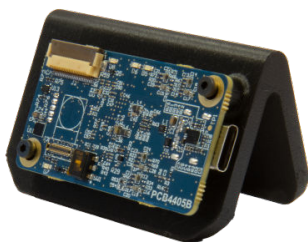


## EVK Main: Hardware USB kit for evaluating ST BrightSense image sensors on a computer



| Order code      | Description           |
|-----------------|-----------------------|
| STEVAL-EVK-U011 | 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 leveraging 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

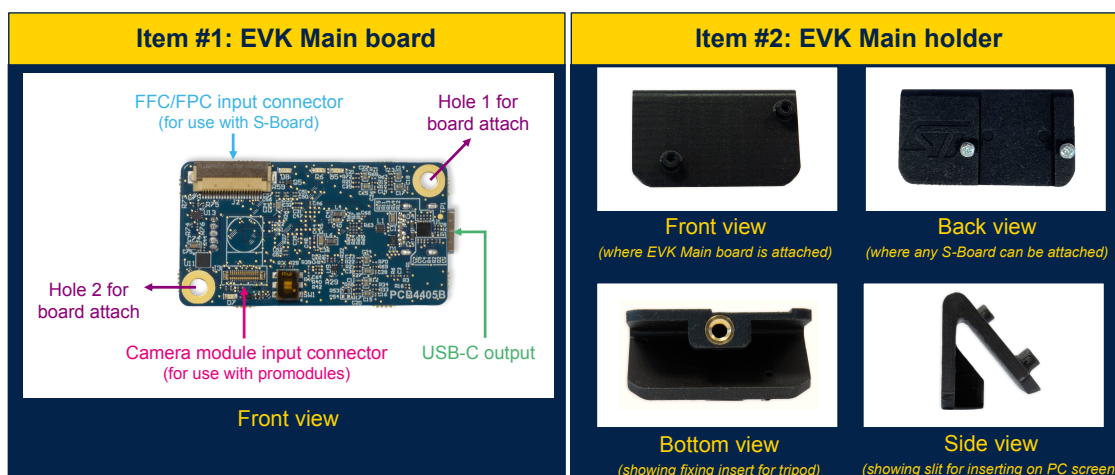


Table 1. Main technical specifications

| Category    | Item                  | Parameter                   | Specification                          |
|-------------|-----------------------|-----------------------------|----------------------------------------|
| Electronics | Input 1:<br>Promodule | Connector type              | FPC-to-board                           |
|             |                       | Pinout                      | 30 pins <sup>(1)</sup>                 |
|             |                       | Connector reference         | BM28B0.6-30DP/2-0.35V by Hirose        |
|             |                       | Image input format          | MIPI CSI-2                             |
|             |                       | Control interface           | I <sup>2</sup> C                       |
|             |                       | Compatible evaluation tools | CAM-55G0, CAM-55G1, CAM-56G3, CAM-66GY |
|             | Input 2:<br>S-Board   | Connector type              | FFC/FPC                                |
|             |                       | Pinout                      | 22 pins <sup>(2)</sup>                 |
|             |                       | Connector reference         | FH12-24S-0.5SH(55) by Hirose           |
|             |                       | Image input format          | MIPI CSI-2                             |
|             |                       | Control interface           | I <sup>2</sup> C                       |
|             |                       | Compatible evaluation tools | S-Boards                               |
|             | Output                | Flex cable                  | Included in S-Board deliverable        |
|             |                       | Connector                   | USB-C                                  |
|             |                       | Interface                   | USB3                                   |
| 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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