

## Product Technical Specification



### Features

- Converts Sony/Tamron FCB's LVDS video signals to USB 3.0 for SuperSpeed video transfer.
- USB 3.0 SuperSpeed (5 Gbps) Type-C interface.
- Supports Full HD 1080p @ 60 fps (UVC 1.1)
- Compatible with Sony FCB-EV9500L/ EV9520L LVDS cameras
- VISCA camera control via USB CDC or UART TTL
- Plug-and-play operation on Windows / Linux
- DIP switch selectable camera control (USB / TTL)
- Regulated 12 V DC input
- LED indicators for Power & Status
- Compact (50 × 60 mm), RoHS compliant
- Industrial Operating range -40 °C to +85 °C

### Applications:

- AI Edge Computing and Vision Analytics
- Security & Surveillance / Remote Monitoring
- Industrial & Machine Vision Systems
- Medical & Diagnostic Imaging Instruments
- Robotics & Automation
- Broadcast, Multimedia & Videography
- UAV / ROV & Mobile Vision Payloads
- Research, Development & Prototyping

### Product description:

The Oppila LVDS-USB3 Interface Board is a compact and high-performance interface solution designed to bridge Sony FCB-EV series LVDS cameras (such as FCB-EV9500L and FCB-EV9520L) to any standard USB 3.0 host. It enables real-time Full HD (1080p60) video streaming with simultaneous camera control, all through a single USB Type-C connection.

Built around a SuperSpeed USB 3.0 architecture, the board supports UVC 1.1 compliant video output for instant plug-and-play operation with Windows and Linux systems—no proprietary drivers required. Camera configuration and control are seamlessly managed through the VISCA protocol, available either over USB CDC (virtual COM port) or via a dedicated TTL serial interface, allowing flexible system integration.

Powered by a regulated 12 V DC input, the interface board also supplies power to the connected camera module, minimizing external cabling and simplifying installation. LED indicators provide at-a-glance system and power status, while on-board DIP switches allow quick selection of control mode (USB or UART).

Designed for industrial-grade reliability, the Oppila LVDS-USB3 Interface Board features a rugged layout, compact footprint (50 × 60 mm), and an extended operating temperature range from -40 °C to +85 °C. Its combination of high performance, small form factor, and versatile connectivity makes it ideal for UAV payloads, defence optics, surveillance platforms, and machine-vision systems requiring stable, high-speed imaging over USB 3.0.

**Contact Oppila for Custom product requirements**  
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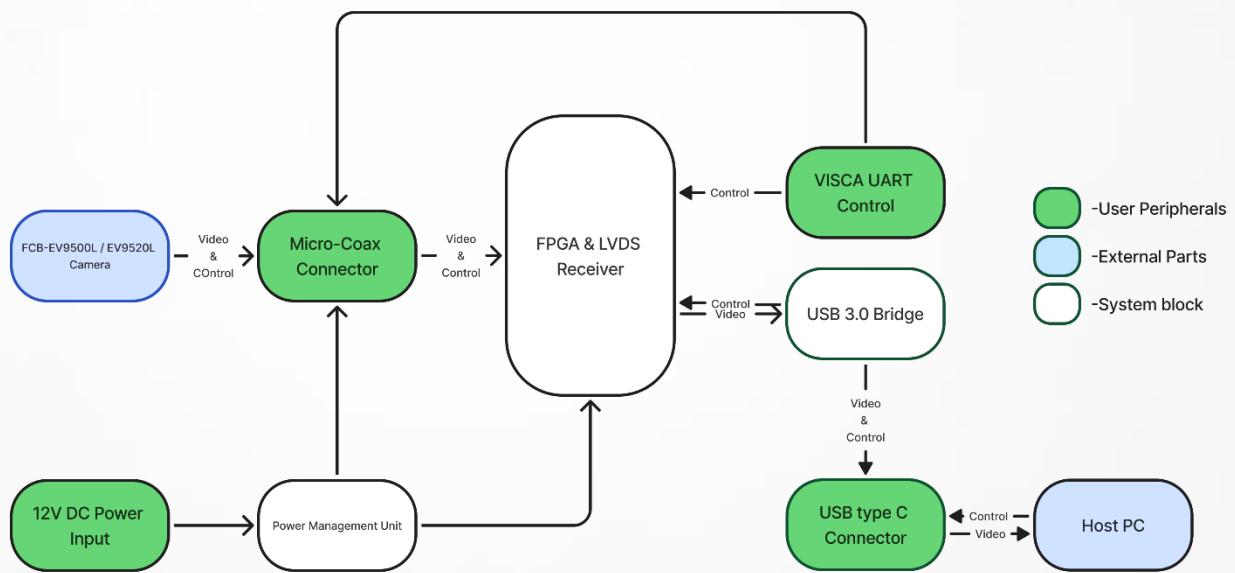
Parameter	Details
Input Voltage	12 V DC regulated (via 2-pin connector)
Input Current	1.5 A typical (up to 2.0 A max depending on camera load)
USB Interface	USB 3.0 Type-C, SuperSpeed (5 Gbps)
Video Streaming	UVC 1.1 (USB Video Class) – Plug & Play
Supported Video Formats	Up to Full HD (1080p @ 60 fps) – Camera dependent
Camera Interface	LVDS interface compatible with Sony FCB-EV9500L / EV9520L
Control Interface	VISCA over USB CDC (Virtual COM) & UART TTL
Control Mode Selection	Via DIP switch (USB / TTL)
Indicators	Power LED (ON) / Status LED (Stream Activity)
Connectors	USB Type-C (host), 2-pin DC input, 30-pin micro-coax (camera), 3-pin UART header
Dimensions (L × W)	50 mm × 60 mm
Weight	21 g
Operating Temperature	−40 °C to +85 °C
Storage Temperature	−20 °C to +60 °C
Compliance	USB 3.0 Specification, UVC 1.1, RoHS Compliant
Power Supply Recommendation	12 V / 2 A regulated supply (minimum rating)
Operating Systems Supported	Windows and Linux
Mounting	4 × M2 holes on corners (3 mm offset)
Compatibility	Sony FCB-EV LVDS Series Cameras
Optional Support	USB3 Vision (U3V) interface version available

## Kit Contents

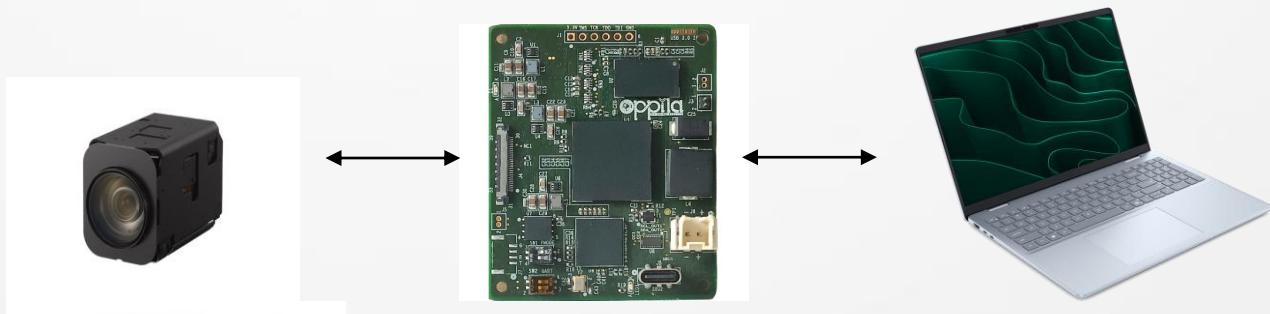
Item	Description
Interface Board	Oppila's LVDS–USB3 Interface Board (50 × 60 mm)
Power Cable	2-pin 12 V DC power cable (included with kit)
Cables	Micro-coaxial LVDS cable and UART cable for camera connectivity (optional)
USB Cable	Certified USB 3.0 Type-C cable (optional accessory)
Mounting Hardware	Screws and spacers for camera-to-board integration (optional accessory)
User Documentation	Product datasheet and setup instructions (digital copy)

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## Board Block diagram



## System Block diagram



## Product Images



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