

VGL-1000

Video-Giga-Link for VDS Digital Cameras



Features

- Digital data transfer via coaxial cable
- Data rate up to 1.3 Gbit/sec.
- Cable length (depending on cable quality) up to 100 m
- Return channel for all camera control signals
- Usable for nearly all VDS digital cameras
- Digital output RS644 (12bit) directly pin-to-pin compatible to VDS cameras
- If desired, also Camera Link output available

For the first time **Allied Vision Technologies GmbH** presents a digital data transfer via coaxial cable called video-giga-link **VGL-1000** which is reliably practicable also at bigger distances up to 100 m.

The data are transferred bit-serially up to 1.3 Gbit/sec.

This is achieved by transmitter and receiver chips based on a silicon bipolar process with 25 GHz corner frequency.

The data transfer is carried out by 12-bit and a pixel clock up to 66 MHz. Therefore the VGL-1000 is applicable for nearly all digital cameras by VDS Vosskühler.

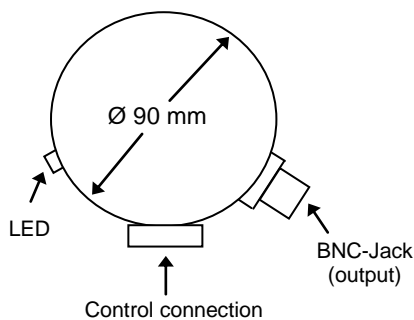
Besides, for the data transfer of the camera data to a PC grabber a return channel is integrated in the system by which all necessary control signals are transferred from the PC grabber to the camera. For the control of VDS cameras with serial interface a full duplex RS232 connection is available.

The VGL-1000 system consists of two different components, a transmitter module VGL-1000TX which is screwed onto the camera backside and a receiver box VGL-1000RX. The two components are connected to each other by a coaxial cable.

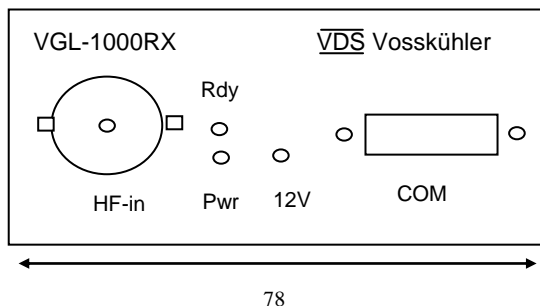
At the receiver output VGL-1000RX a 37pin Sub-D jack is available which is identical 1:1 to the RS644 camera output.

A „Camera Link“ output is also available, so all standard RS644 and „Camera Link“ grabbers can be used.

VGL-1000 TX Back view:



VGL-1000 RX Front View:



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Technical Data

- Net data transfer up to 800 Mbit/sec.
- Bandwidth approx. 1 MHz to bit-clock
- Bit-clock = 20 x pixel clock of the camera
- Adjustable frequency response correction (cable equalization) for longer coaxial cables
- 12 bit RS644 output
- For camera-pixel clocks from 21 to 66 MHz
- Designed for 75 ohm coaxial cable
- Return channel for all camera-control signals
- Return channel carrier frequency appr. 100 kHz bandwidth approx. 50 kHz
- Full duplex-RS232-channel (9600 baud, 8bit no parity, data 0 – 7 F_n)
- Delay of camera control signals (IOD, gain, binning) max. 500 µs
- Trigger delay at /T_{REX} approx. 65 µs ± 2,5 µs (jitter)
- Minimum /T_{REX} pulse width approx. 100 µs

VGL-1000 TX (Transmitter Module)

- Direct push-on to VDS cameras
- Low construction depth (max 15 mm)
- BNC cable connection (75 ohm)
- Power supply: + 12 V (SELV) (- 4%, + 10%)
- Current record: approx. 0.15 A (without camera)
- Ambient air temperature 0 – 40°C
- CE conform
- Made in Germany

VGL-1000 RX (Receiver Module)

- RS644 output with 12 bit (like camera output)
- Option „Camera-Link“ (BASE)
- Serial RS232 interface (9 pin)
- Pixel clock like camera clock
Abbreviation: < 100 x 10⁻⁶
- Power supply: + 12 V (SELV) (- 10% , + 10%)
- Current record approx. 0.2 A
Connection: 5.5 mm hollow plug (inside 2.1 mm) for power supplies
- Re-poling protection
- Ambient air temperature: 0 – 40°C
- CE conform
- Made in Germany