

# Coaxlink

1630 Coaxlink Mono  
1631 Coaxlink Duo  
1632 Coaxlink Quad  
1633 Coaxlink Quad G3

1635 Coaxlink Quad G3 DF  
1637 Coaxlink Quad 3D-LLE  
1638 Coaxlink Quad CXP-3  
3602 Coaxlink Octo



# 1. Coaxlink PCI Express Products Installation Guide

## 1.1. Disclaimer

EURESYS s.a. shall retain all property rights, title and interest of the documentation of the hardware and the software, and of the trademarks of EURESYS s.a.

All the names of companies and products mentioned in the documentation may be the trademarks of their respective owners.

The licensing, use, leasing, loaning, translation, reproduction, copying or modification of the hardware or the software, brands or documentation of EURESYS s.a. contained in this book, is not allowed without prior notice.

EURESYS s.a. may modify the product specification or change the information given in this documentation at any time, at its discretion, and without prior notice.

EURESYS s.a. shall not be liable for any loss of or damage to revenues, profits, goodwill, data, information systems or other special, incidental, indirect, consequential or punitive damages of any kind arising in connection with the use of the hardware or the software of EURESYS s.a. or resulting of omissions or errors in this documentation.

## 1.2. Declarations



### Notice for Europe

This product is in conformity with the Council Directive 2014/30/EU

This equipment has been tested and found to comply with Class B EN55022/CISPR22 and Class B EN55024/CISPR24.

This product has been tested in a typical class B compliant host system. It is assumed that this product will also achieve compliance in any class B compliant unit.

To meet EC requirements, shielded cables must be used to connect a peripheral to the card.



### Notice for USA

Compliance Information Statement (Declaration of Conformity Procedure) DoC FCC Part 15

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation or when the equipment is operated in a commercial environment.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



### Notice for Korea

The following products have been registered under the Clause 3, Article 58-2 of Radio Wave Acts:

Product	KC Registration Number	Product	KC Registration Number
1631 Coaxlink Duo	MSIP-REM-EUR-PC1631		
1632 Coaxlink Quad	MSIP-REM-EUR-PC1632	1637 Coaxlink Quad 3D-LLE	MSIP-REM-EUR-PC1637
1633 Coaxlink Quad G3	MSIP-REM-EUR-PC1633	1638 Coaxlink Quad CXP-3	MSIP-REM-EUR-PC1638
1635 Coaxlink Quad G3 DF	R-R-EUR-PC1635	3602 Coaxlink Octo	R-R-EUR-PC3602



This product is in conformity with the European Union RoHS 2011/65/EU Directive, that stands for "the restriction of the use of certain hazardous substances in electrical and electronic equipment".



According the European directive 2012/19/EU, the product must be disposed of separately from normal household waste. It must be recycled according to the local regulations.

### 1.3. Precautions for Use of Board Products

#### **Electrostatic Sensitive Device**

Boards may be damaged by electrostatic discharges. Follow the procedure hereby described and apply any general procedure aimed at reducing the risk associated with electrostatic discharge. Damage caused by improper handling is not covered by the manufacturer's warranty.

#### **Electromagnetic Compatibility**

Euresys boards are compliant with electromagnetic compatibility regulatory requirements. To ensure this compliance, the card bracket must be secured with the relevant screw in accordance with the procedure described herein.

#### **Risk of Electrical Shock**

Do not operate the computer with any enclosure cover removed. During the hardware installation, ensure the AC power cord is unplugged before touching any internal part of the computer.

#### **Heating Device**

It is normal for a board to dissipate some heat during operation. All enclosure covers, including blank brackets, must be fitted correctly to ensure that the fan cools the computer adequately.

#### **Hot Plugging Forbidden**

Uncontrolled plugging and unplugging of equipment may damage a board. Always switch off the computer and any relevant system device when connecting or disconnecting a cable at the frame grabber or auxiliary board bracket. Failure to do so may damage the card and will void the warranty.

#### **Poor Grounding Protection**

The computer and the camera can be located in distant areas with individual ground connections. Poor ground interconnection, ground loop or ground fault may induce unwanted voltage between equipment, causing excessive current in the interconnecting cables. This faulty situation can damage the frame grabber or the camera electrical interface. The user must follow proper equipment grounding practices at all ends of the interconnecting cables. In addition, the use of cable assemblies with overall shield solidly connected to the conductive shell of all connectors is recommended. Besides the beneficial effect of cable shielding on electromagnetic compatibility, the shield connection can increase the protection level against grounding problems by temporarily absorbing unwanted fault current.

### 1.4. PCI Express Card Slot Requirements

For optimal performance:

- 1630 Coaxlink Mono, 1631 Coaxlink Duo, 1632 Coaxlink Quad, 1637 Coaxlink Quad 3D-LLE and 1638 Coaxlink Quad CXP-3 must be plugged into a x4, x8 or x16 PCI Express Gen 2 or Gen 3 card connector providing at least four active lanes.
- 1633 Coaxlink Quad G3 and 1635 Coaxlink Quad G3 DF must be plugged into a x4, x8 or x16 PCI Express Gen 3 card connector providing at least four active lanes.
- 3602 Coaxlink Octo must be plugged into a x8 or x16 PCI Express Gen 3 card connector providing at least eight active lanes.

To guarantee proper operation and longer board reliability, ensure an adequate cooling of the card. The cooling is improved by a higher air flow circulating around the board. This air flow is increased, for example, by using computer case fans. In addition, avoid placing a Coaxlink card next to other heat dissipating boards.

### 1.5. PCI Express Card Installation Procedure

Switch off the computer and all connected peripherals (monitor, printer...).

1. Discharge any static electricity that could be accumulated by your body. You can achieve this by touching an unpainted metal part of the enclosure of your computer with a bare hand. Make sure that the computer is linked to the AC power outlet with proper earth connection.
2. Disconnect all cables from your computer, including AC power.
3. Open the computer enclosure, according to the manufacturer instructions, to gain access to the PCI Express slots. Locate an available and adequate PCI Express slot. Refer to "[PCI Express Card Slot Requirements](#)" above.
4. Remove the blank bracket associated with this location. To achieve this, remove the securing screw and keep it aside for later use in the procedure. Keep the blank bracket in a known place for possible re-use.
5. Unwrap the Coaxlink card packing, take the board and carefully hold it. Avoid any contact of the board with unnecessary items, including your clothes.
6. Gently insert the card into the selected PCIe slot, taking care to push it down fully into the slot. If you experience some resistance, remove the board and repeat the operation. You should attempt to make a perfect board-to-slot mechanical alignment for best results. Ensure that the lower part of the bracket is inserted into the corresponding enclosure fastening.
7. Secure the board with the saved screw.

8. **Optional.** When the camera(s) is (are) powered through the CoaXPress cable or when the +12 V power output is required on any System I/O connector, connect a 12 V power source to the Auxiliary Power Input connector using a 6-pin PEG cable.
9. **Optional.** Establish the connections with the Internal GPIO connector(s) as required by the application.
10. **Optional.** When synchronized acquisition is required for cameras attached to different Coaxlink cards, establish the card-to-card link interconnections.
11. Close the computer enclosure according to the manufacturer instructions.

## 1.6. Coaxlink Driver Installation Procedure

The Coaxlink driver is distributed on the support section of the Euresys website: <http://www.euresys.com/support/>.

**Note:** The Euresys website download area may require user authentication. The user ID and password are not obtained, they are chosen by the user. Access is free and unrestricted.

1. Select the Coaxlink product series to display the file list corresponding to the latest available Coaxlink driver release.
2. Select the setup file corresponding to your operating system and your processor architecture

```
coaxlink-<OS>- [<ARCH>-] <MA.MI.RE.BU> .<EXT>
```

- The <OS> field designates the operating system: linux, macos, win, win10
- The <ARCH> optional field designates the processor architecture: aarch64, x86, x86\_64
- The <MA.MI.RE.BU> designates respectively the major and minor version numbers, the revision and the build numbers of the driver package
- <The EXT> field designates the file type: exe, tar, gz, pkg

**Important:** For an installation on Windows 10, use the `coaxlink-win10- [<ARCH>-] <MA.MI.RE.BU> .exe` setup file with drivers signed by Microsoft!

3. Launch the installer tool to install the driver files and software tools on your PC.

**Note:** If you have an existing Coaxlink driver already installed, the installer tool prompts you to uninstall it before being able to continue. Otherwise, it prompts you for the selection of the destination folder.

## 1.7. Firmware Update Procedure

The Coaxlink driver comes with all the firmware variants for all the Coaxlink products.

1. Determine the firmware variant that fulfills the functional requirements of your application: e.g. '1-camera', '1-camera, line-scan', '2-camera' ...

**Note:** Refer to the *Firmware Variants per Product* section of the Coaxlink driver release notes for the firmware variants that are applicable to your Coaxlink card.

2. Launch the Coaxlink Firmware Manager tool to perform a firmware **update** or to **install** a specific firmware variant on your Coaxlink card(s) using the Coaxlink Firmware Manager tool in **GUI mode** or in **command-line mode**:

- a. In GUI mode, to **update** or **install** a variant:
  - Select the card to update
  - Select the firmware variant to install
  - Proceed with the installation
- b. In command-line mode, to **update** a variant:
 

```
coaxlink-firmware update
```
- c. In command-line mode, to **install** another firmware variant:
 

```
coaxlink-firmware install '<variant-name>'
```

3. Wait until completion of the firmware update

**Important:** Avoid turning off your PC during the firmware update procedure!

4. Repeat the procedure on all your Coaxlink cards

5. **Power off completely your PC** and restart it to activate the newly loaded firmware.

**Important:** The above procedure requires a Coaxlink driver version 10.0.0 or higher to be executed on Coaxlink cards having a Serial Number 10,000 or higher!