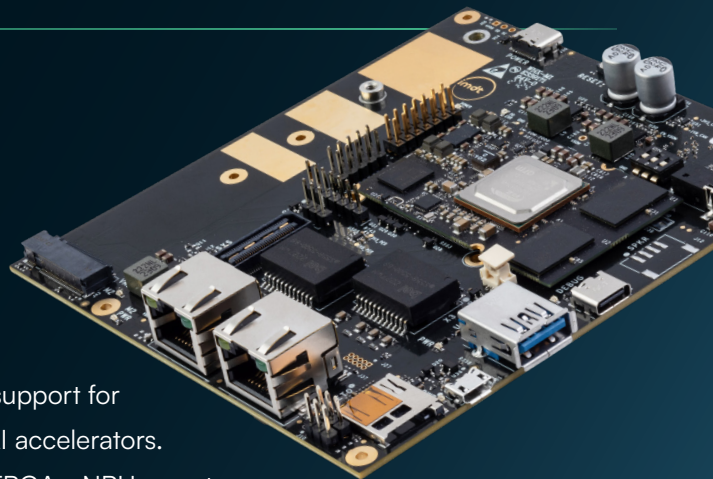




IMDT V2H 4X SBC



The IMDT V2H 4X SBC is a compact, high-performance carrier board built around the IMDT V2H SOM, designed for real-time edge AI and vision-centric applications. A standout feature is its support for 4-lane PCIe Gen3, making it an ideal host platform for external AI accelerators.

This high-bandwidth interface enables seamless connectivity to FPGAs, NPU's, or storage devices, allowing developers to offload compute-intensive workloads, enhance real-time performance, and reduce latency in vision processing pipelines. The board also supports multi-camera systems through four independent MIPI CSI interfaces, making it suitable for robotics, industrial automation, and autonomous devices. With rich I/O, efficient power design, and a developer-friendly layout, the V2H 4X SBC accelerates prototyping and deployment of advanced embedded solutions.

- Based on IMDT 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-M for AI accelerator
 - 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 Evaluation Kit

RENESAS

PARTNER PROGRAM



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

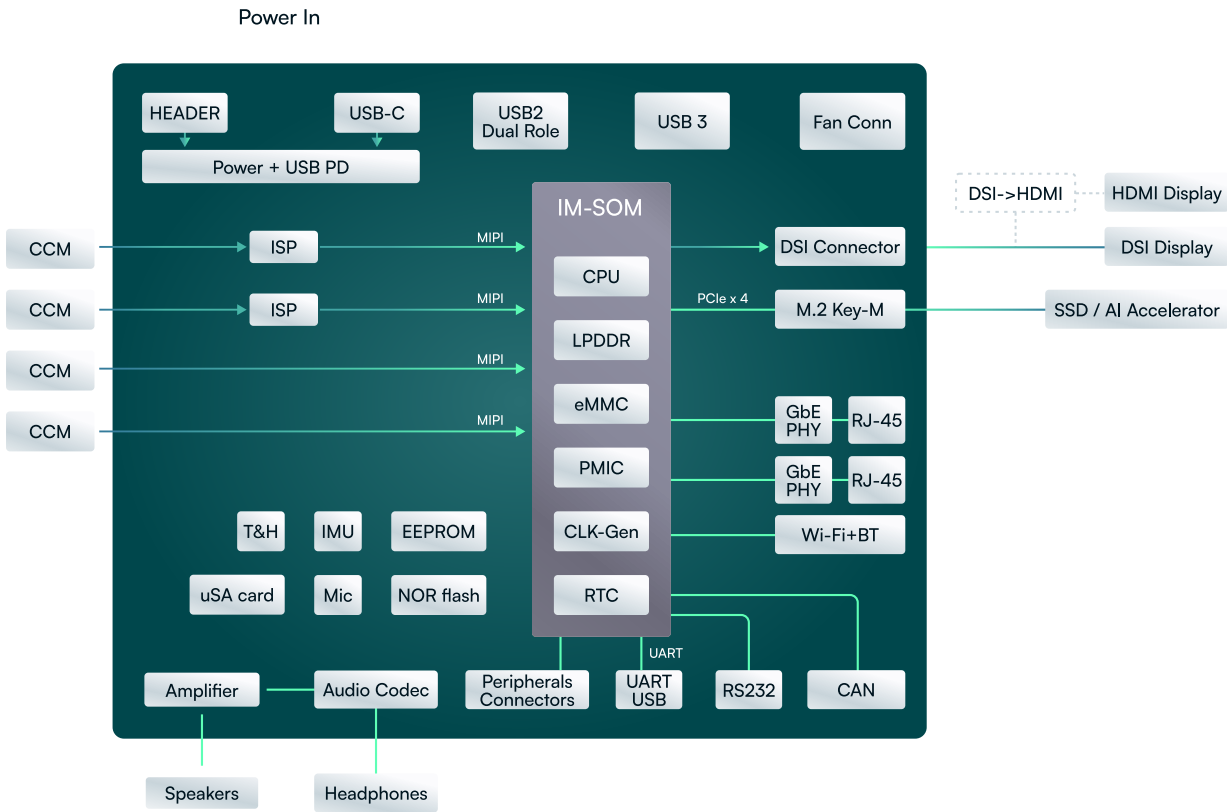


Product Specification

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 USB 3.2 type-A connector USB 2.0 Micro-B connector M.2 NGFF Key-M for AI accelerator 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

Block diagram



The IMDT V2H 4X Evaluation Kit

Provides a ready-to-use development environment for streamlined prototyping and system integration. Built around the V2H 4X SBC, 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 4X SBC



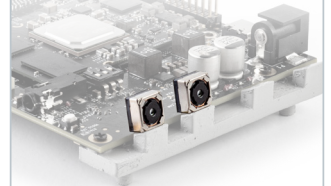
2 x USB cable C - C type
for power supply & Debug



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

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.

For more information contact: sales@imd-tec.com