

IMDT V2N SOM

The IMDT V2N SOM (System on Module) is a high-performance, cost-effective solution designed for a range of AI-driven vision applications.

Powered by the Renesas RZ/V2N processor, it features an Arm® Quad Cortex®-A55 (1.8GHz) CPU, an integrated AI accelerator and 4K encoder/decoder, making it optimized for vision-based tasks.

The V2N SOM supports up to two cameras via 2 x 4-lane MIPI CSI-2 connections and offers customizable options such as onboard Wi-Fi/Bluetooth, various memory and storage capacities, and PHY configurations. These features make it ideal for development across a wide range of applications.



- Based on Renesas' RZ/V2N Quad Cortex®-A55 processor + Cortex-M33@200MHz
- Integrated AI accelerator, DRP-AI3 (up to 15TOPS)
- Multi camera connectivity, up to 2 x 4-lane MIPI CSI
- 4K encoder/decoder
- Configurable memory size (DDR, eMMC)
- Customizable carrier board and the associated SW services
- Dimensions (WxLxH): 58 x 36 x 5mm



Small form factor



Complete solution including HW&SW



Flexible & modular platform



Enhanced Security

Key Features



Multi camera connectivity, up to 2 x 4-lane MIPI CSI



Quad core A55 + Cortex M33



Built in AI accelerator



4K encoder/decoder



Various communication / storage / network interfaces



Accelerators engines



On-chip SRAM



Audio



Analog/digital converter(ADC)



Internal temperature sensors



Security

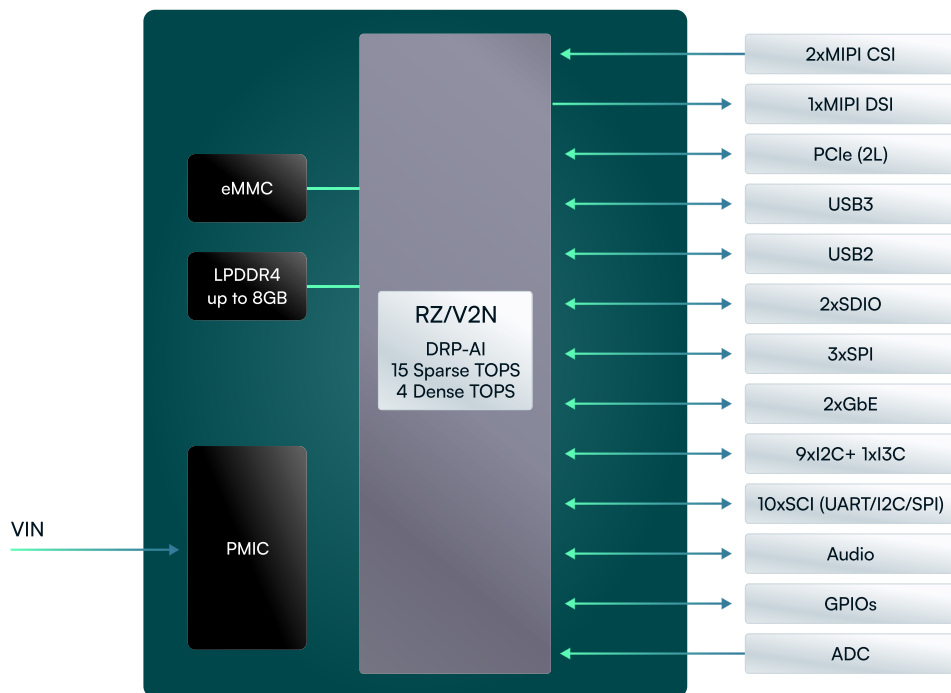


Product Specification

Specification	Description
CPU:	RZ/V2N, 4xA55+M33, VPU, NPU, GPU, ISP
Memories:	LPDDR4, 8GByte (Default) eMMC 32GByte (Default)
Connectivity:	1 x USB 3.2 Gen2x1 (10Gbps) Host-only 1 x USB 2.0 PCIe: Gen3, 2-Lane GbE: 2xRGMII 2 x SDIO (4-bits)
Camera:	2 x 4-lane 2.1Gbps MIPI CSI interface ISP

Specification	Description
Display:	1 x 4-lane DSI
Audio:	I2S, PDM, SPDIF
Other I/Fs:	3 x SPI 1 x I3C 9 x I2C 10 x SCI 6 x CAN-FD
Dimensions:	58 x 36 x 5mm

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.

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