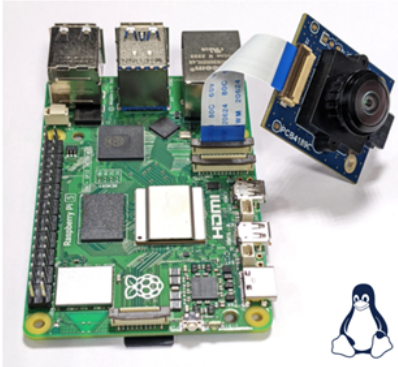


## Using the V4L2 Linux driver of the VD56G3 image sensor and associated CAM-56G3 promodules with various embedded processing platforms



### Features

- V4L2 (video4linux2) Linux driver for the VD56G3 image sensor
- Operates on various processing platforms
- Supports multiple kernel versions
- Supports various sensor configurations
- Compatible evaluation hardware includes:
  - VD56G3 S-Board
  - P-Board and VD56G3 promodules

### Description

Get started with the VD56G3 image sensor within a few minutes using the STSW-IMG502: A V4L2 linux driver that can operate on various embedded processing platforms.

It is available for free download on st.com. This turnkey driver allows users to integrate the VD56G3 sensor with zero effort and no code development. Consequently, users can focus on their algorithms and applications. The process is simple: Download the driver, build it as a module in the Linux kernel, update the device tree, and it is ready to use!

Operating under the V4L2 open-source framework, the driver supports various kernel versions. It ensures compatibility with a broad range of embedded processing platforms from many vendors worldwide. This versatile driver also supports numerous configurations and sensor features, enabling the user to benefit maximally from the rich toolbox of features that are embedded in the VD56G3 image sensor.

The STSW-IMG502 driver operates on two types of turnkey evaluation hardware kit from STMicroelectronics. All include boards, optics, and flex cables. The first option, is to use the driver with the [VD56G3 S-Board](#): A MIPI sensor board with an M12 lens holder enabling the user to integrate any of their preferred M12 or smaller lens. The second option, is to use the driver with the [P-Board](#): A MIPI promodule board that enables the user to plug any [CAM-56G3 evaluation camera module](#).



Product status link

[STSW-IMG502](#)

**Table 1. Specification summary**

Category	Parameter	Specifications
Supported products	Supported product references	VD56G3
	Resolution	1.53 MP – 1124 x 1364
	Color	Monochrome
Hardware support	Processing hardware (not provided)	Embedded processing platform
	Connection to processing hardware	FFC/FPC cable
	Interface	MIPI CSI-2
	Compatible imaging hardware from ST	VD56G3 S-Board P-Board and CAM-56G3 promodules
Software support	Environment	Linux
	Framework	V4L2
	Kernel version supported	4.19 or newer LTS version (long-term support)
Supported configurations	Resolution	Discrete formats down to 320 x 240
	Frame rate	Free selection up to the maximum frame rate
	Data output	RAW8 or RAW10
	Other supported features	Auto or manual exposure control Automatic dark calibration Defective pixel correction GPIOs for extra control including trigger or LED synchronization.

## Revision history

**Table 2. Document revision history**

Date	Version	Changes
27-May-2024	1	Initial release
28-May-2024	2	Updated "Description".

**IMPORTANT NOTICE – READ CAREFULLY**

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgment.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. For additional information about ST trademarks, refer to [www.st.com/trademarks](http://www.st.com/trademarks). All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2024 STMicroelectronics – All rights reserved