



Elektrobit

# Image Solution Box

Enabling development of next generation automotive displays/HMI controllers



[www.elektrobit.com](http://www.elektrobit.com)

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## Modular interface concept i.e., 4x GMSL 2/3 Links

- Project specific interface modules,  
side channel touch data read out.
- › HDCP
  - › 100Base Ethernet,
  - › GPIO & I2C side channel
  - › H-MTD or Fakra

## Video generation & capturing

- FPGA for flexible video features:
- › Generate two independent video streams
  - › Parallel capture on four streams
  - › VESA DSC compression and decompression
  - › Flexible frame size and timing parameters (Max. frame size: 16k x 8k, Max Pixel-Clock: 1080MHz.)
  - › Video timing analysis

## Display & control knob

## Power, GPIO, LEDs

10-20V

## Video in & out

## 1G/10G Ethernet

Control, debug, touch data and capture video data

## USB-C

Control debug, touch  
I2C Tunneling via  
USB-I2C device

## SD card slot

SDHC, 32GB, 25MBit/s  
Video timing and test  
image configuration

## Use Cases & Variants

- › **Development**  
Stand-alone use without control computer.
- › **Design Validation**  
The ISB4 can be built into a 19" rack without its housing.
- › **Production Testing**  
Variant without control buttons on the front panel.

## System Configuration

- › **JSON based configuration files**  
Human readable format allows for easy development and debugging.
- › **Support of multiple project configurations**

## Feature Outlook

- › **Webserver/GUI**
- › **FTP server**
- › **DLL for test system integration**
- › **HDMI video generator**
- › **DisplayPort interface module**
- › **Video gateway**
- + Custom project specific adaptations