

AUTOMOTIVE VIDEO LINK FRAMEGRABBER (SERDES)

Video-Data Recording for Camera & ECU
validation and in-car testing

The answer to your challenges is here

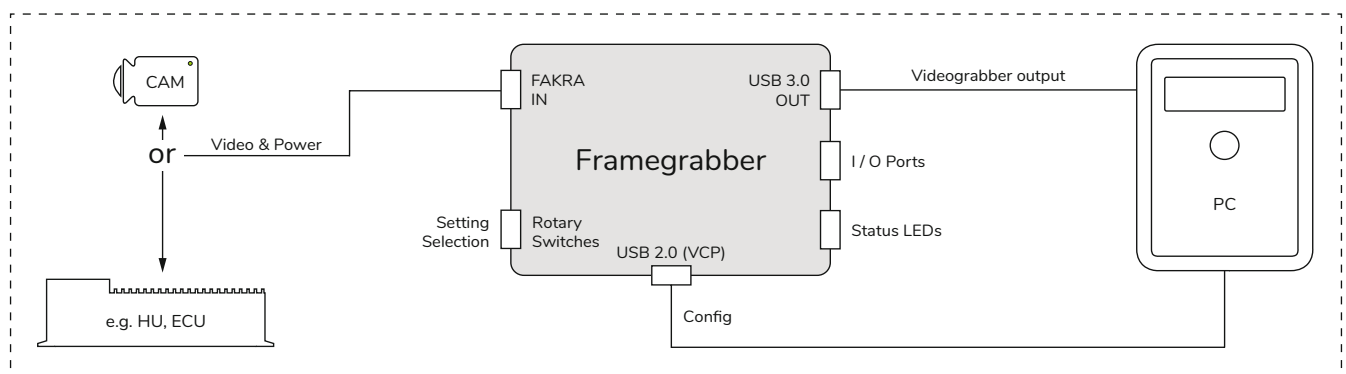
Video Data Recording for Automotive Camera and ECU outputs



Features

- ▶ Visualization and recording of a new camera / ECU setup in less than 10 minutes
- ▶ All-in carefree package: tools, cables and paramteres included
- ▶ Pre-configuration and Plug&Play support included
- ▶ Easy adaptable to new use-cases
- ▶ High compatibility with standard and customer software
- ▶ Applicable to Camera & ECU validation, laboratory, rack and in-car testing
- ▶ Wide variety of TZ add-on products

General Device Structure



Key Features

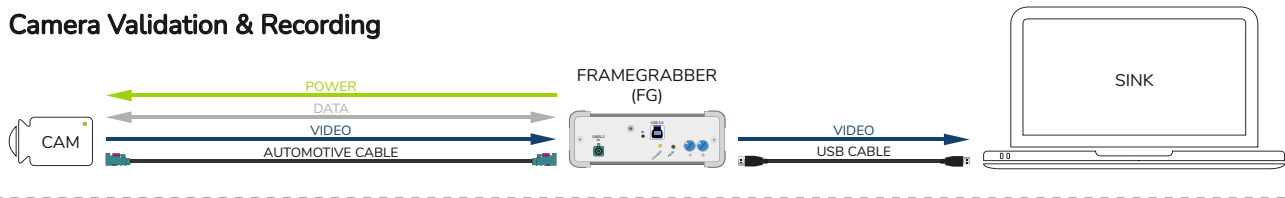
- Easy PC-capturing of camera & ECU video signals
 - Standard OS included UVC (USB video class) driver will be used
 - Connects to the PC like a webcam
 - Lots of free available capture tools like OBS Studio, VLC, Windows Cam App, E-Cam view
 - Easy integration in development tools like Matlab, Python or in your own framework (Direct Show)
- Available for Maxim GMSL, GMSL2 and TI FPD-Link III
- Arbitrary range of color formats supported e.g. RGB, YUV and RAW
- Built-in control channel master for register access of the SerDes over USB (VCP)
- Power over COAX supply for cameras
- External access to deserializer pins like I2C, GPIO or UART for the usage with host adapters (e.g. Aardvark)
- Up to 80 pre-configured settings plus 20 user defined settings for different link settings, resolutions and color formats
- TZ GUI for simple and quick settings configuration and easy firmware updates
- Internal storage and playback of register tables for camera (serializer + imager) initialization

Typical Customer Applications

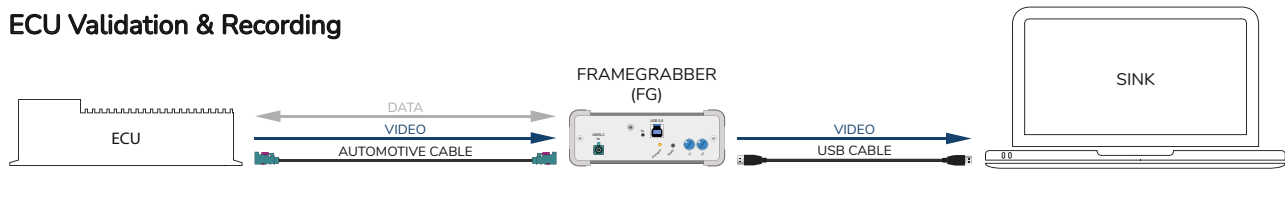
- Easy testing at users working desk
- In-Car recording of video signals in experimental vehicles
- Calibration of camera lenses in laboratory environment
- Hardware in the loop tests
- Environmental tests
- End of the line testing

Use Cases

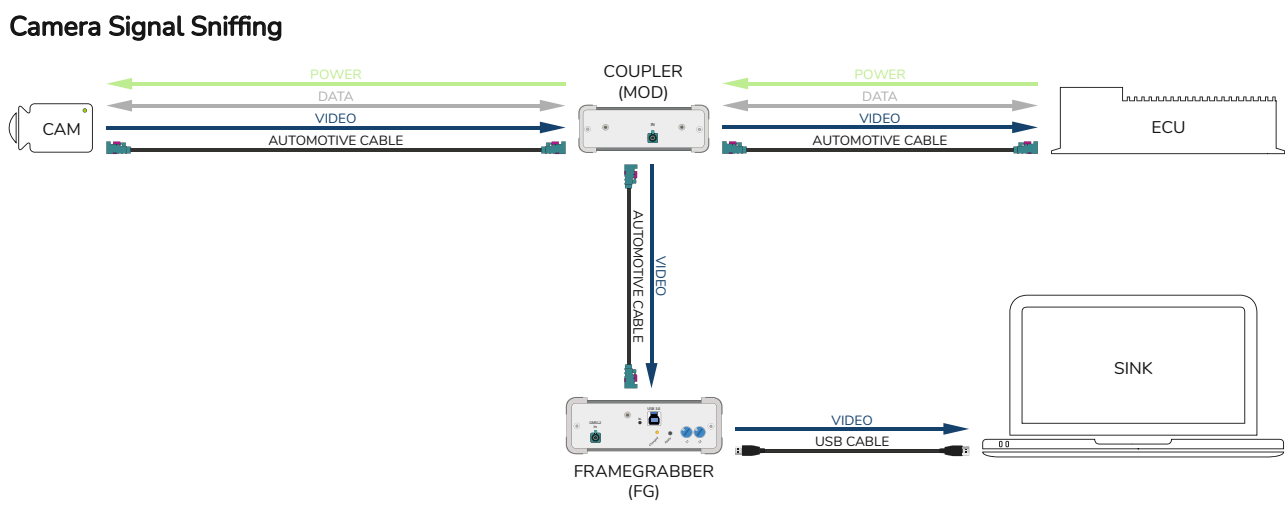
Camera Validation & Recording



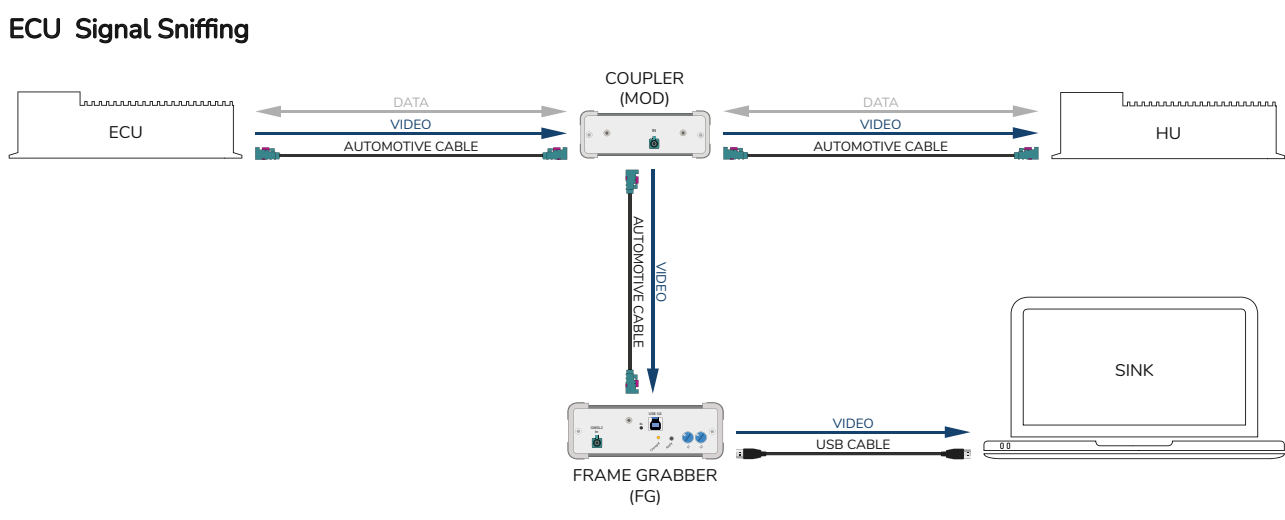
ECU Validation & Recording



Camera Signal Sniffing




































ECU Signal Sniffing



Technical Data

Automotive Video Link Technologies	Maxim GMSL, GMSL2 & TI FPD-Link III
Video Link Bandwidth	max. 2.4 Gbit/s, depending on color format
PC Interface (video output)	USB 3.0
PC Interface (configuration)	USB 2.0
I ² C/UART Control Channel Interface	USB 2.0
Power Supply	+11V to +16V (DC)
Dimensions [L/W/H] (without connectors)	130 / 135 / 55 mm
Temperature range	0°C...70°C
Power Over COAX Voltage	+9V (DC)

Framegrabber Variations

Part No	Technology	Connector	Deserializer	Features
FG0010	GMSL	FAKRA	MAX9288	    
FG0014	GMSL	FAKRA	MAX9296A	    
FG0023	GMSL2	FAKRA	MAX9296A	   
FG0026	GMSL2	FAKRA	MAX9296A	    
FG0033	GMSL2	H-MTD	MAX9296A	   
FG0040	FDP-Link III	FAKRA	DS90UB960	    
FG0053	GMSL	FAKRA	MAX9286	    



FG0010



FG0014



FG0023



FG0026



FG0033



FG0040



FG0053



Power over COAX supply



TZ GUI Support



USB Video Class



Built-in control channel Master



External access to deserializer pins

Suitable Add-on Products

Part No	Description
MOD0020	Directional COAX-Coupler (FAKRA Version)
MOD0061	UART to RS232/USB Adapter
SW0080	2:1 Switch (FAKRA Version)
SW0090	8:1 Switch (FAKRA Version)
SW0100	20:1 Switch (FAKRA Version)



MOD0020



MOD0061



SW0080



SW0090



SW0100

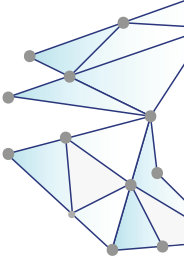
Accessories

Part No	Description
AC1008	Aardvark I2C/SPI Host Adapter
AC2001	Universal Power Supply 12V/1A 2-pin Ria (EU,US,UK,AU)
AC3020	1.0m USB3 Cable (Type-A to Type-B plug)
AC3101	5.0m USB3 Cable (Type-A to Type-B plug)
AC3036	1.8m USB Cable (Type-A to Type-B plug)
AC3035	5.0m USB Cable (Type-A to Type-B plug)
AC3003	1,5m Leonie Dacar 302 cable with FAKRA connector (straight jack, z-coding)
AC3033	3.0m Leonie Dacar 302 cable with FAKRA connector (straight jack, z-coding)
AC3006	5.0m Leonie Dacar 302 cable with FAKRA connector (straight jack, z-coding)
	Further Leonie Dacar cable assemblies on request

Imprint

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