SOM RENESAS SECURE RZ/V2H – AI ACCELERATOR

4 x Arm Cortex-A55 1.8 GHz, 2 x Cortex-R8, 1 x Cortex-M33, DRP-AI3 80TOPS

- RZ/V2H Quad core Cortex-A55® 1.8 GHz, Cortex-M33 CPU, Dual Cortex-R8®, VPU, ISP, GPU
- DRP-AI3 as high-speed AI inference processing and excellent power efficiency
- Storage eMMC 64GB and RAM 8GB LPDDR4X
- TPM 2.0 (Trusted Platform Module) protecting integrity and authenticity of embedded systems
- Small Form Factor by (W x L x H): 65mm x 40mm x 6mm
- 4 x Hirose Board to Board connector
- Support additional hole for heatsink mounting
- Supports Yocto Linux and Ubuntu 22.04

Specification Table

		SOM RZ/V2H
CPU Details	**CPU Name**	Renesas RZ/V2H
	CPU Type	4 x Cortex-A55 2 x Cortex-R8 1 x Cortex M33 DRP-AI3 accelerator
	CPU Speed	1.8 GHz
System	**RAM**	8GB LPDDR4X Option: 16GB LPDDR4X
	Internal Storage	64GB eMMC HS200
	External Storage Support	2x uSD SSD M.2 2230 (PCIe Gen3)
	GPU	Arm Mali-G31
	3D GPU Support	OpenGL Supported
	AI Accelerator	DRP-AI3 – (8TOPS/dense, 80TOPS/sparse)
	Video Decoder	H.264 / H.265
	Audio	5 x I2S, 2 x PDM 3-channels

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Multimedia	**Display Interfaces**	1 x 4-lane MIPI DSI
	Camera Interface	4 x 4-lane 2.1Gbps MIPI CSI ISP ARM Mali-C55 (Option)
Connectivity	**USB 3.2 Gen1 (10Gbps)**	2
	USB 2.0	2
	PCIe: Gen3	1x4-Lane
	GbE	2xRGMII
	SPI	3
	I2C	9
	I3C	1
	CAN-FD	6
	ADC	8
OS Support	**Embedded Linux**	Yocto Linux 5.1.0 Ubuntu 22.04 (On Request) Android (On Request)
Physical	**Size**	65mm x 40mm x 6mm
	Interface	4 x Hirose Board-to-Board connector
Power	**Main Voltage**	5V
	I/O Voltage	3.3V
Environment	**Temperature**	Industrial: -40°C to 85°C
	Humidity	Humidity (Non-condensing): 10% - 90%

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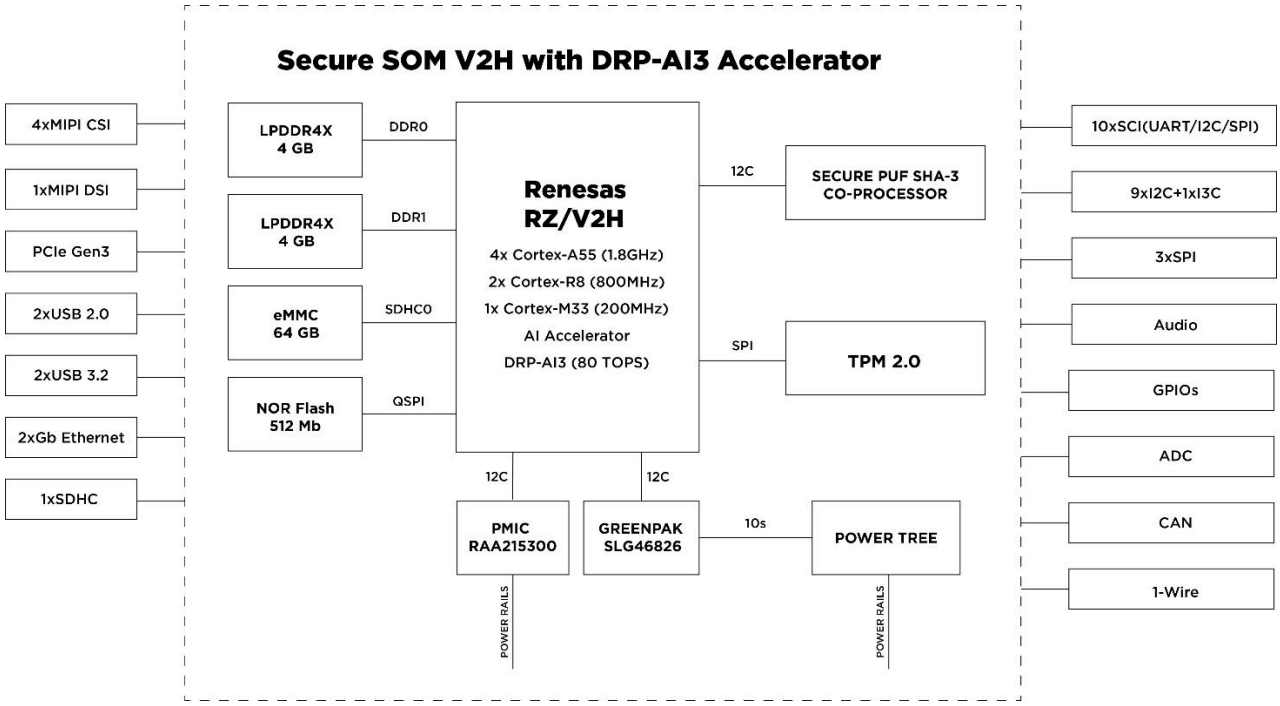
Product Block Diagram



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SOM Pinout Simplified Schematic