

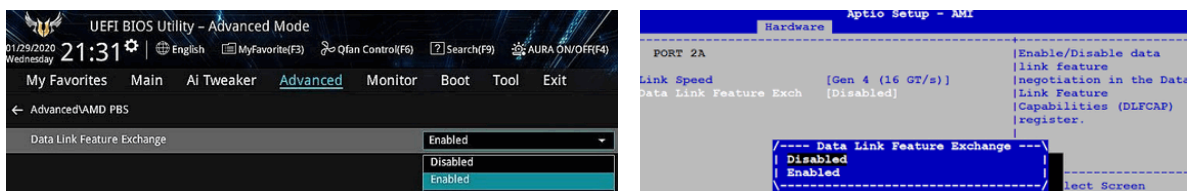
PCIe 4.0 and PCIe 5.0 compatibility of PCO cameras with Kaya Komodo II frame grabber

Background

This guide is intended for PCO cameras with CLHS interface supplied with a Kaya Komodo II frame grabber. While PCI Express (PCIe) is generally backward-compatible, the Komodo II (a PCIe 3.0 device) may experience issues in newer systems with PCIe 4.0 or 5.0 slots. Typical symptoms include black screens, POST errors during boot, or the frame grabber not being detected by the operating system.

Recommended BIOS Settings

1. Disable "Data Link Feature Exchange" (or "Data Link Feature Capability"). This setting is often located under **Advanced** → **PCI Subsystem** in the BIOS.



Screenshots of the "Data Link Feature Exchange" setting in the BIOS of exemplary consumer (left) and business (right) motherboards.

2. Additional settings for maximum compatibility
 - Disable Fast Boot (commonly located in the Boot section)
 - Disable Single Root I/O Virtualization (SR-IOV) (commonly located in the Advanced section).
 - Manually set PCIe slot speed to Gen 3.0 (or Gen 2.0) instead of Auto/Gen 4.0/5.0

Tested Motherboards by KAYA Instruments

Komodo II frame grabbers work correctly on PCIe 4.0 systems when "Data Link Feature Exchange" is disabled. Verified systems include (this is not a complete list, compatibility depends on BIOS options and vendor updates):

- Supermicro M12SWA-TF, X12SPA
- Advantech ASMB-816
- Gigabyte WRX80-SU8-IPMI

If No Option is Available

If your BIOS does not offer an option to disable "Data Link Feature Exchange," contact your motherboard vendor's Technical Support or Customer Service. Many vendors can provide an updated BIOS firmware with this option enabled or disabled by default. When requesting support, you can reference:

"Need to disable the Data Link Feature Exchange in a PCIe Gen4 system [Base Spec 4.0, Chapter 7.7.4.2 Data Link Feature Capabilities Register (Offset 04h)] to ensure compatibility with legacy hardware."

This troubleshooting guide is based on material provided by Kaya Instruments. The original guidelines can be found here:

