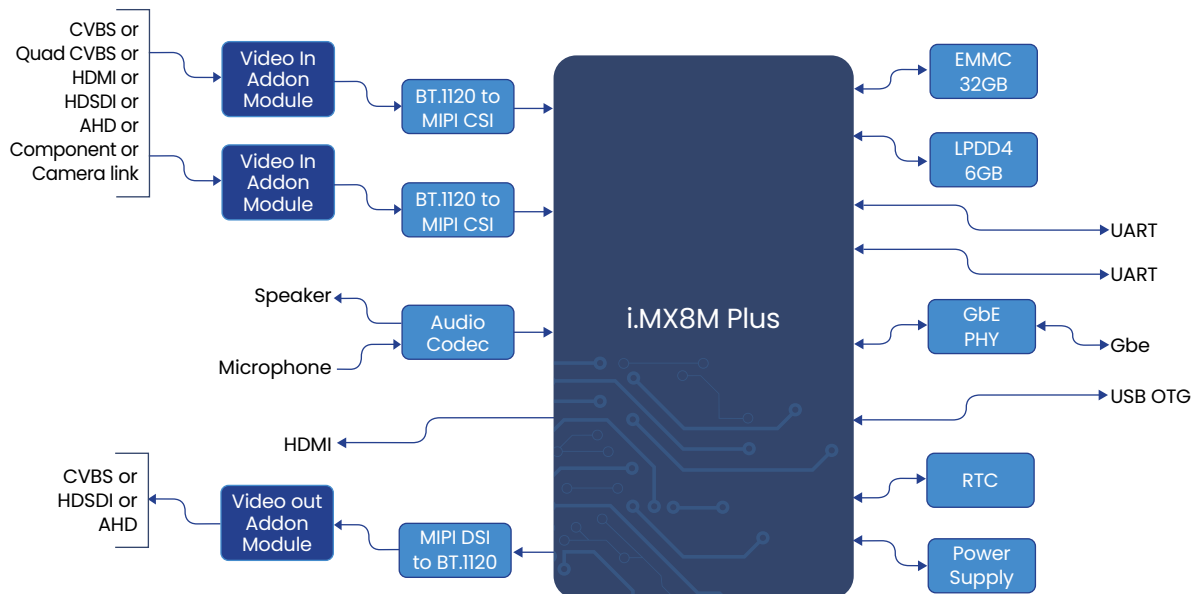Target recognition, observation, and situational awareness

Key Benefits

- Compact form factor
- 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 stabilization, scaling, graphics overlay, picture-in-picture
- 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
- 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	Dual camera port each supporting the following video input receivers: analog, quad analog, HDSDI, HDMI, AHD, component, camera link
Display	HDMI on main board
	Single display port supporting the following video output transmitter: analog, HDSDI, AHD
Audio in	Microphone
Audio out	Speaker
H.264/5 codec	VBR & CBR Encoding performance: 1- 8 x D1 4 x 1080p60 2 x 1080p60 + 4 x D1 Decoding resolutions: 2 x 1080p60 1 x 1080p60 + 1 x D1
Network	GbE
Storage media	32GB EMMC
Serial interfaces	Dual UART
USB	USB – OTG
Dimensions	25.4 x 50.8 mm
Operating temperature	−40ºC to +85ºC
Power	5V
	<4W in 2 x HDSDI @ 1080p30 recording and streaming