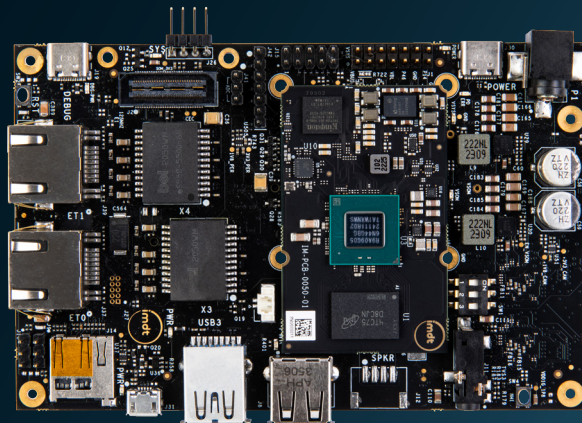


IMDT V2N SBC

The IMDT V2N SBC carrier board transforms the IMDT V2N SOM into a compact, high-performance mini-computer, offering a fully customizable, cost-effective solution ideal for robotics, drones, and smart city projects.

Powered by Renesas' RZ/V2N processor, the V2N SBC provides extensive assembly options and comprehensive onboard connectivity to meet your specific needs. Its energy-efficient design and small footprint make it the perfect choice for developers creating compact and advanced applications.



- Based on IMDT V2N SOM
- Multi-Camera Solution by up to 2 x 4-lane MIPI CSI
- Internal and external ISPs
- 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 + Bluetooth 5.2 BR/EDR/LE
- 2 x RJ-45 , 1000Base-T, Optional PoE
- CAN-FD transceiver on board
- 6-DOF IMU, 3-Axis magnetometer
- Dimensions (WxLxH): 125 x 80 x 20mm

RENESAS

PARTNER PROGRAM



Multi-camera solution



Full connectivity



Small form factor



Low power

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

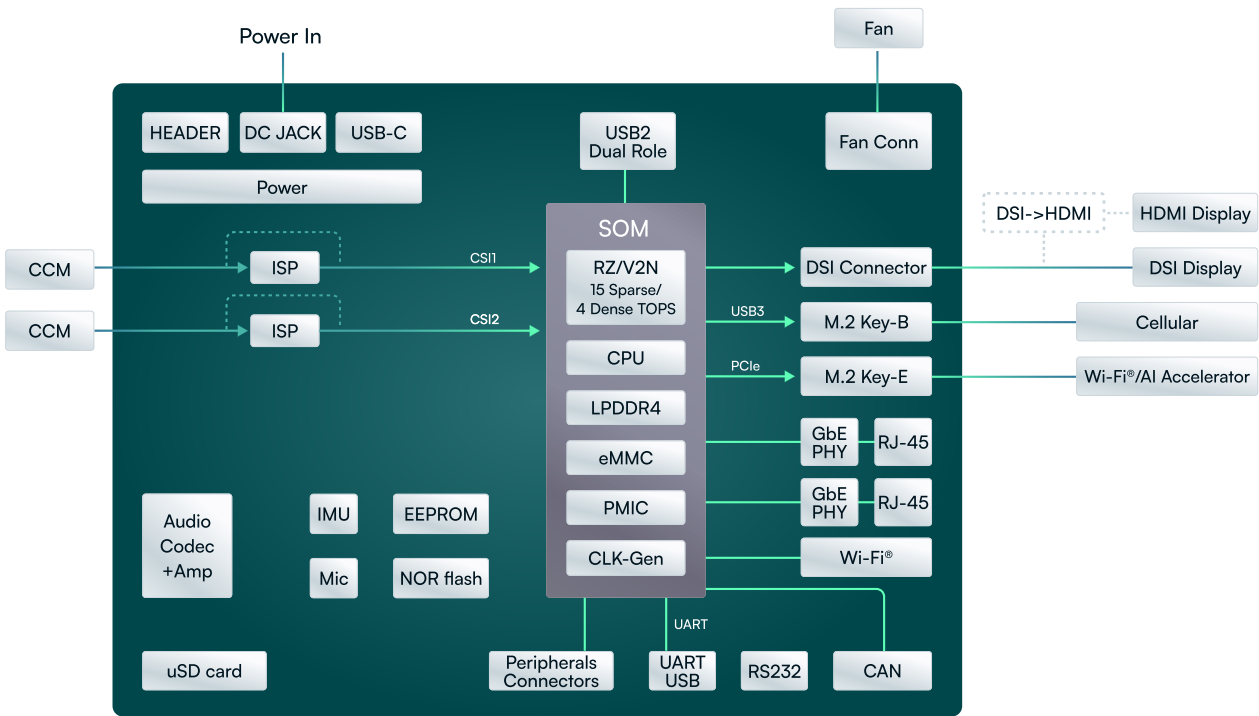


Product Specification

Specification	Description
CPU:	RZ/V2N, 4xA55+M33, VPU, NPU, GPU, ISP
Memories:	QSPI NOR flash, 64MBytes Secure EEPROM Micro SD card slot
Connectivity:	2.4/5GHz Wi-Fi 4, Dual-band + Bluetooth5.2 BR/EDR/LE 2x RJ-45, 1000Base-T, Optional PoE 1xUSB 3.2 type-A connector 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:	2 x 4-lane MIPI CSI interface for cameras via IAS connectors ISP
Display:	4-lane DSI, with touch I/F HDMI via external DSI to HDMI converter

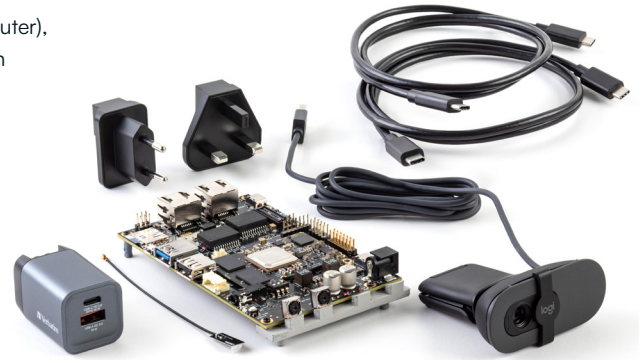
Specification	Description
Audio:	3.5mm Audio jack for stereo headset with mic Onboard PDM digital microphone
Sensors:	Temperature & Humidity 6-DOF IMU 3-Axis magnetometer
Power:	USB-C PD power Optional external power supply
Misc	RTC Fan control Boot DIP-Switch LEDs Debug - On board UART to USB bridge with USB-C connector
Extensions:	SPI, I2C, I2S, PDM, GPIOs, Analog headers Extension connectors with power and I2C
Dimensions:	125 x 80 x 20mm

Block diagram



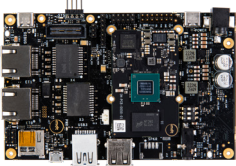
IMDT's V2N Evaluation Kit, based on the IMDT V2N SBC (Single Board Computer), is a high-performance mini-computer designed for a variety of applications in robotics, drones, and smart city projects. The kit offers a user-friendly board with comprehensive onboard connectivity, providing developers with an energy-efficient solution that occupies minimal space.

The V2N EVK can serve as a comprehensive development platform for both evaluation and application development purposes. The kit offers an excellent demonstration of the V2N SOM and SBC connectivity features and performance.



What's in the box

IMDT's V2N SBC



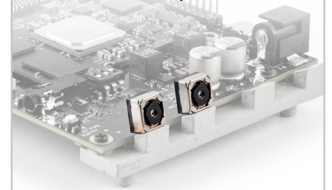
2 x USB cable C - C type
for power supply & Debug



Full HD USB camera



2 x AR1335 mipi cameras



Antenna



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.

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