Digiteq Automotive

We make car revolution happen

Video “C” adapter’s family

Video “C” adapter is a unique solution that allows video capturing of the full displayed content of various modern digital instrument clusters to do testing of display units even more efficiently, complexly, and realistically.

Family of video “C” adapters solves the growing need for video capturing and testing of the complete video content from digital instrument cluster units. Displayed content of the modern digital instrument cluster units (e.g., FPK, FID, iID) comes from different video sources – the main part of the video stream is generated by the relevant ECU (e.g., MIB, ICAS, HCP), and the second part of the video stream, mainly security-related dashboard indicators, is generated directly by the display unit itself in the OLDI protocol. Video “C” adapter allows the video capturing of these video streams generated directly by the display unit, and its conversion to a serial video protocol (FPD Link III, GMSL 2). We offer a solution for capturing video streams of the full displayed content of various modern digital instrument cluster units used within the VW Group.

Video “C“ adapter connects the OLDI video signal between the display unit and the display via a specially designed ribbon cable and include programmed computing unit FPGA. Video „C“ adapter removes the spread spectrum from the original video stream, adjusts timing parameters, and converts them to a standardized LVDS bus output – FPD Link III or GMSL 2/3 – while maintaining the same frame rate (1:1 serial pixel clock).

Key features

- Allows video capturing of a complete, real displayed content of modern digital instrument clusters, for it is simple testing
- Convert any OLDI video stream into a standard LVDS bus protocol (FPD Link III / GMSL 2/3)
- Developed a solution for total video capturing of the newest digital instrument clusters within the VW Group
- Allows sending the video signal over a longer distance
- Fully compatible with the FrameGrabber 4 (FG4) and the Modular Frame Grabber (MGB)
- Stable and high-quality video capturing with minimal latency
- Reliable solution, resistant to external interferences
- Compact matchbox size

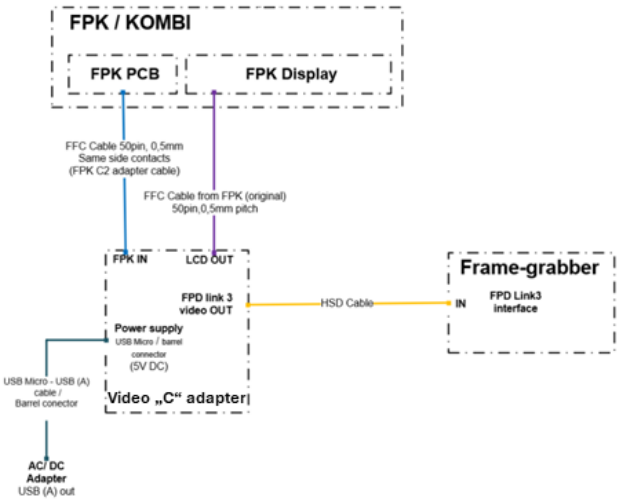
Conversion of the specific OLDI video stream to a standardized LVDS bus protocol ensures high quality of the grabbing, a reliable and stable video stream with minimal latency. It even allows the transfer of the video stream over a long distance, which would be impossible with the original OLDI video stream. Vide “C” adapters are fully compatible with FPD Link III and GMSL 2/3 interface modules of the FrameGrabber4 (“FG4”) and the Modular Frame Grabber (“MGB”).
This makes it easy to process the captured data on a computer and completely automate the entire unit testing process. We created the Video “C” adapters in two versions for more comfortable use: a single output, which offers only FPD Link III output, and the combined dual output version that offers both FPD Link III as well as GMSL 2/3 interface.

The Video “C” adapter can be powered directly from the connected display or separately using the included micro-USB cable.

Video „C“ adapters are always custom-designed for specific display units due to the various display panels used. We have currently developed three versions of the Video „C“ adapters, labeled C1, C2, and C3, for specific display units (see specifications below).

Our team is open and pleased to adapt the Video „C“ adapter for additional display units upon request.

Video “C” adapter general wiring diagram:



The Video “C” adapter connects to the OLDI video stream generated by the display unit, forwards it to the display and converts it to a standard LVDS bus for the grabber.

Offered C- adapters:

- Video “C1” adapter – compatible with the P.N. 95C920901D and related display unit
- Video “C2” adapter – compatible with the P.N. 57L.920.340 and related display unit
- Video “C3” adapter - compatible with the P.N. 83H920034 and related display unit

Custom development of the Video “C” adapter for a new display:

We are open to custom-developing or adapting any Video “C” adapter for a new display unit based on demand.

These inputs are necessary for the analysis and design of a new custom version of the adapter:

- Display type (part number)
- Described orientation with pinout description
- Video parameters (display resolution, frame rate, spread spectrum parameters)
- Target HW unit with a simulation for its operation
- Necessary ribbon cables

Delivery content:

- Video “C” adapter module
- Set of specially designed ribbon cables for interconnection
- Micro USB charging adapter

Technical Parameters	
Main use case:	Video conversion of the video streams generated by the display unit, and it is transferring to a standard LVDS bus protocol for further processing by FrameGrabber 4 (“FG4”) / Modular Frame Grabber (“MGB”)
Input: Output:	Video stream generated by the video stream unit LVDS video stream (FPD Link III or GMSL 2/3)
Versions of the Video “C” adapter:	▪ C1 adapter – compatible with the P.N. 95C920901D and related ▪ C2 adapter – compatible with the P.N. 57L.920.340 and related ▪ C3 adapter - compatible with the P.N. 83H920034 and related Please contact us if you would like to support any further display units. We are open to custom-developing or adapting any solution based on demand.
Video “C” adapter variants:	▪ Single output: FPD link III, or GMSL 2/3 interface ▪ Dual output: includes both FPD link III and GMSL 2/3 interfaces
Compatible grabbers:	▪ Modular Frame Grabber (MGB) ▪ FrameGrabber 4 PCIe card (FG4)
Supported LVDS buses:	▪ FPD link III ▪ GMSL 2/3
Dimensions (w × h × d)	▪ Single output: FPD link III, or GMSL 2/3 interfaces: 52x85x19 mm ▪ Dual output: both FPD link III and GMSL 2/3 interfaces 60x95x21 mm
Weight	▪ Single output: FPD link III, or GMSL 2/3 interfaces: 51 g ▪ Dual output: both FPD link III and GMSL 2/3 interfaces 66 g
Power voltage	5V DC approx. 1,8W (micro USB or DC barrel connector (5,5x2,1 mm)
Operating temperature	0 °C to 60 °C while preventing condensation
Ribbon cables	Completely custom design ribbon cables
Used serializers	Version with FPD Link III: DS90UB947 Version with GMSL2/3: MAX96737ADGTN/VY+
EMC Compliance	CISPR 32/EN 55032
IP rating	IP20

For ordering, further details and available accessories please contact us: business.products@digiteqautomotive.com