AUTOMOTIVE VIDEO LINK FRAME GRABBER

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

The answer to your challenges is here
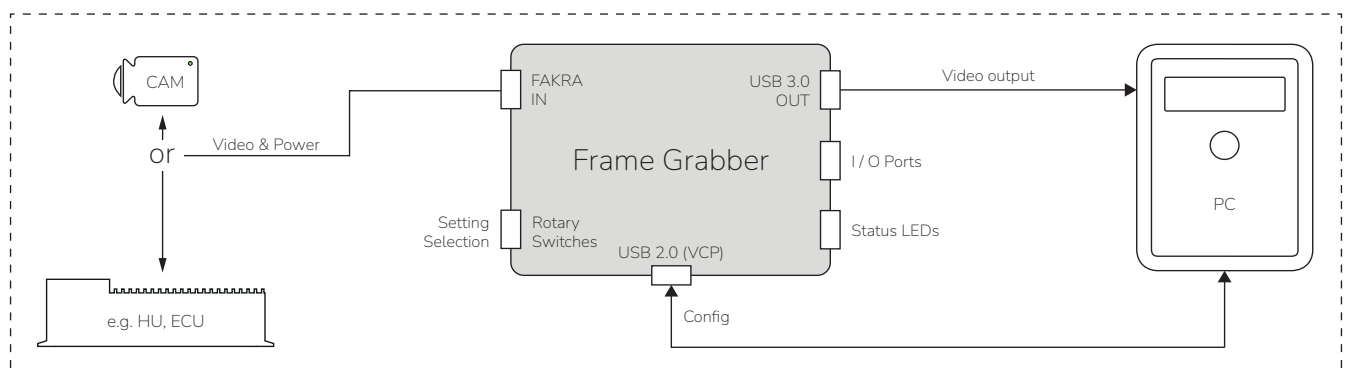
Video Data Recording for Automotive Camera and ECU outputs

Features

◐	Visualization and recording of a new camera / ECU setup in less than 10 minutes
◐	All-in carefree package: tools, cables and parameters included
◐	Pre-configuration and Plug & Play support
◐	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

CAM

or

Video & Power

e.g. HU, ECU

FAKRA IN

Frame Grabber

USB 3.0 OUT

Setting Selection

Rotary Switches

USB 2.0 (VCP)

I / O Ports

Status LEDs

Video output

PC

Config

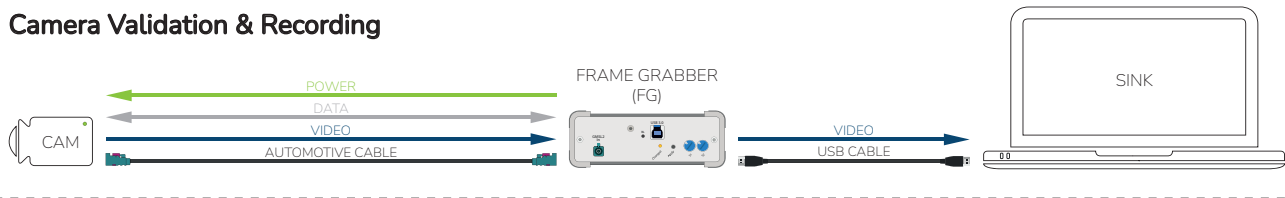▶ Play   ⊙ Record   ◉ Visualize   🔍 Analyze   🔧 Modify   ⤬ Route   ⚙ Engineer

Key Features

- Easy PC-capturing of camera & ECU video signals

- Available for all common Automotive Video links (GMSL and FPD-Link)

- 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 software 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 user's 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

CAM
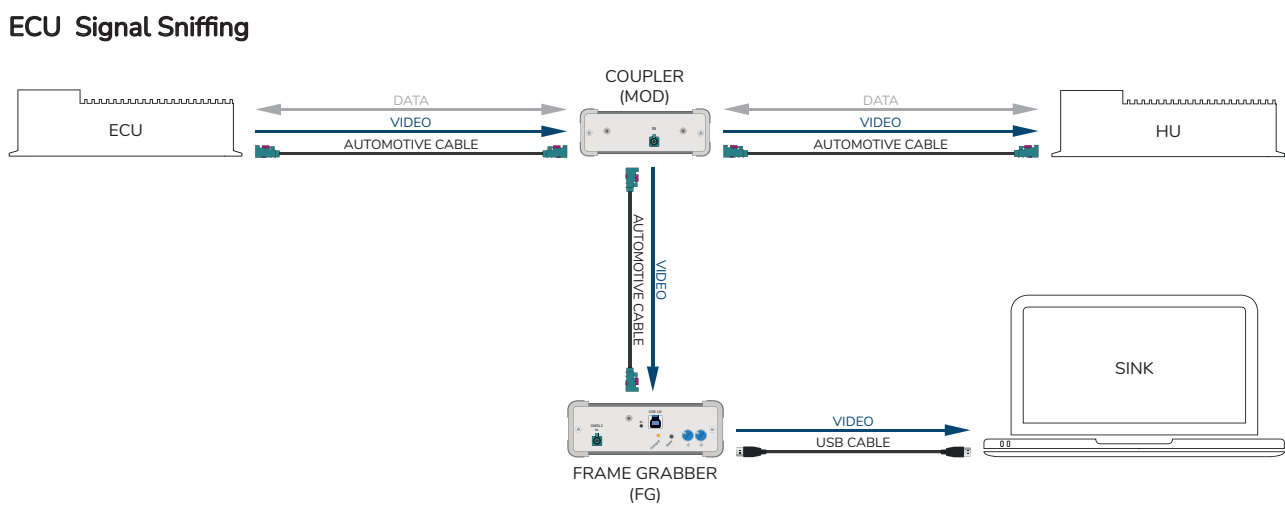POWER
DATA
VIDEO
AUTOMOTIVE CABLE

FRAME GRABBER
(FG)

VIDEO
USB CABLE

SINK

ECU Validation & Recording

ECU
DATA
VIDEO
AUTOMOTIVE CABLE

FRAME GRABBER
(FG)

VIDEO
USB CABLE

SINK

Camera Signal Sniffing

CAM
POWER
DATA
VIDEO
AUTOMOTIVE CABLE

COUPLER
(MOD)

POWER
DATA
VIDEO
AUTOMOTIVE CABLE

ECU

AUTOMOTIVE CABLE
VIDEO

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DATA
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HU

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VIDEO

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(FG)

VIDEO
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SINK
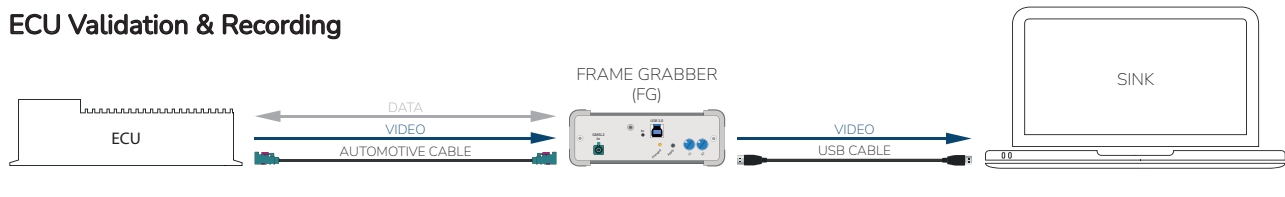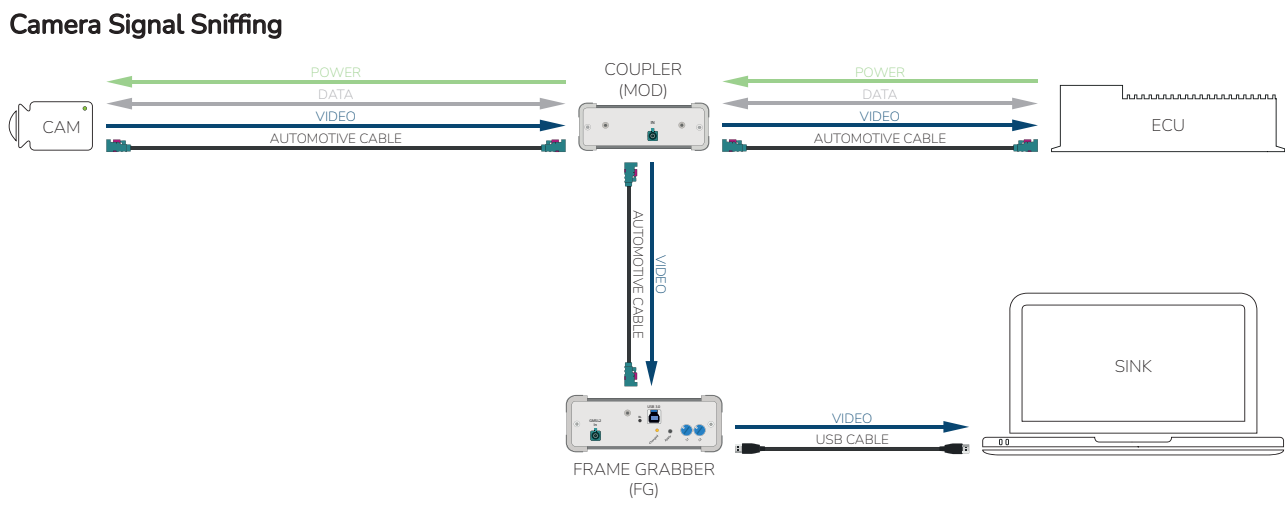
Technical Data

Automotive Video Link Technologies	GMSL1, GMSL2, GMSL3, FDP-Link III, FDP-Link IV
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
I²C/UART Control Channel Interface	USB 2.0
Power Supply	+12V (DC)
Dimensions [L/W/H] (without connectors)	130 / 135 / 55 mm
Power Over COAX Voltage	+9V (DC)

Frame Grabber Variations

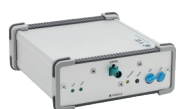| Part No	Technology	Connector	Variants	Features
FG0014	GMSL1	1x FAKRA		⚡ 🖱 ☑ CC ⇄
FG0026	GMSL2	1x FAKRA		⚡ 🖱 ☑ CC ⇄
FG0040	FDP-Link III	4x FAKRA		⚡ 🖱 ☑ CC ⇄
FG0053	GMSL1	4x FAKRA		⚡ 🖱 ☑ CC ⇄
FG0063	GMSL2	1x FAKRA	Tunneling Mode	⚡ 🖱 ☑ CC ⇄
FG0083	FDP-Link IV	1x FAKRA		⚡ 🖱 ☑ CC ⇄
FG0093	GMSL3	1x FAKRA		⚡ 🖱 ☑ CC ⇄

FG0014   FG0026   FG0040   FG0053   FG0063   FG0083

FG0093

⚡ Power over COAX supply   🖱 TZ GUI Support   ☑ USB Video Class   CC Built-in control channel Master   ⇄ External access to deserializer pins

Suitable Add-on Products

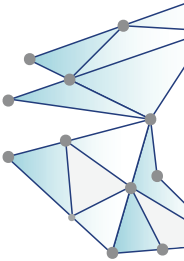| Part No	Description
CPL0210	Directional COAX-Coupler (FAKRA Version)
CPL0220	Active Direction Coupler (FAKRA Version)
SW0081	2:1 Switch (FAKRA Version)
SW0090	8:1 Switch (FAKRA Version)

CPL0210   CPL0220   SW0081   SW0090

we empower
automotive video
innovations

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