

# Products

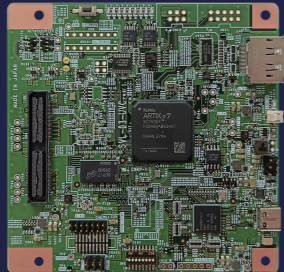
## MIPI Monitor Board **SVL-03-UVC**

### Overview

Enables CMOS sensor, Automotive Camera Image outputs to be displayed and recorded. Can support 6Gbps data transfer for Automotive Images via USB3.2-Gen2 interface.

### Features

- Supports MIPI CSI-2 up to 1.5Gbps/lane input
- USB3.2 (UVC) or DisplayPort output
  - ↳ USB3.2-Gen2-6Gbps compliant
- Supports MIPI CSI-2 output deserializer



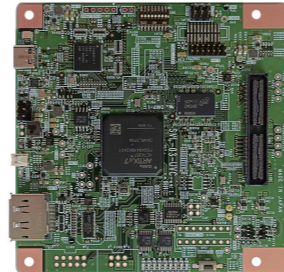
## MIPI Generator **SVL-03-GEN**

### Overview

Emulation board to convert USB3.2-Gen2 or DisplayPort data into, MIPI CSI-2 image data. Flexible set up for key parameters such as blanking area, frame rates, and others.

### Features

- Supports MIPI CSI-2 up to 1.5Gbps/lane output
- USB3.2-Gen2 or DisplayPort input
- Supports MIPI CSI-2 input serializer



## Parallel Monitor Board **SVP-01-UVC**

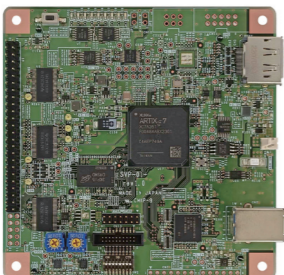
### Overview

Enables Image data of parallel interface to be displayed and recorded. Can DisplayPort or USB3.0(UVC)/PC output.

※with a separate adaptor, HDMI output is also possible

### Features

- Supports parallel 24bit up to 150MHz
- USB3.0(UVC) or DisplayPort output
- Supports deserializer for parallel output



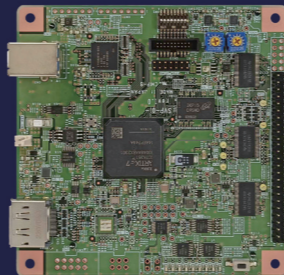
## Parallel Generator **SVP-01-GEN**

### Overview

Emulation board to convert USB3.0 or DisplayPort image data to parallel image data. Flexible set up for key parameters such as blanking area, frame rates and others.

### Features

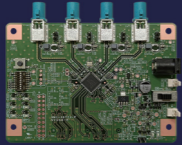
- Support parallel 24bit up to 150MHz
- USB3.0 (Vendor Class) or DisplayPort input
- Supports deserializer for parallel input



## Option Boards

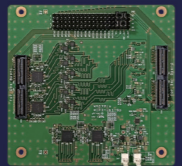
### SerDes Board

Optional board to support various data communication types. Supports FPD-Link III, GMSL, GVIF, ASA, MIPI A-PHY, etc by connecting to SV Boards.



### MIPI Split Board **NV072 (MIPI-Uni-SP)**

Splitter board for MIPI CSI-2 format data. Enables image output (display) and data outputs to other MIPI equipment simultaneously.



### Micro-Computer Board **NV070-B (MIPI-Uni-Conn)**

Enables I2C slave commands or stand alone function in relation to the SV Board and/or SerDes board, materialized by XIAO RP2040 (micro-computer).



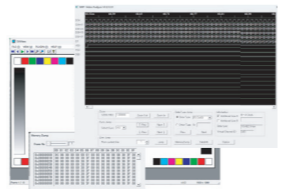
## Variant model

Enhanced version of MIPI monitor board (SVM-06).

### MIPI Image Recorder **SVI-09-MIPI**

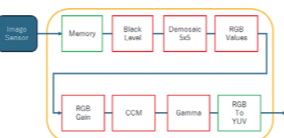
Includes multiple Evaluation purpose Applications with functions such as MIPI analyzer.

USB3.0 (Vendor Class) compliant and can easily be modified by the user.

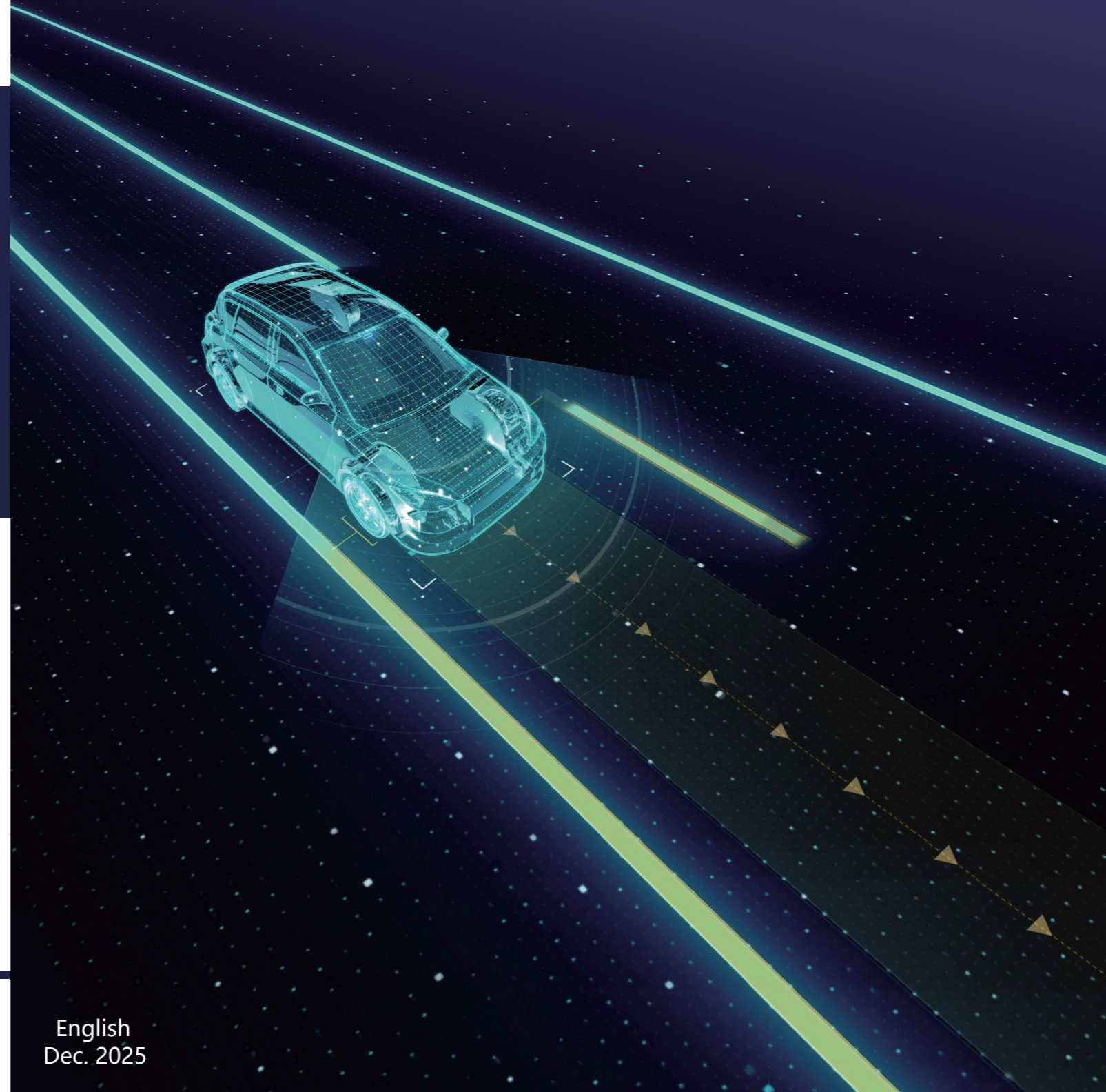


### RAW data imaging board **SVM-06-BYR2**

Enables De-mosaic and various parameter adjustments, allowing realtime imaging and RGB value/data accumulation.

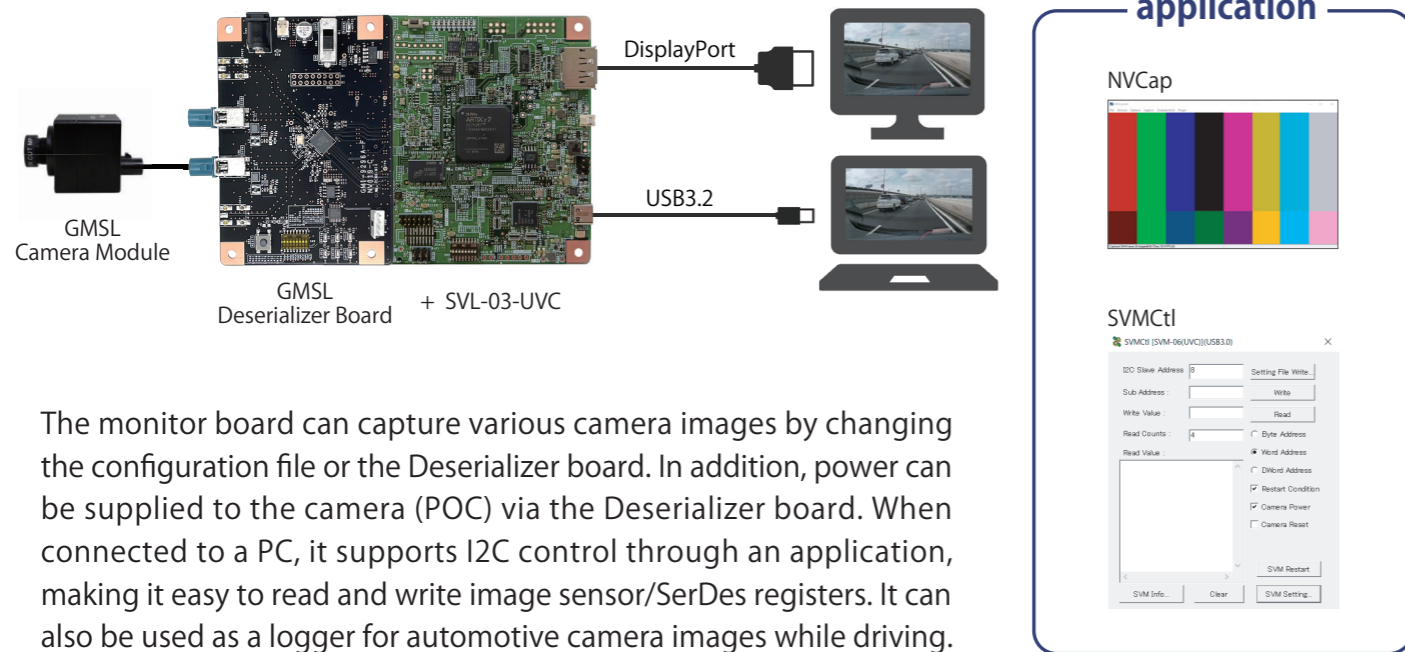


# SV series



## Camera Capture System

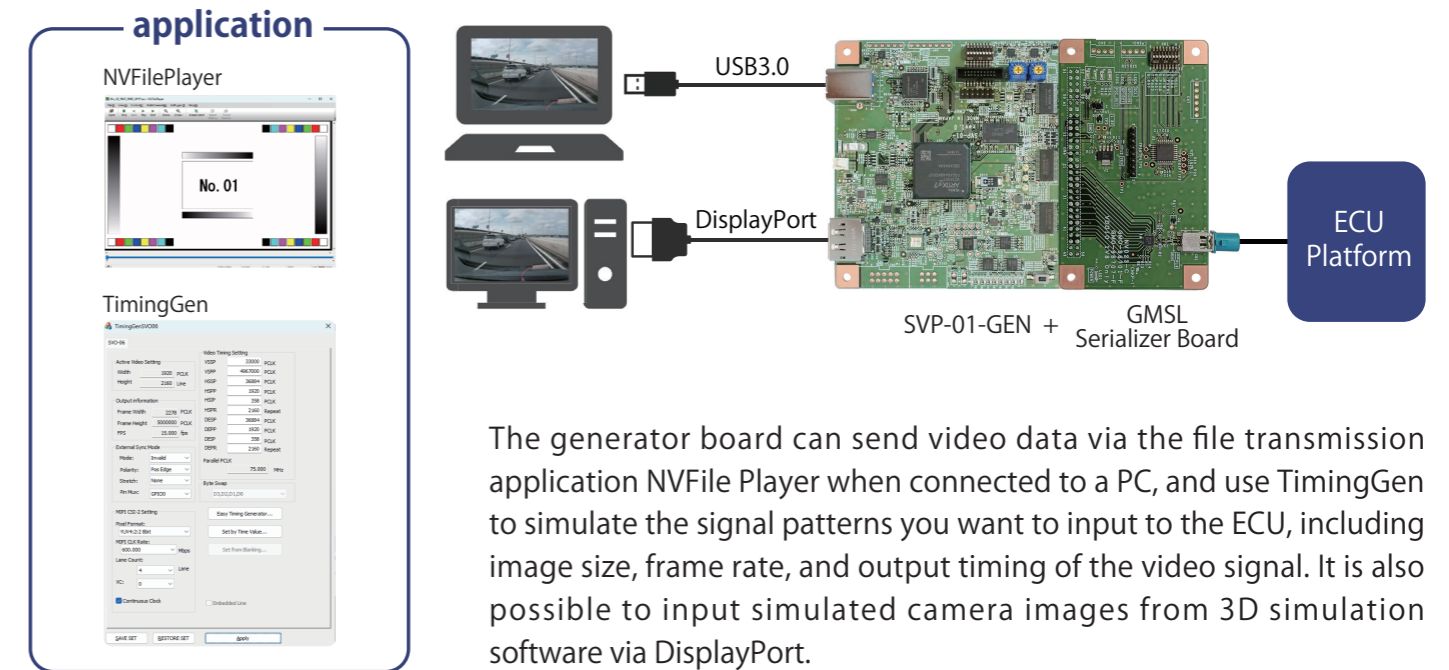
This system combines our monitor board with a Deserializer board to output automotive camera images from GMSL or FPD-Link III to DisplayPort or USB. Depending on the image sensor signal type of the connected camera, you can choose between the MIPI version or the parallel version.



The monitor board can capture various camera images by changing the configuration file or the Deserializer board. In addition, power can be supplied to the camera (POC) via the Deserializer board. When connected to a PC, it supports I2C control through an application, making it easy to read and write image sensor/SerDes registers. It can also be used as a logger for automotive camera images while driving.

## Camera Emulation System

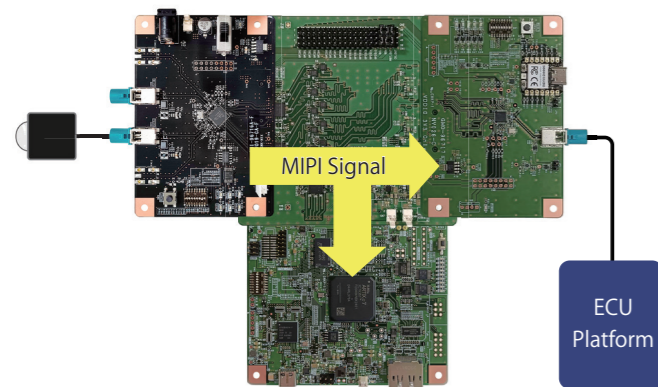
This is a system that combines our generator board and Serializer board to convert video signals input via USB or DisplayPort into signals such as GMSL or FPD-Link III, and output them to an ECU. Depending on the signal type, you can choose either the MIPI version or the parallel version.



The generator board can send video data via the file transmission application NVFile Player when connected to a PC, and use TimingGen to simulate the signal patterns you want to input to the ECU, including image size, frame rate, and output timing of the video signal. It is also possible to input simulated camera images from 3D simulation software via DisplayPort.

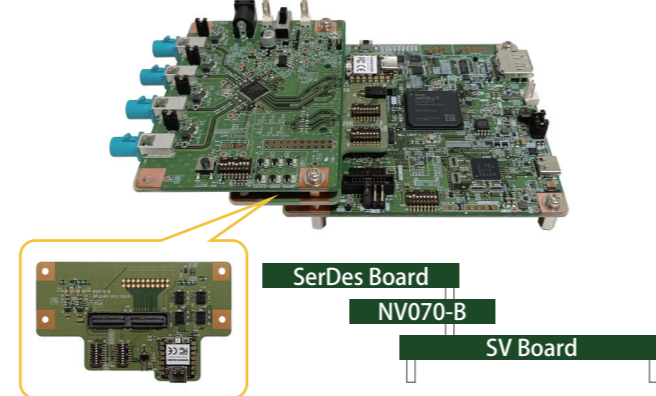
## Option Board Uni-Series

### MIPI Split Board NV072 (MIPI-Uni-SP)



This board splits the MIPI signal into two lines, allowing video transmission from the camera to the ECU while also enabling display and recording via the SV board. By replacing the SerDes board, it supports various standards and can also be used for standard conversion purposes. With pre-settings from the SV board, it will be identified as a pass-through connection from the ECU side.

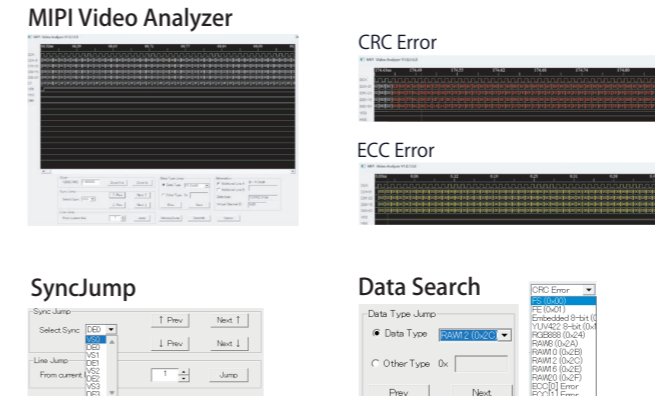
### Microcontroller Board with XIAO RP2040 Module NV070-B (MIPI-Uni-Conn)



A microcontroller board equipped with the XIAO RP2040. By connecting it with the SV board or SerDes board, it allows functional expansion such as I2C response and GPIO control. Flexible control can be achieved through firmware implementation, and by programming it to act as a camera when connected to a GEN board, it can also support avoiding ECU fail-safes.

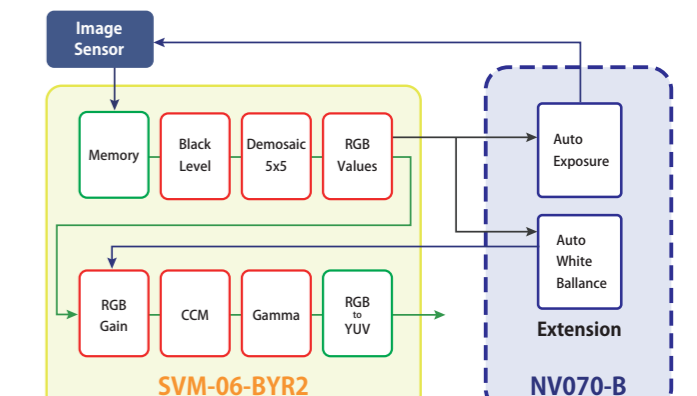
## SVM-06 Variant Model

### MIPI Image Recorder SVI-09-MIPI



An image recorder controlled by Vendor Class, equipped with histogram, vectorscope, waveform monitor, and MIPI video analyzer. With MIPI frame analysis, it features error detection, data searching, and jump-to-checkpoint function, enabling basic failure analysis without the need for costly measuring instruments.

### RAW Development Monitor Board SVM-06-BYR2



Can develop RAW data in real time, allowing video confirmation on PC or displays. Equipped with demosaic using a 5 x 5 filter, black level correction, RGB gain, color matrix, and gamma correction. Various parameters can be controlled via registers. It can obtain integrated RGB values within a specified field of view and can also be used for feedback processes such as AE (Auto Exposure) and AWB (Auto White Balance).