

Baumer GAPI SDK for USB Multi-Camera Systems with Linux®

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Description

This document describes the use of USB multi-camera systems on Linux®-based computers.

Products

Baumer GAPI SDK – Linux®

Baumer USB Industrial Cameras

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1 Technical Background

The USB module of the Linux[®] kernel features a memory limit of 16 MB, which will lead to restrictions in the use of USB multi-camera systems.

2 Modification of the kernel's USB module memory

2.1 Memory limit determination

The memory limit of the Linux[®] USB module can be determined by running the following command:

```
# cat /sys/module/usbcore/parameters/usbfs_memory_mb
```

By default, the returned value should be 16. This memory limit is a kernel boot argument that has to be changed at boot time. The kernel boot arguments are managed by the systems bootloader. The most major distributions such as Ubuntu[®], Debian[®] or Fedora[®] all use the grub bootloader. The procedure to change the boot arguments for the grub bootloader is described below.

2.2 Change memory limit with GRUB bootloader

The file “/etc/default/grub”¹ contains an entry GRUB_CMDLINE_LINUX_DEFAULT. On Ubuntu[®] systems the complete entry looks similar to following: GRUB_CMDLINE_LINUX_DEFAULT="quiet splash".

By adding the argument “usbcore.usbfs_memory_mb=xxx”² the memory limit will be increased at the next boot.

For increasing the memory limit to 1000 MB, the complete entry should look like this:
GRUB_CMDLINE_LINUX_DEFAULT="quiet splash usbcore.usbfs_memory_mb=1000"

In order to apply the changes to grub, you need to call “grub-mkconfig -o /boot/grub/grub.cfg” as root user.

3 Support

In the case of any questions or for troubleshooting please contact our support team.

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¹ In order to modify this file, you need to have the administrative rights of the root user.

² Memory size for the USB module, given in Megabyte.

4 Legal Notes

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