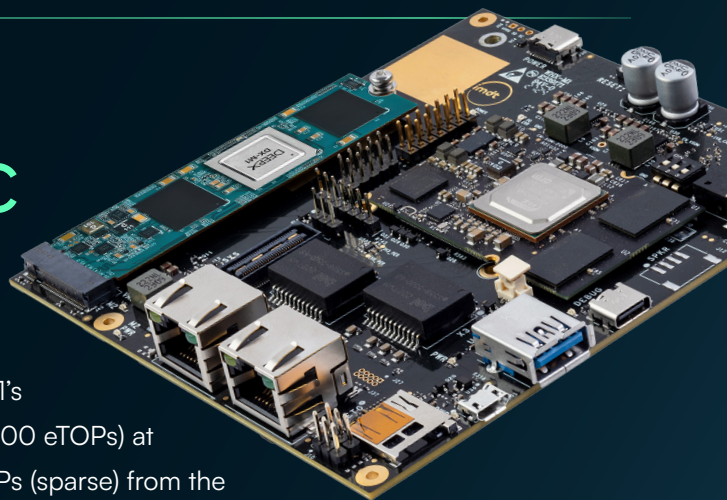




IMDT V2H DEEPX SBC



The IMDT V2H DEEPX SBC is a powerful, compact mini-computer engineered for AI-driven vision applications. Fully compatible with the DEEPX M1 module, it harnesses the M1's industry-leading energy efficiency—delivering up to 25 TOPs (200 eTOPs) at under 5W—alongside an additional 8 TOPs (dense) and 80 TOPs (sparse) from the integrated V2H processor. This enables real-time, high-performance AI processing in a small footprint.

Ideal for robotics, drones, and smart city deployments, the V2H SBC offers a balanced mix of performance, efficiency, and cost-effectiveness. Its extensive I/O options, modular assembly support, and comprehensive on-board connectivity make it an excellent choice for developers creating intelligent, compact system designs.



- Based on IMDT RZ/V2H SOM
- Supports 4-lane PCIe Gen3
- Multi camera connectivity, up to 4 x 4-lane MIPI CSI
- 6-DOF IMU, 3-Axis magnetometer for motion sensing
- Full Connectivity
 - M.2 NGFF Key-E for Wi-Fi module or AI accelerator
 - M.2 NGFF Key-B for cellular module
 - Wi-Fi 4, Dual-band
 - 2 x RJ-45, 1000Base-T, optional PoE
- Dimensions (WxLxH): 125 x 110 x 15mm
- Quick prototyping with IMDT's V2H DEEPX Evaluation Kit

DEEPX

DX-M1 M.2 LPDDR5x2

Type: AI Accelerator

AI Perf: 25 TOPs / 3~5W

Form Factor: M.2 M Key (22 x 80 mm)

Interface: PCIe Gen.3 x4

Memory: 4GB LPDDR5, QSPI 1Gbit NAND



Delivering 8+25 TOPs of combined AI performance



Outstanding power efficiency



Cost efficiency



Multi-camera solution



Full connectivity

Key Features



Low Power SBC
without heat sink



Built in AI accelerator



Various communication /
storage / network interfaces



Accelerators engines



On-chip SRAM



Audio



Analog/digital converter(ADC)



Internal temperature sensors



Security

Product Specification

Specification	Description
CPU:	RZ/V2H, 4xA55+M33+2xR8, VPU, NPU, GPU, ISP
Memories:	QSPI NOR flash, 64MBytes Secure EEPROM Micro SD card slot
Connectivity:	Supports 4-lane PCIe Gen3 2.4/5GHz Wi-Fi 4, Dual-band + Bluetooth 5.2 BR/EDR/LE 2 x RJ-45 , 1000Base-T, Optional PoE 1 x USB 3.2 type-A connector 2 x USB 2.0 connectors M.2 NGFF Key-E can be used for Wi-Fi module or AI accelerator M.2 NGFF Key-B can be used for cellular Module RS-232 transceiver on board CAN-FD transceiver on board
Camera:	4 x 4-lane MIPI CSI interface for cameras via IAS connectors ISP

Specification	Description
Audio:	3.5mm Audio jack for stereo headset with mic Onboard PDM digital microphone
Sensors:	Temperature & Humidity 6-DOF IMU 3-Axis magnetometer
Power:	USB-C PD power POE+GTP (with addition of power supply module) Optional external power supply
Misc	RTC Fan control Boot DIP-Switch LEDs Debug - On board UART to USB bridge with USB-C connector
Extensions:	SPI, I2C, I2S, PDM, GPIOs, Analog headers Extension connectors with power and I2C
Dimensions:	125 x 110 x 15mm

The IMDT V2H DEEPX Evaluation Kit

Provides a ready-to-use development environment for streamlined prototyping and system integration. Built around the V2H DEEPX SBC and fully integrated with the DEEPX M1 module, the kit exposes all key interfaces and connectivity features, making it easy to evaluate performance and explore real-world AI use cases. It enables developers to accelerate testing, fine-tune applications, and validate designs with minimal setup effort. It is an ideal platform for transitioning quickly from concept to deployment.



What's in the box

IMDT's V2H SBC



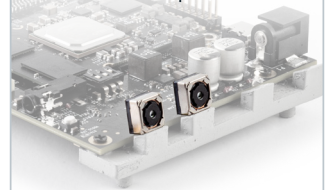
2 x USB cable C - C type
for power supply & Debug



Full HD USB camera



2 x AR1335 mipi cameras



USB-C PD 35W Wall Adapter
with foldable US prongs &
replaceable EU and UK plugs



Optional



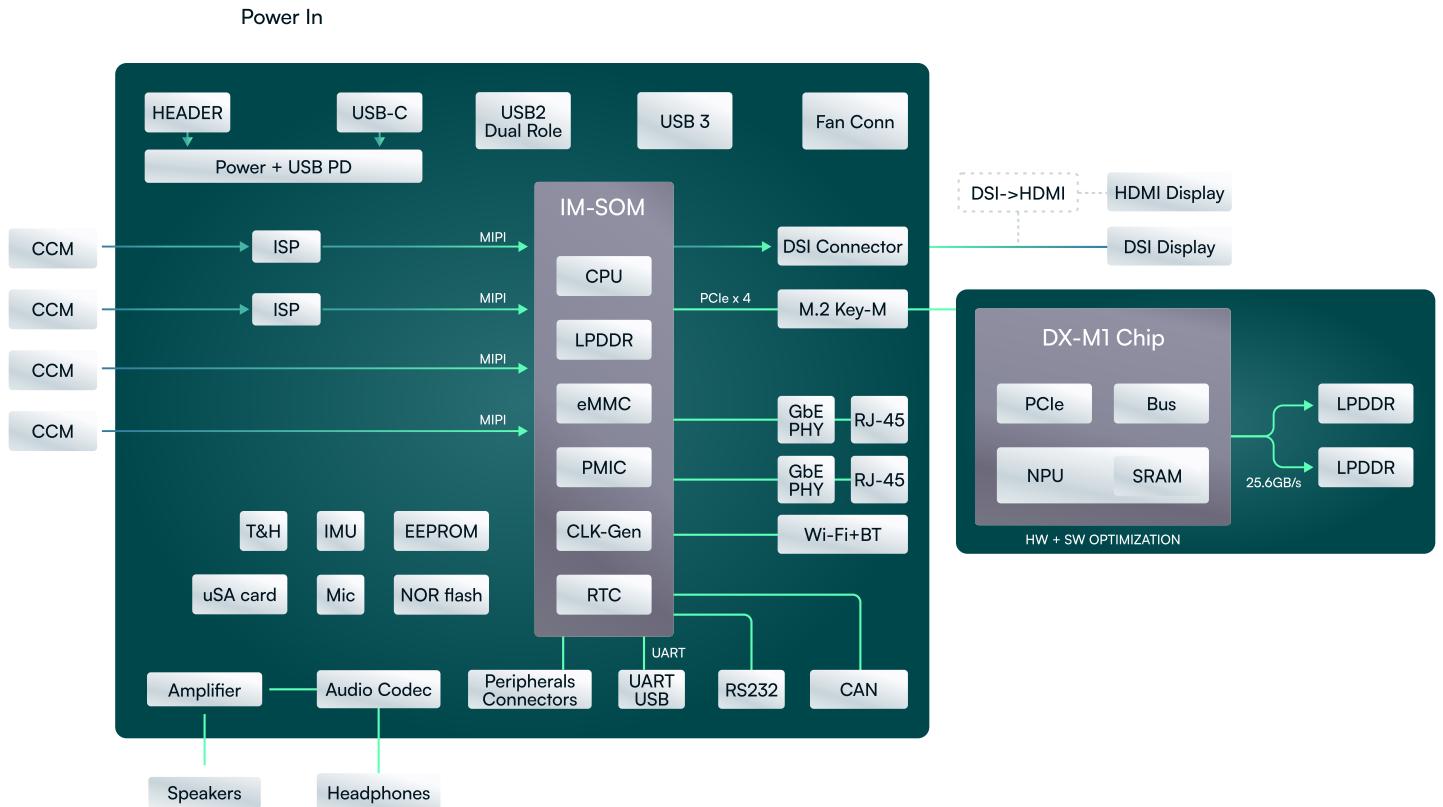
DSI to HDMI adapter
& HDMI cable

Optional



Display

Block diagram



About IMDT

IMDT Technologies, with headquarters in the UK and Israel, specializes in creating advanced vision and AI-powered products and systems. Leveraging extensive engineering experience in real-time applications, including vision and AI on edge hardware and software, IMDT has excelled in design, development, and manufacturing since its inception in 2017. The company globally addresses complex vision and AI challenges, focusing on partnerships with leading chip manufacturers and delivering turnkey projects in medical, robotics, smart cities, smart homes, and industrial IoT.

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