6222 Video Dragon - Component Selection Guide

6222 Video Dragon family

Media Interface

Cable

G Patch

Cable

Unit under test

UUT

GÖPEL electronic
Enjoy Testing
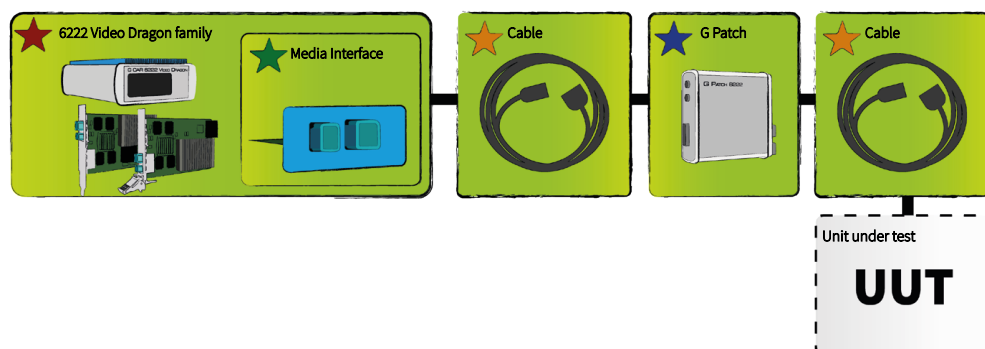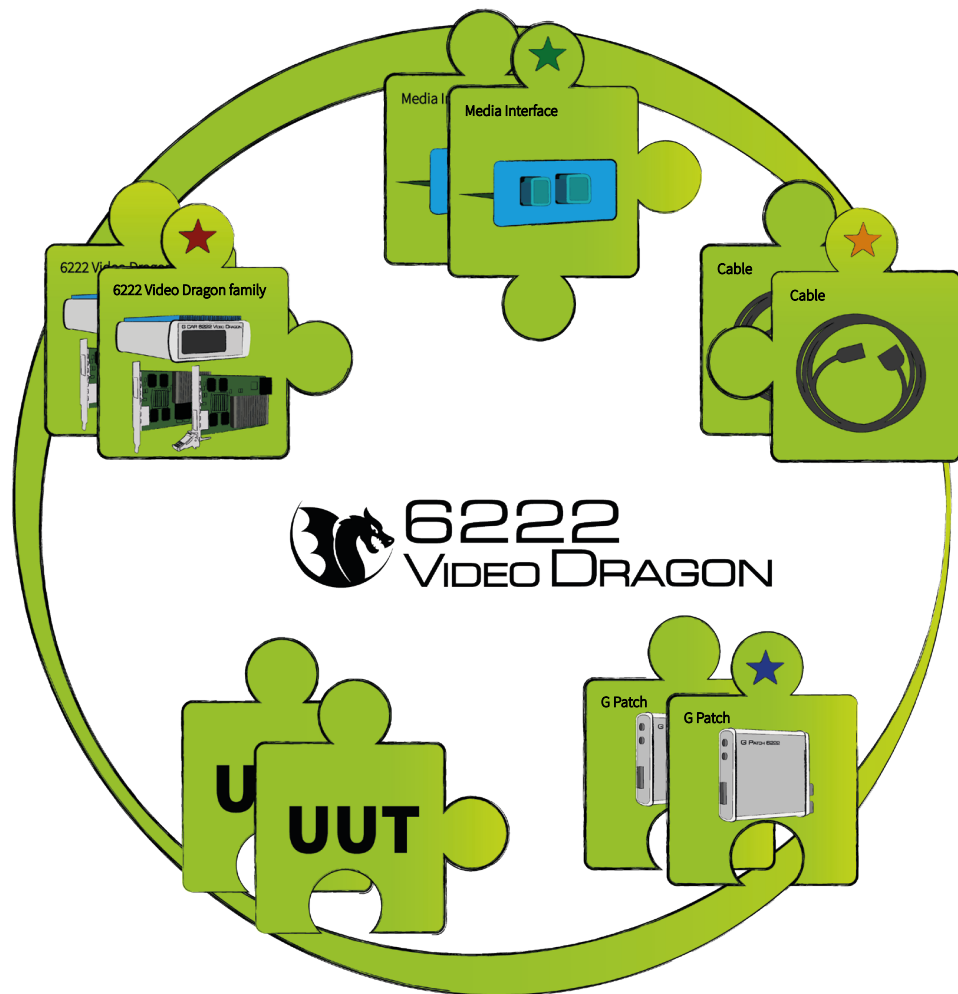
Please note!

This document is an aid to better understanding of the purpose of the individual components of a 6222 Video Dragon application. The clear presentation of the various configurations should help to simplify the selection process and thus determine the products required for the respective testing task.

The document does not replace the original documentation of the 6222 Video Dragon or G Patch 6222 under any circumstances, but rather is to be considered as a supplement to it.
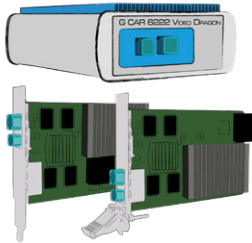
Short description 6222 Video Dragon

The 6222 Video Dragon is a modular system for the collection and output of video data. It combines the characteristics of a frame grabber and a frame generator in one device.

The 6222 Video Dragon consists of a universal baseboard with a specific media interface attached. Specifically because the configuration of the media interface determines whether it is a grabber, a generator or both. The serialisers/deserialisers are located on the media interface.

GÖPEL electronic provides a wide range of media interfaces for GMSL, FPD-Link and APIX. The 6222 Video Dragon is adapted to the unit under test via a separate component, the G Patch. The function and variants of the G patch are described below.

Configuration 6222 Video Dragon

In order to select the correct configuration for the testing task from the wide range of possible configurations, the user should first answer the following questions:

What sort of interface to the host do I want to use?

· Selection of the baseboard

Do I need image capture, image output or both?

· Selection of the media interface

What type of connection does my unit under test have - coaxial or STP (shielded twisted pair)?

· Selection of the media interface and G Patch 6222

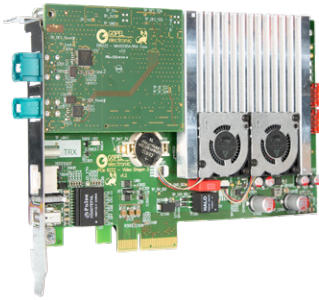**Which serialiser/deserialiser do I need as a remote point for my unit under test?**

· Selection of the media interface and G Patch 6222

The following overviews and schematic diagrams provide assistance in answering the questions.
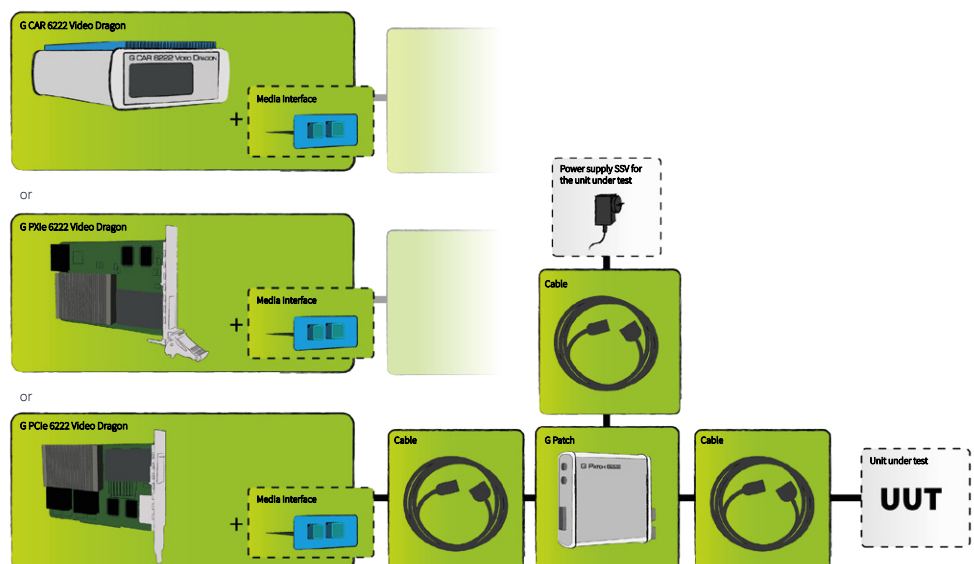
Baseboards 6222 Video Dragon

★ G PCIe 6222

PCIe card with PCIe Gen2 x4

• Standard height, half depth
• 1 slot wide
• active cooling

★ G PXIe 6222

PXIe card with PCIe Gen2 x4

• Euro card format
• 1 slot wide
• passive cooling

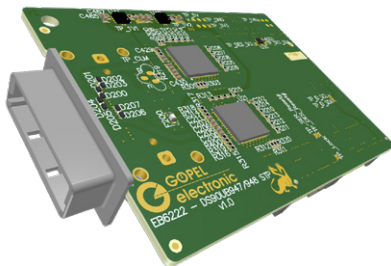### ★ G CAR 6222 Video Dragon

Stand-alone box with USB 3.0 and Ethernet

• (WxDxH) 110 mm x 190 mm x 55 mm
• passive cooling

Media Interfaces 6222 Video Dragon

The following images show examples from the wide range of available media interfaces
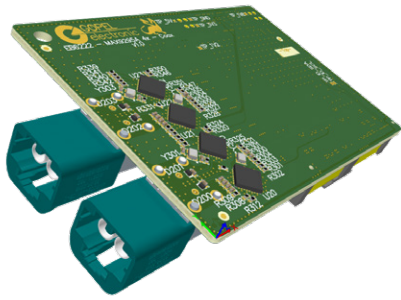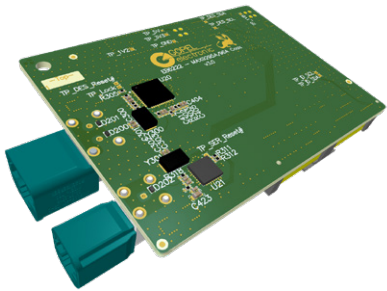
★ STP

Shielded Twisted Pair media interface

★ Coaxial

4-channel coaxial media interface

★

3-channel coaxial media interface

Cables 6222 Video Dragon

★ STP video cable

Connection cable between STP media interface and G Patch 6222

★ Coaxial video cable

Connection cable between coaxial media interface and G Patch 6222 or unit under test

★ 6222 CAN-DIO adapter cable

Cable for CAN interface and DIOs

G Patch 6222 for 6222 Video Dragon

★ Coaxial

4-channel, one Fakra plug per channel Power-over-Coax function

★ STP (shielded twisted pair)

2x2-channel, STP connector Power-over-Cable function

★

2x2-channel, STP connector Power-over-Cable function and Ethernet connection (MII sideband)

★

3-channel, one STP connector per channel Power-over-Cable function

Form factors 6222 Video Dragon

The 6222 Video Dragon has three form factors, they differ only in the host interface.
There are no differences in terms of functionality and connection to the unit under test.
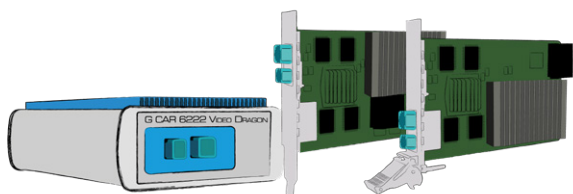

· Stand-alone box: G CAR 6222 Video Dragon

· PCIe card: G PCIe 6222 Video Dragon

· PXIe card: G PXIe 6222 Video Dragon
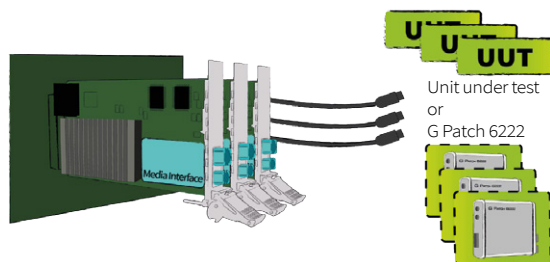
★ G CAR 6222 Video Dragon
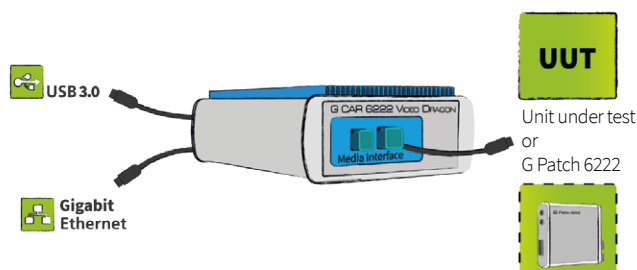
The G CAR 6222 Video Dragon is a stand-alone device with passive cooling. The reduced bandwidth of the host interface (USB or Ethernet) could restrict data exchange to the PC, meaning that not every image could be displayed for large video bandwidths. However, this has no effect on the actual possible video bandwidth.

★ G PCIe 6222 Video Dragon
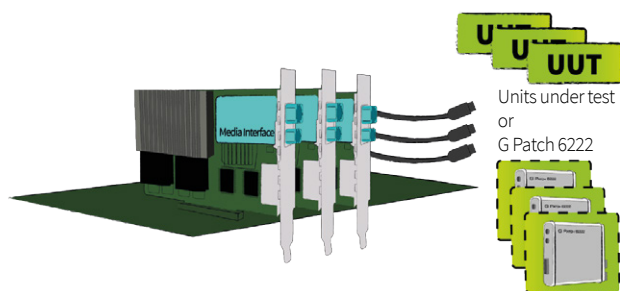
The PCIe card G PCIe 6222 Video Dragon is one slot wide and requires a slot with at least PCIe Gen2 x4 for the full bandwidth.
Data exchange with the host takes place via DMA. The card is actively cooled. Therefore, if several cards are in use in a host system, sufficient air circulation must be ensured.
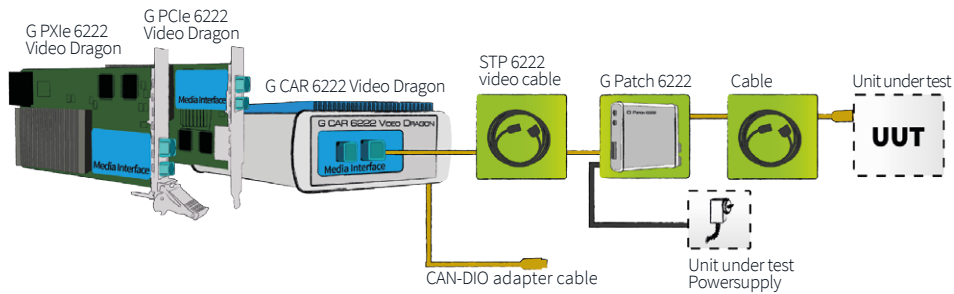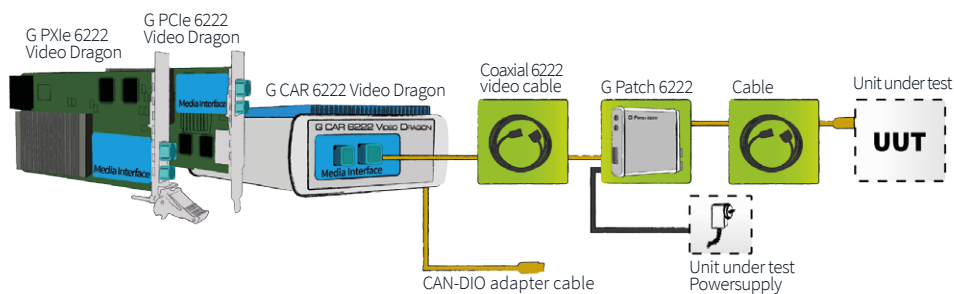
★ G PXIe 6222 Video Dragon

With a width of just one slot, the G PXIe 6222 Video Dragon is particularly suitable for use in 19" test racks. The card is passively cooled, the required airflow is provided via the PXI rack. The card works in the host interface with PCIe Gen2 x4. When using multiple G PXIe 6222 Video Dragons in a PXI rack, the maximum bandwidth of the backplane or PXIe controller must be observed.

Sample configurations 6222 Video Dragon

★★★★ 6222 Video Dragon with STP media interface

★★★★ 6222 Video Dragon with coaxial media interface and PoC

★★★ 6222 Video Dragon with coaxial media interface and without PoC