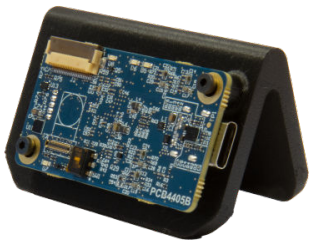
STEVAL-EVK-U0I

Data brief

EVK Main: Hardware USB kit for evaluating ST BrightSense image sensors on a computer



Order code	Description
STEVAL-EVK-U0I1	EVK Main hardware kit

Features

- Comprehensive hardware kit including:
  - EVK Main board with USB Type-C® output.
  - Mechanical holder for stable image capture in various configurations.
- Benefit from a seamless evaluation on PC:
  - USB3 output for straightforward PC connection.
  - Ready to stream images live or perform accurate image testing using scripts or manual parameters adjustments.
  - Complementary evaluation software (STSW-IMG501) is available for free download on st.com.
- Modular and reusable kit for evaluating sensors in various ways:
  - Compatible with all ST BrightSense image sensors and promodules.
  - Evaluate image sensors as turnkey evaluation promodules using the flex-to-board input connector.
  - Evaluate image sensors combined with any off-the-shelf M12 lens by connecting an S-Board to the FFC/FPC input connector.
- Versatile mechanical holder enabling various mechanical setups:
  - On a flat surface such as a desk or a test bench.
  - Inserted on a laptop screen acting as a webcam.
  - Fixed on a tripod.

Description

The EVK Main is a versatile hardware kit enabling to evaluate any ST BrightSense image sensor or associated evaluation promodule on a computer. This comprehensive evaluation solution includes an EVK Main board with USB-C output and a mechanical holder for stable image capture.

Leveraging its well-thought-out modular design, the EVK Main can be used and reused in various ways to perform image sensor evaluation. With its two input connectors, it offers the user the flexibility to evaluate image sensors either as turnkey evaluation promodules or combined with any off-the-shelf M12 lens.

Evaluating ST BrightSense image sensors as turnkey promodules is instant by plugging any promodule (CAM-56G3, CAM-66GY, CAM-55G0, CAM-55G1) onto the common flex-to-board connector at the bottom left of the board. Evaluating sensors with the ability to fine tune the lens instead is just as easy by plugging one of the S-Board solution from ST and its included ribbon cable into the FFC/FPC connector at the top left of the board. This dual input system enables reusing the exact same kit at different stages of the development process or for evaluating different products.

The mechanical holder embedded in the kit provides the additional flexibility to perform evaluation in three different mechanical configurations. It can be used to perform evaluation on a flat surface such as a desk, inserted on a laptop as a webcam levering the slit of its V-shape design, or fixed on a tripod using the tripod connector on the bottom face of the holder.

Featuring USB3 output, it provides immediate plug-and-play connection to computers and laptops. Combined with the STSW-IMG501 free evaluation software from ST, the EVK Main offers a quick and effortless evaluation experience of ST BrightSense image sensors.

Figure 1. Split view of the content of the EVK Main

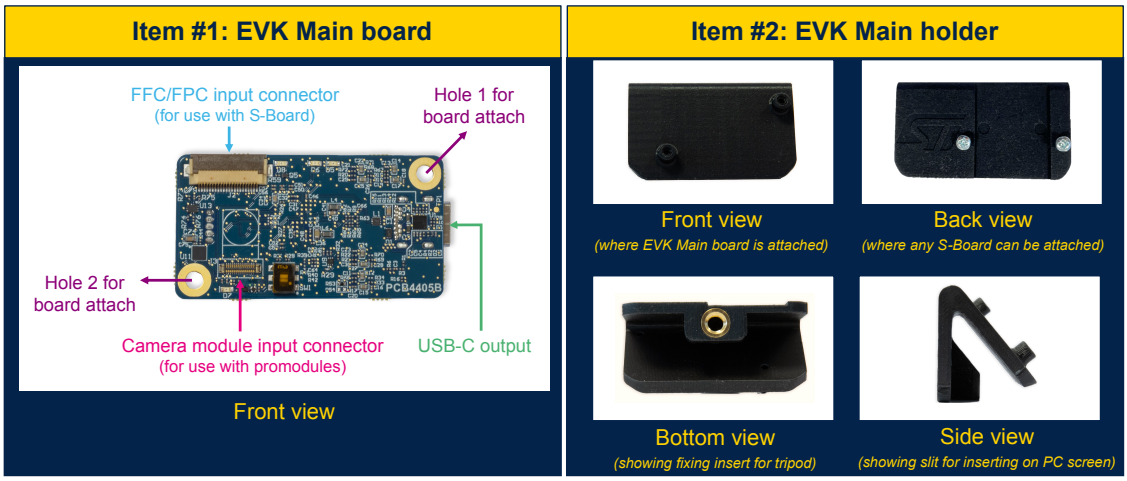


Table 1. Main technical specifications

Category	Item	Parameter	Specification
Electronics	Input 1: Promodule	Connector type	FPC-to-board
		Pinout	30 pins (1)
		Connector reference	BM28B0.6-30DP/2-0.35V by Hirose
		Image input format	MIPI CSI-2
		Control interface	I²C
		Compatible evaluation tools	CAM-55G0, CAM-55G1, CAM-56G3, CAM-66GY
	Input 2: S-Board	Connector type	FFC/FPC
		Pinout	22 pins (2)
		Connector reference	FH12-24S-0.5SH(55) by Hirose
		Image input format	MIPI CSI-2
		Control interface	I²C
		Compatible evaluation tools	S-Boards
		Flex cable	Included in S-Board deliverable
	Output	Connector	USB-C
		Interface	USB3
		USB cable	Not provided
Mechanics	Board	Dimension - L x H x W	50 x 27 x 9 mm
		Holes for board attach	M3 compatible
	Holder	Surface - L x H	61 x 34 mm
		Thickness – W	35 mm max
		Slit width for PC - W	10 mm
		Connection to tripod	IUB-0420-1 fixing insert

1. *For more details, refer to promodules documentation.*
2. *For more details, refer to S-Boards documentation.*

Revision history

Table 2. **Document revision history**

Date	Version	Changes
07-Jun-2024	1	Initial release

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