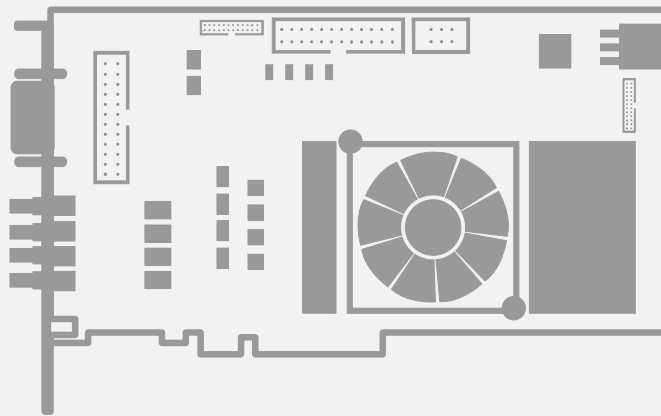**euresys**

Empowering Computer Vision

Coaxlink

Flash EEPROM Change Note

1629 Coaxlink Duo PCIe/104-EMB
1633 Coaxlink Quad G3
1633-LH Coaxlink Quad G3 LH

1634 Coaxlink Duo PCIe/104-MIL
1635 Coaxlink Quad G3 DF
1637 Coaxlink Quad 3D-LLE

Terms of Use

This documentation is provided with Coaxlink 12.5.4 (doc build 2109).
www.euresys.com

Contents

1. Introduction

Several Coaxlink products will undergo a hardware change of the Flash EEPROM control logic.

> **NOTE**
> The Flash EEPROM is the memory that stores the contents of the Coaxlink's on-board FPGA.

Affected products list

Product	S/N Prefix	First Serial Number of New Cards
1629 Coaxlink Duo PCIe/104-EMB	KDI	10,000
1633 Coaxlink Quad G3	KQG	10,000
1633-LH Coaxlink Quad G3 LH	KQH	10,000
1634 Coaxlink Duo PCIe/104-MIL	KDR	10,000
1635 Coaxlink Quad G3 DF	KDF	10,000
1637 Coaxlink Quad 3D-LLE	KQE	10,000

Consequences

Existing applications using a Coaxlink driver prior to version 10.0.0 are required to use a new procedure to install or update the firmware on new boards.

The change has no impact for applications already using Coaxlink driver 10.0.0 or higher.

With the exception of the firmware update, the change has strictly no impact on the product functionality, performance and specifications:

- The hardware design of these new cards, including the CoaXPress interface, PCI Express interface, the FPGA and the I/O, has not been changed.

- The functionality, performance and specification of the new cards is guaranteed to remain unchanged. Once programmed with the corresponding firmware, the new cards remain compatible with all previous versions of the Coaxlink driver.

Firmware versions

The following table provides, for each card, the first firmware version that can communicate with the new Flash EEPROM control logic and the first Coaxlink driver version embedding that firmware version:

Product	First Firmware Version	Delivered with
1629 Coaxlink Duo PCIe/104-EMB	-	*Not available yet*
1633 Coaxlink Quad G3	243	Coaxlink 10.0.0
1633-LH Coaxlink Quad G3 LH	243	Coaxlink 10.0.0
1634 Coaxlink Duo PCIe/104-MIL	-	*Not available yet*
1635 Coaxlink Quad G3 DF	-	*Not available yet*
1637 Coaxlink Quad 3D-LLE	243	Coaxlink 10.0.0

2. Identifying Old and New Cards

Identification by Serial Number

Any Coaxlink card having a serial number above or equal to *10,000* is a new card.
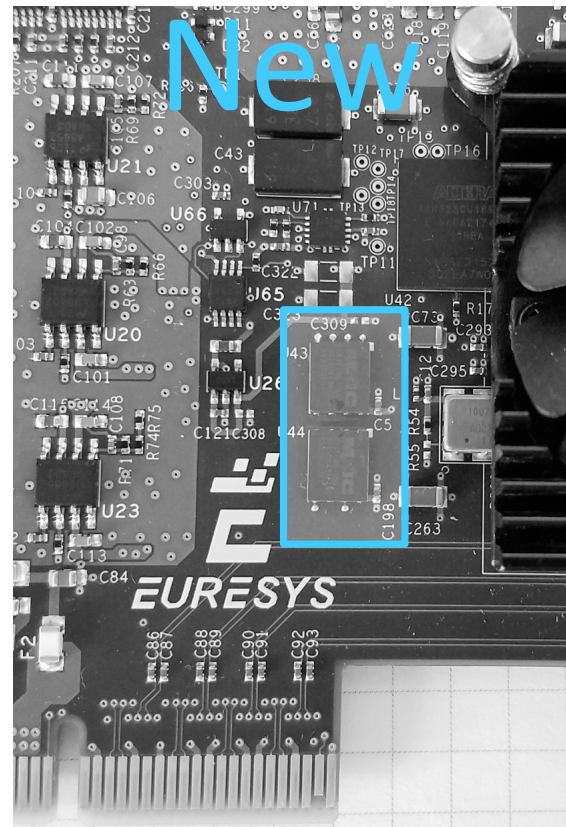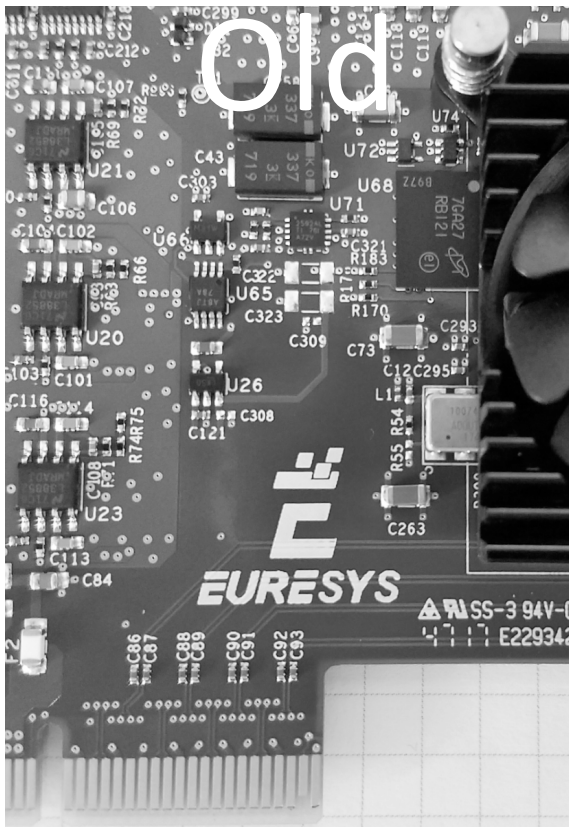
> **NOTE**
> The serial number is printed on the shipping box and on the card.

Visual Identification

New **1633 Coaxlink Quad G3**, **1633-LH Coaxlink Quad G3 LH** and **1637 Coaxlink Quad 3D-LLE** can be visually identified by the two SPI Flash Memory IC's located between the fan and the PCI Express connector.
See the blue rectangle in the following drawing:

3. Directives For New cards

When the application uses a Coaxlink driver version 10.0.0 or higher

Coaxlink driver 10.0 and higher fully support new cards, in all their functionality, which means:

- OK for operation
- OK for firmware update
- OK for firmware downgrade using the "Downgrade Procedure" on page 8

When the application uses a Coaxlink driver prior to version 10.0.0

For applications using a Coaxlink driver prior to version 10.0.0, the following procedure must be applied to downgrade the firmware to correspond to the driver effectively used by the user application:

1. Install the card in a PC with a Coaxlink driver version 10.0.0 or higher installed

2. Apply the "Downgrade Procedure" on page 8

3. Install the card in the PC with the old Coaxlink driver required by the user application

> ⊘ **WARNING**
> For cards that were downgraded to a firmware version not supporting the new Flash EEPROM control logic, use the " Recovery Procedure" on page 9 to revert to the previous firmware.

> ⊘ **WARNING**
> To manage the firmware on "new" cards running "old" firmware, it is mandatory to use a Coaxlink Firmware Manager version 10.1.2 or higher! Running an older version may lead to a "flash bank select inconsistency error (-20021)".

> 🗒 **NOTE**
> The firmware revision number can be obtained by getting the value of the FirmwareRevision GenICam features of the Interface module.

3.1. Downgrade Procedure

> **⚠ WARNING**
> To be done on a PC with a Coaxlink driver version 10.0.0 or higher installed!

Using the Coaxlink Firmware Manager tool in GUI mode

1. Open the Coaxlink Firmware Manager application

2. Click on the top left menu button and select "Firmware images"

3. Open a Windows file explorer

   a. Select the `coaxlink-firmware.exe` file delivered with the old Coaxlink driver required by the application

   b. Drag the selected file and drop it into the "Embedded firmwares images" area of the Coaxlink Firmware Manager window

4. Click on the top left menu button and select "Coaxlink cards" to go back the main window

5. Using Coaxlink Firmware Manager

   a. Select the card to downgrade

   b. Select the firmware variant to install

   c. Proceed with the installation

Using the Coaxlink Firmware Manager tool in command-line mode

- Keeping the same firmware variant:

  coaxlink-firmware update --firmware=PATH-TO_FILE

- Changing also the firmware variant:

  coaxlink-firmware install "1-camera" --firmware=PATH-TO_FILE

`PATH-TO_FILE` is the path to the `coaxlink-firmware.exe` file delivered with the old Coaxlink driver required by the application.

3.2. Recovery Procedure

> ⊘ **WARNING**
> To be done on a PC with a Coaxlink driver *version 10.1.2* or higher installed!

1. Using the Coaxlink Firmware Manager tool in command-line mode, execute the bank selection command:

   coaxlink-firmware bank-select --next=ALTERNATE

   The command displays a status indicating that the next firmware after boot is the other bank:
   ```
   [BANK0: current firmware][BANK1: alternate/next firmware] or
   [BANK0: alternate/next firmware][BANK1: current firmware]
   ```

2. Power off the PC

3. Power on the PC