



mistywest

MistySOM-V2L Product Brief

MW-V2L-E32G-D2G-I-WX-V0

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Overview

MistySOM-V2L (MW-V2L-E32G-D2G-I-WX-V0) is the MistySOM built around the **Renesas RZ/V2L**, offering the same capabilities as the RZ/G2L but with a power efficient NPU, making it suitable for low power object detection and classification.

The MistySOM-V2L is built from the ground up to enable battery powered computer vision. It is ruggedized for industrial temperatures and offers long term (10 year) firmware support via a CIP kernel based Linux BSP.

Available separately is the MistyCarrier (MW-V2L-G2L-I-WWB-V0) board, providing a platform that allows easy accessibility to a variety of interfaces.

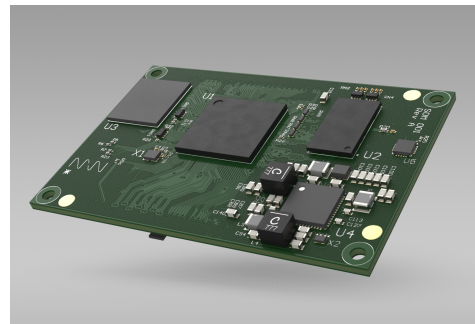
About the MistySOM-V2L

The NPU of the MistySOM-V2L enables *Jetson Nano*-like performance for embedded video applications while using 50% less power, and supports multiple AI frameworks (ONNX, PyTorch, TensorFlow, etc), enabling the ability to offload processing to the CPU.

The MistySOM-V2L is capable of running some versions of YOLO at >20FPS without a heatsink, and images and video can be captured through the 4 lane MIPI-CSI interface and with the onboard codec efficiently h.264 encoded. It includes a dual core Cortex-A55 and single core Cortex-M33 CPU.

Target Applications

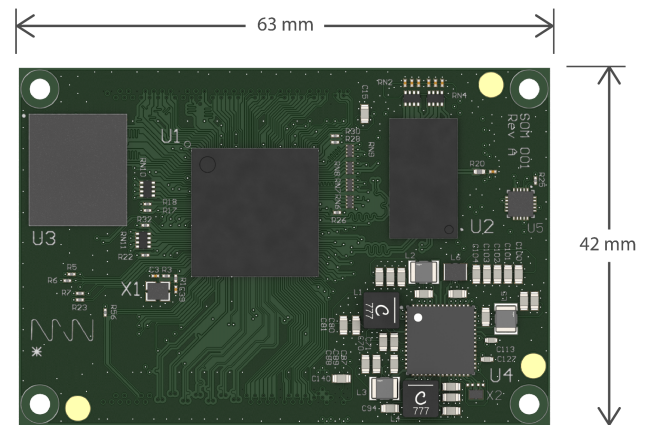
- Sports Cameras and Movement Tracking
- Retail and Logistics Automation
- Building Management / People Counting
- Smart Transportation / Traffic Monitoring
- Animal Tracking
- Smart Agriculture
- Food Waste Detection
- Construction



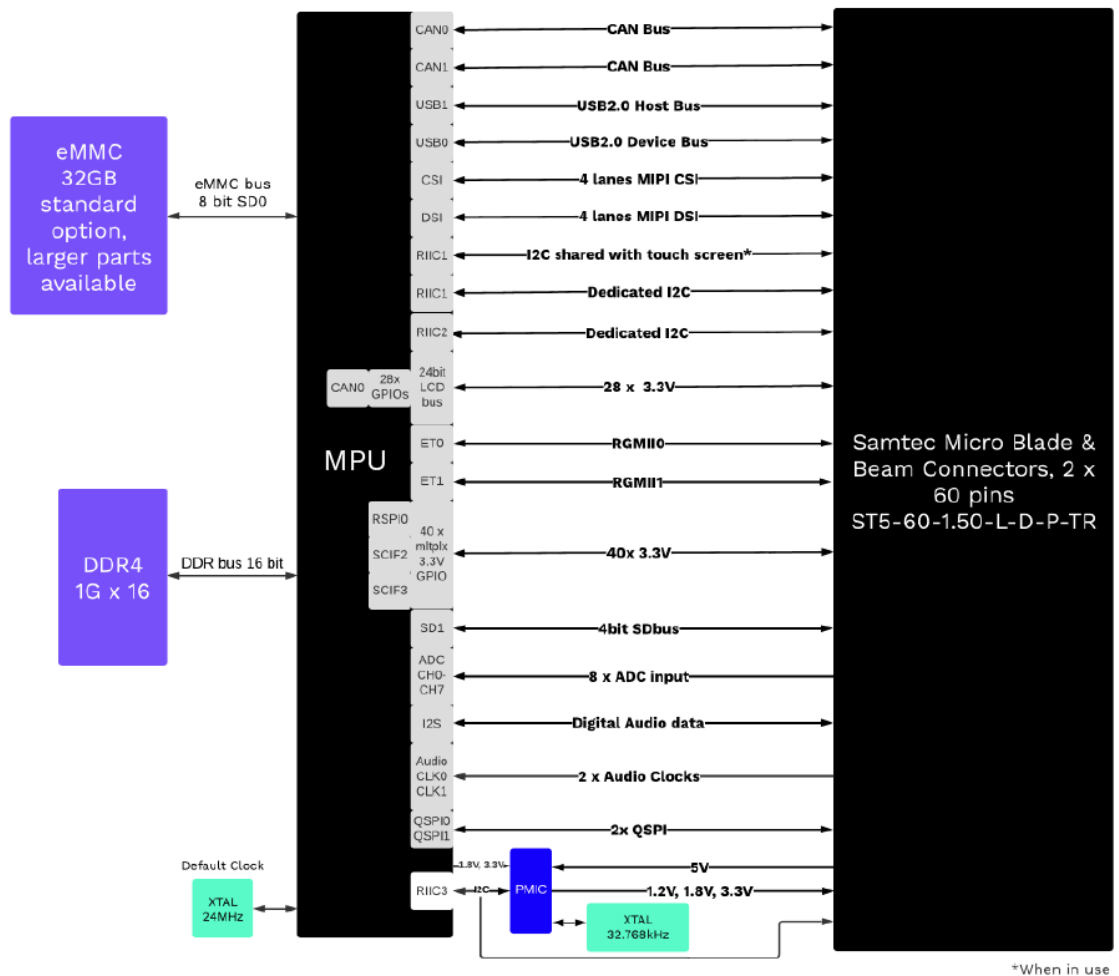
MW-V2L-E32G-D2G-I-WX-V0 Specifications

Type	Specification
MPU	Renesas RZ/V2L
CPU	Cortex-A55 (1.2GHz) x 2, Cortex-M33 x 1
GPU	3D graphics engine Mali-G31
NPU	DRP-AI
Storage	32 GB eMMC (16-128 GB available)
Memory	2 GB DDR4 (1-2 GB available)
Temp. Range	-40 to 85°C
RTC	Yes
Dimensions	63 x 42 x 7.05 mm
Carrier Board Connections	2 x 120 pin high-speed mezzanine connectors (ST5-60-1.50-L-D-P-TR)
Data Lanes Available	MIPI CSI (4-lanes) MIPI DSI (4-lanes) 2x USB 2.0 2x QSPI, OctaFlash or Hyperflash Interface 2x dedicated I2C 2x GB ethernet (RGMII) 2x CANBus Parallel 24-bit LCD bus GPIO - GPIO, SSI, SPI, UART, CANBus, I2C, Timer, IRQ
Inputs	8x 12 bit ADC 2x Audio Clock
Supported Cameras	Google Coral Cam E-con Systems - e-CAM20 CRUZ 1H01R2 E-con Systems - e-CAM21_CURZ_1H01R2 (link not available)

4x M2 mounting holes
42x63mm Outside dimensions



MW-G2L / MW-V2L BLOCK DIAGRAM



Learn More

Distribution

More information about MistySOM can be found on the [MistySOM GroupGets campaign](#) page.



Distribution of MistySOM will be available through [Avnet](#). Custom designs and modifications available upon request.



Media

- [MistySOM Renesas RZ/G2L or RZ/V2L SoM and devkit goes for \\$112 and up](#) - CNX Software
- [MistySOM: The Ultimate Low Power Computer Vision SOM by MistyWest](#) - GroupGets (YouTube)
- [How to Cross The Embedded Computing Valley of Death](#) - IoT One / Industrial IoT Spotlight
- [Embedded Vision and Connected Intelligence for IoT](#) - Industry40TV (YouTube)
- [Enabling Low Power Computer Vision Applications with MistySOM](#) - MistyWest

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