



TWAIN TRIUM 2D INSTALLATION GUIDE

SUMMARY

1. INTRODUCTION	4
2. CONTENT OF THE USB STICK / DVD ROM PROVIDED WITH TRIUM.....	5
3. WORKSTATION MINIMUM REQUIREMENTS	6
4. BEFORE RUNNING TRIUM TWAIN DRIVER SETUP.....	7
5. INSTALLING THE TWAIN INTERFACE FOR XMIND-TRIUM 2D	7
6. DCAM INSTALLATION	11
7. NETWORK CARD INTEL CT CONFIGURATION	13
8. TRIUM INTERNAL BOARDS FIRMWARE UPGRADE	14
9. TRIUM VARIABLE CONFIGURATION SERVICE TOOL	16
10. RX TUBEHEAD CALIBRATION.....	17

QUICK DESCRIPTION OF THE TWAIN STANDARD

About the TWAIN consortium:

The TWAIN Working Group is a not-for-profit organization which represents the imaging industry. TWAIN's purpose is to provide and foster a universal public standard which links applications and image acquisition devices. The ongoing mission of this organization is to continue to enhance the standard to accommodate future technologies.

The TWAIN consortium does not market any software, hardware or other products. It has a website at <http://www.twain.org/> on which you can find a wealth of practical information for people who want further information on the subject.

The TWAIN standard exists for Windows and Macintosh platforms. Only Windows is covered herein. At the present time, there is no Macintosh version of the TWAIN interface for SOPIX sensors.

The TWAIN standard allows total interconnection of software and peripherals. However, software and peripherals are not obliged to comply with the entire standard; so there can be partial or complete incompatibilities in some cases.

MAIN DESCRIPTION

Objective

Acquire TRIUM PANORAMIC & CEPHALOMETRIC images through TWAIN Source provided by Acteon.

The configuration of TRIUM managed are:

- PANORAMIC
- PANORAMIC/CEPHALOMETRIC

1. INTRODUCTION

This document contains the setup and the configuration of the Workstation with for Trium Pan /Ceph tomograph.

This manual is intended only for new installation of the Trium TWAIN driver software on a brand new x-mind trium, and not for the upgrade of a previous version.

**Please follow all the instruction included in this manual to correctly install the new version of the software.
Changing some options in the installation could affect the right functionality of Trium TWAIN driver software, generating some faults.**

2. CONTENT OF THE USB STICK / DVD ROM PROVIDED WITH TRIUM

1. DOCUMENTATION
2. Setup TWAIN TRIUM
3. NEW HAMMAMATSU DCAM SETUP
4. TRIUM CONFIG INSTALLER

3. WORKSTATION MINIMUM REQUIREMENTS

IT'S MANDATORY TO RESPECT WORKSTATION MINIMUM REQUIREMENTS



THE CHOICE OF WORKSTATION/SERVER FOR X-MIND TRIUM PANO/CEPH, OR OTHER VERSIONS OF TRIUM PROVIDED WITHOUT WORKSTATION, IS UNDER CUSTOMER RESPONSIBILITY. A WRONG CHOICE, WITHOUT RESPECTING MINIMUM REQUIREMENT, WILL NOT BE UNDER ACTEON GROUP RESPONSIBILITY.

Please, take care about workstation minimum requirement to avoid faults, errors, misfunctionality and/or problem during the installation, connection and use of X-MIND Trium.

WORKSTATION:

- MAC Workstations are not supported
- Virtual machines installation is not tested and not permitted

OPERATIVE SYSTEM :

- Microsoft Windows 7 64 bits
- Microsoft Windows 10 professional 64 bits

HARDWARE REQUIREMENTS :

- Processor : INTEL I5 or superior
- RAM : 4GB DDR3 1600MHz in Dual Channel configuration
- Hard Disk : 1TB 7200 rpm or superior
- Network Cards :

2 LAN network boards needed : one of them can be already present on the motherboard and have being used only for network access. The second one MUST be and INTEL CT 1000 pro (provided with Trium PAN/CEPH) and MUST be used for the connection between Trium and workstation

Avoid to use a wireless network card on the workstation : fast connection network (LAN type) are needed to share the patient exams with the clients PCs. Due to this, a WiFi network card could be too slow to transfer patient exams with clients PCs.

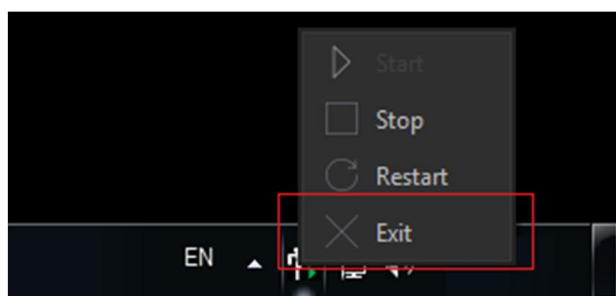
- Graphic card : OPEN GL 2.1 compatible (suggested an NVIDIA GT/GTX)
- Monitor : 1280x1024 16 million of colors at least. HD resolution is suggested.

ADMINISTRATION RIGHTS :

- Always take care to be the administrator of the workstation, and log in as the same user of the Trium TWAIN installation.

4. BEFORE RUNNING TRIUM TWAIN DRIVER SETUP

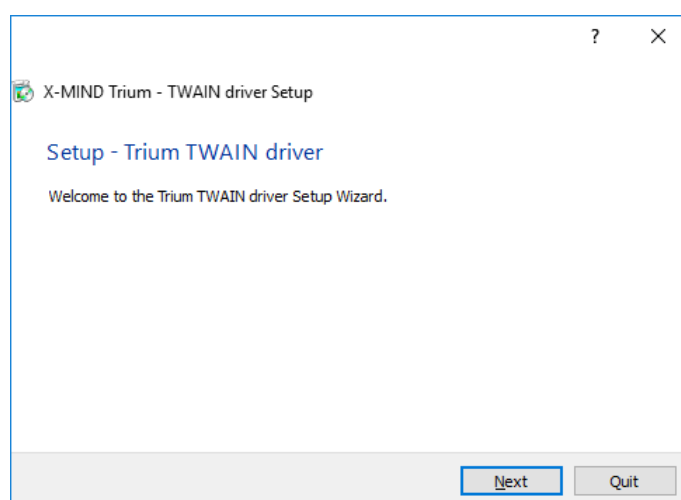
Before launching the setup of TRIUM TWAIN driver it's necessary to check if XMDmanager it's running. Close XMDmanager using the right command as shown in the following image.

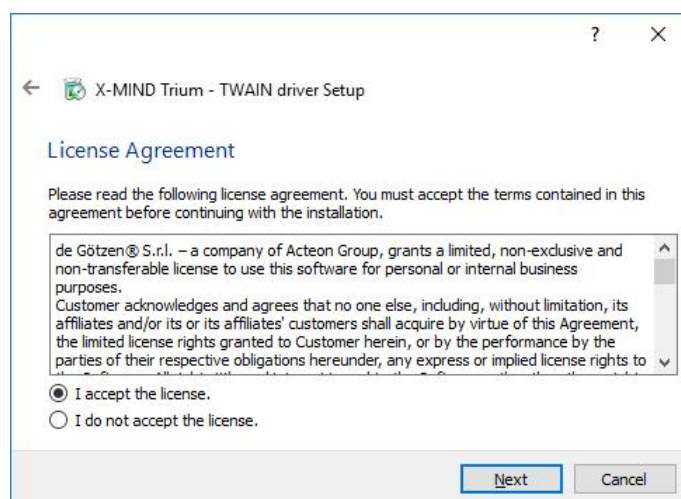
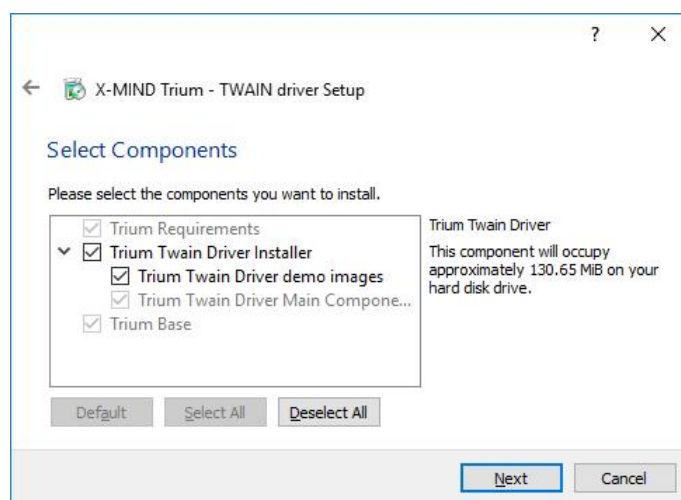
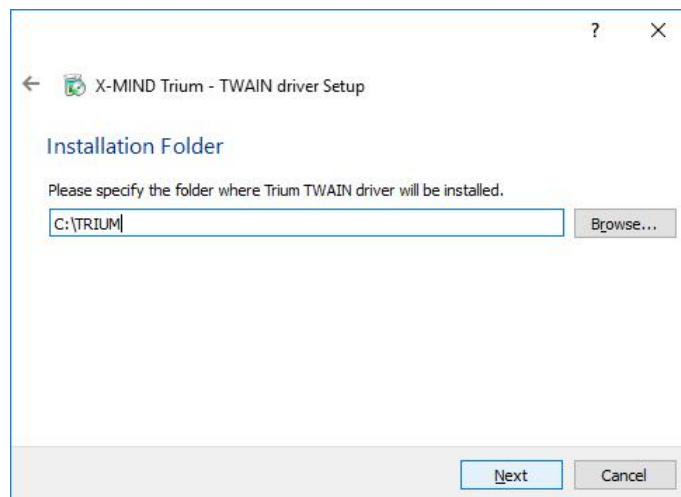


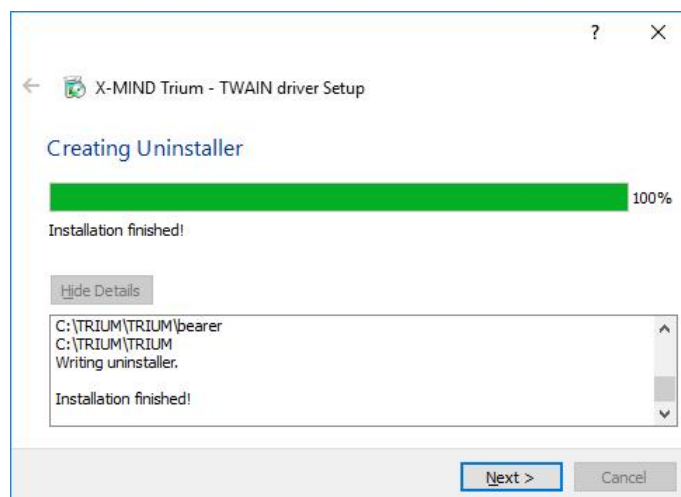
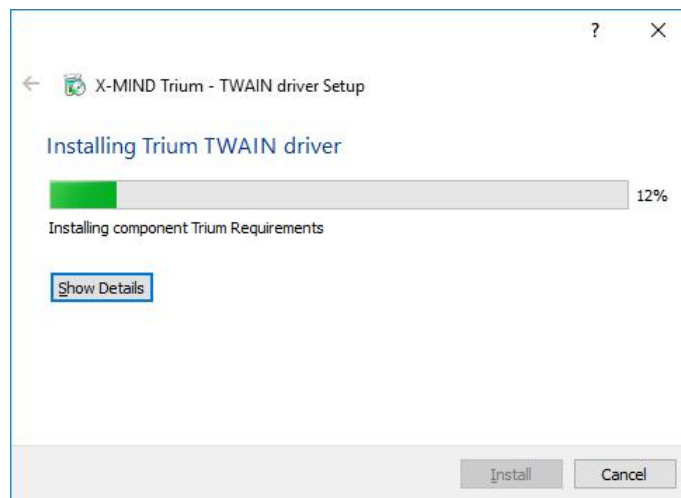
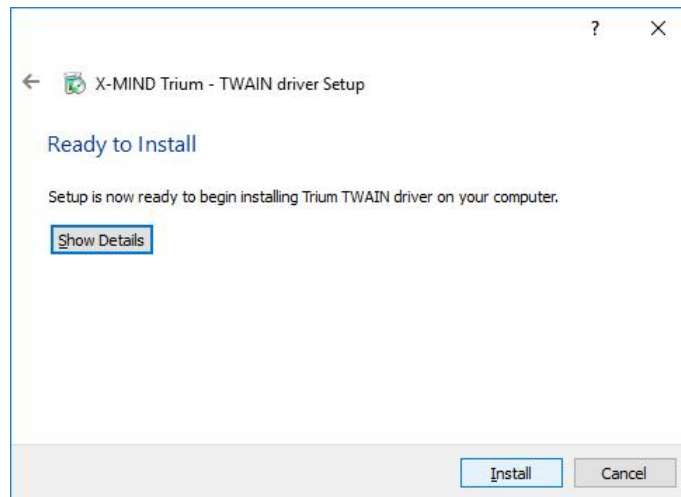
5. INSTALLING THE TWAIN INTERFACE FOR XMIND-TRIUM 2D

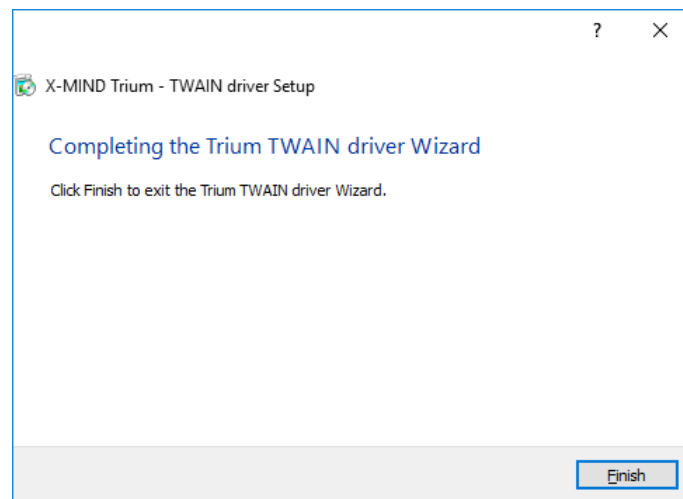
Installation is made as simple as possible.

You just need to run the file **TriumTwainDriverSetup_x.x.x-n.exe**, and installation takes only a few seconds. Follow the steps until message informs you when the installation is finished.



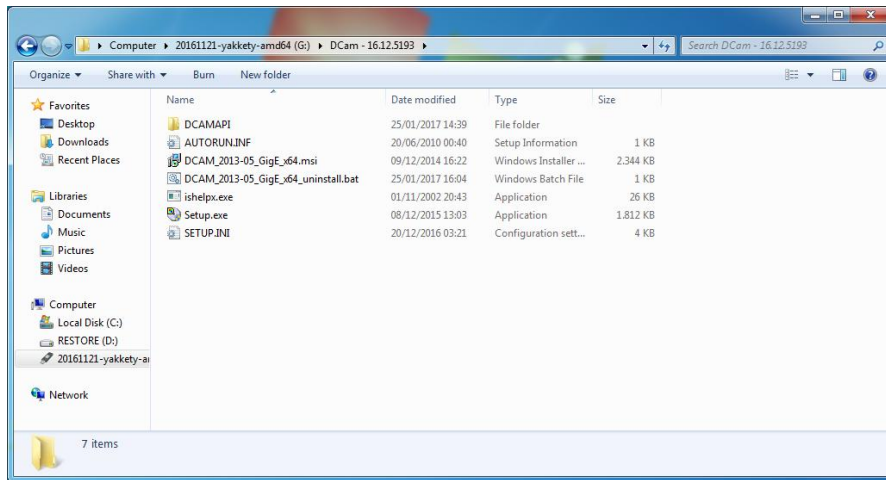




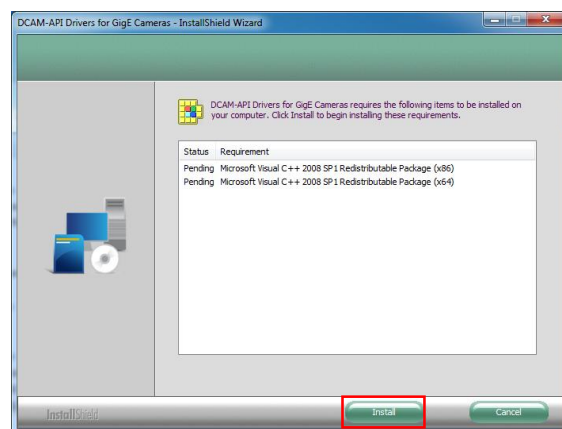
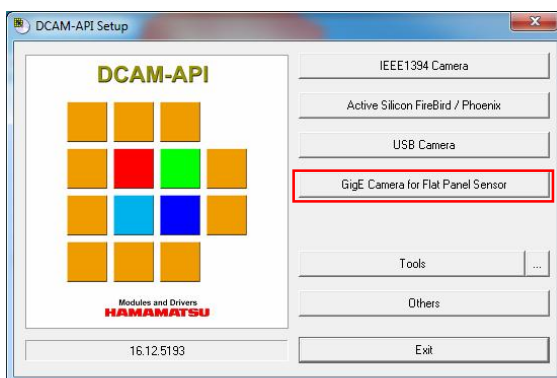


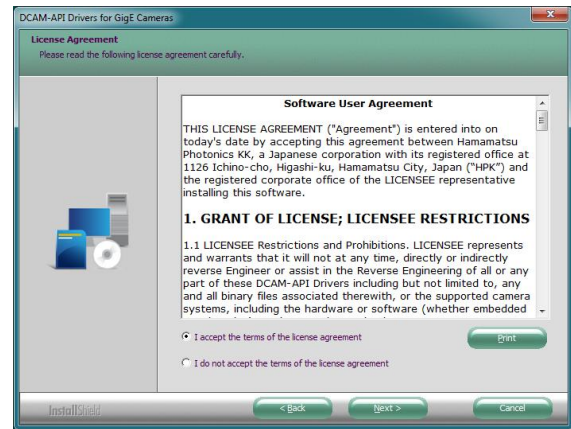
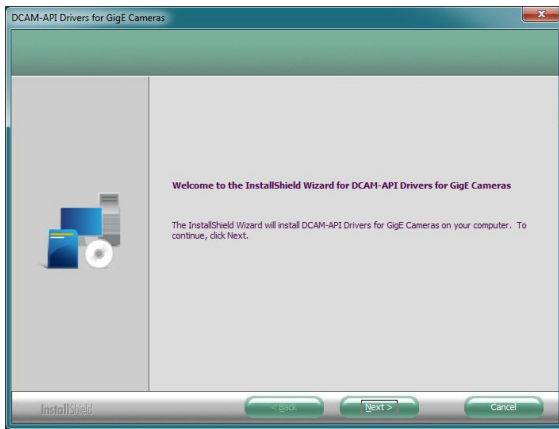
6. DCAM INSTALLATION

1. Install the new DCAM as following:

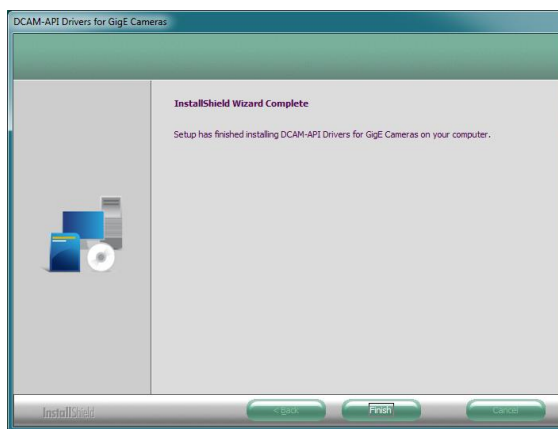


- Launch from the provided **USB stick/zip\DCam - 16.12.5193** folder file the SETUP executable
- the setup application will allow you to choose the installation type: choose GigE Camera for Flat Panel Sensor, then click on install, accept the license and click on next



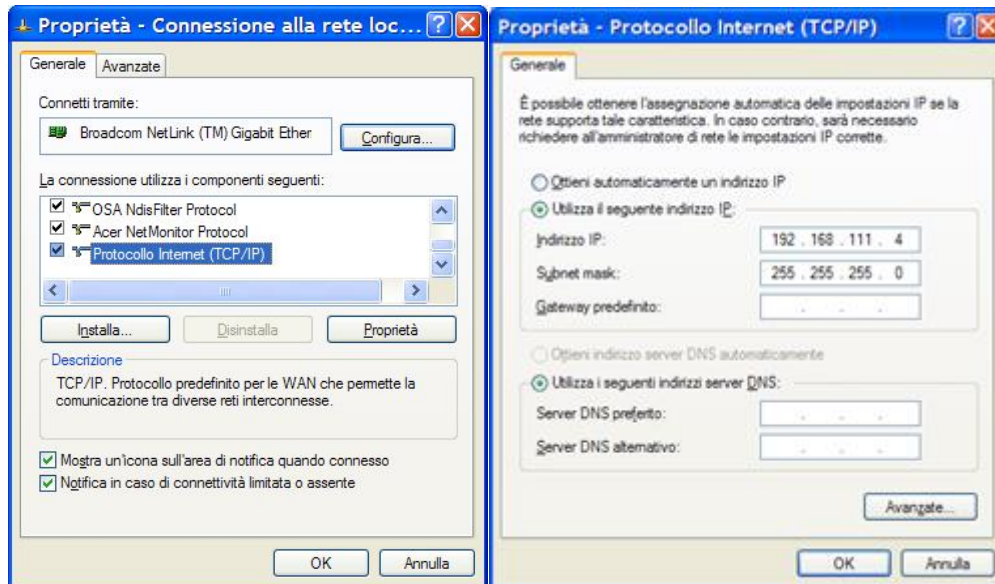


- when the installation is finished, you don't need to set the configuration of the driver

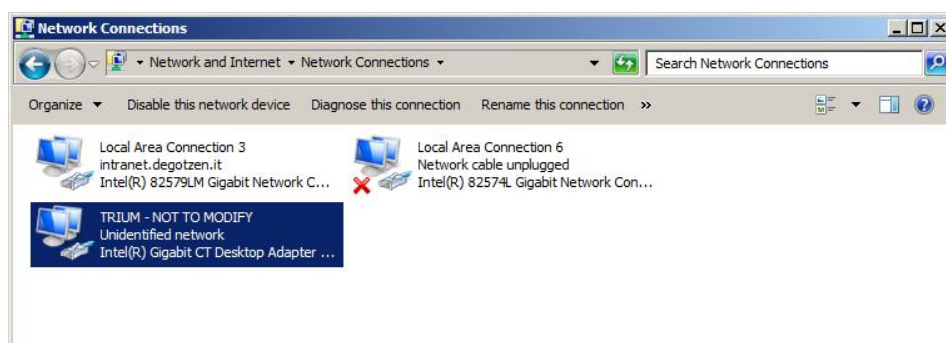


7. NETWORK CARD INTEL CT CONFIGURATION

1. Install from the provided USB stick the INTEL CT network driver
2. From network connection properties set TCP/IP internet protocol with persistent IP address as follow:



3. SET NIC IP address to 192.168.111.4
4. SET Subnet mask to 255.255.255.0.
5. Rename the NIC connection to the EUT as **"TRIUM - NOT TO MODIFY"**.



8. TRIUM INTERNAL BOARDS FIRMWARE UPGRADE

After the starting of TWAIN TRIUM, if the software detect a new firmware board available for any board, it will propose you, using the XM Driver. Follow step by step the instruction proposed. Don't change or do nothing else, otherwise the machine could be not functional. Firmware upgrade is under technician responsibility.

During the firmware upgrade:

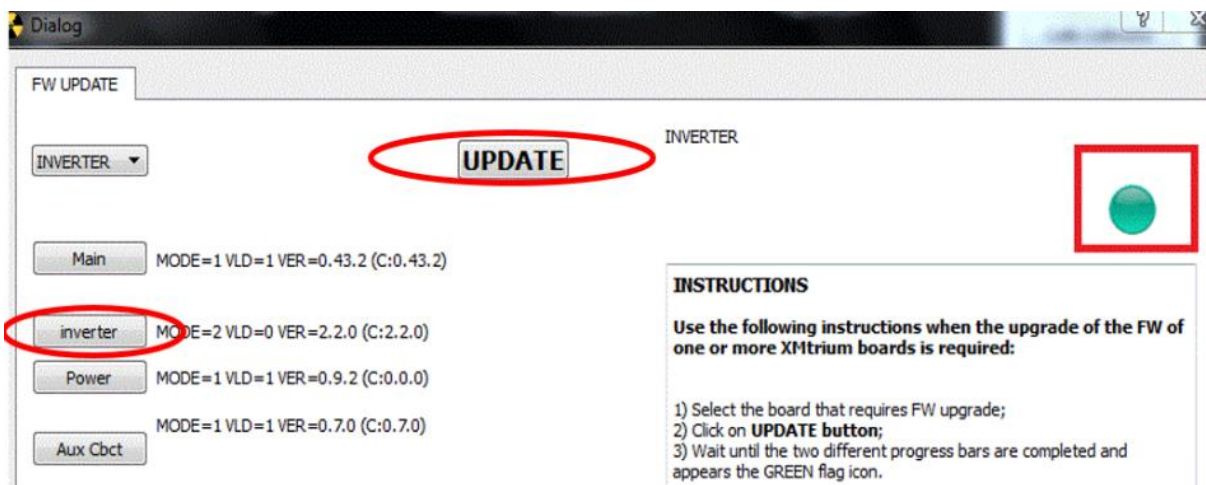
1. DON'T SWITCH OFF THE TRIUM
2. DON'T SWITCH OFF THE WORKSTATION
3. DON'T DISCONNECT THE LAN CABLE BETWEEN TRIUM AND THE WORKSTATION
4. DON'T OPEN PROGRAM OR FOLDER IN THE WORKSTATION

Making these operation will interrupt the correct firmware upgrade and can damage the Trium or put it out of order.

These kind of operator's faults are under **operator responsibility**

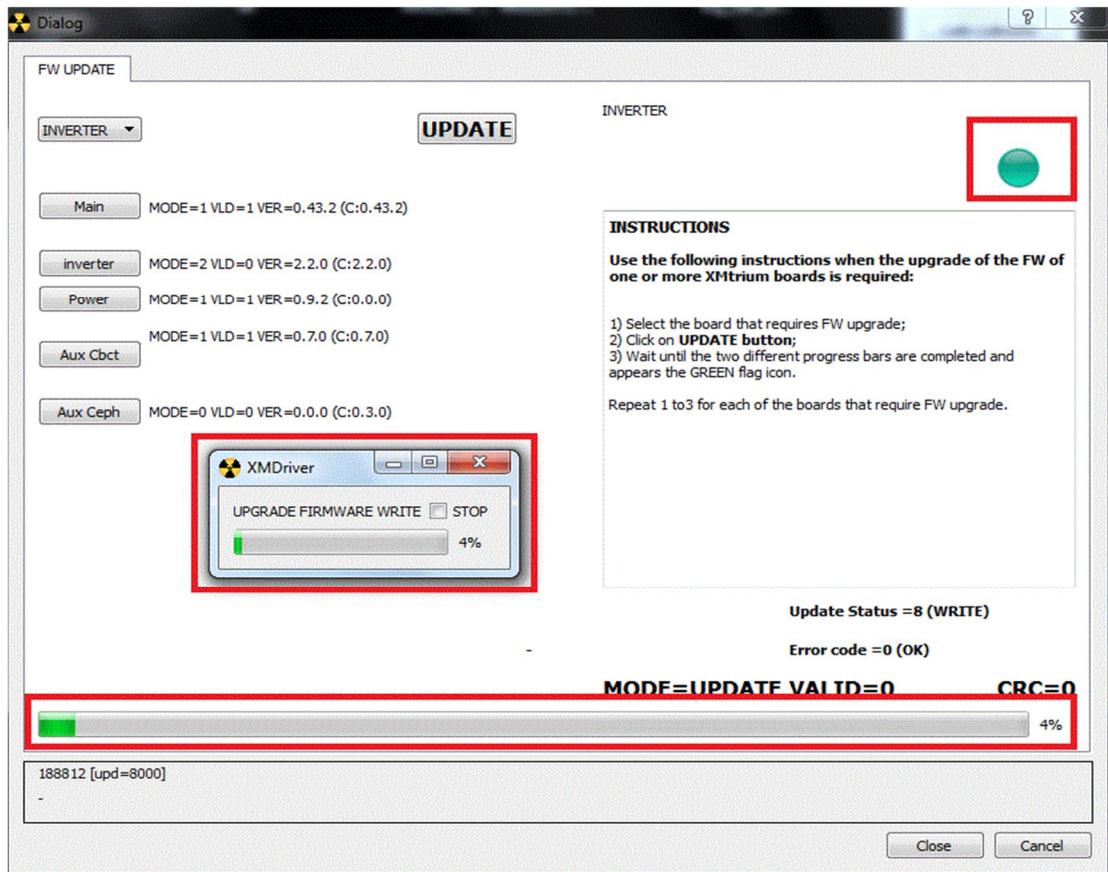


1. Select the board and click on UPDATE button (Inverter board in this example)

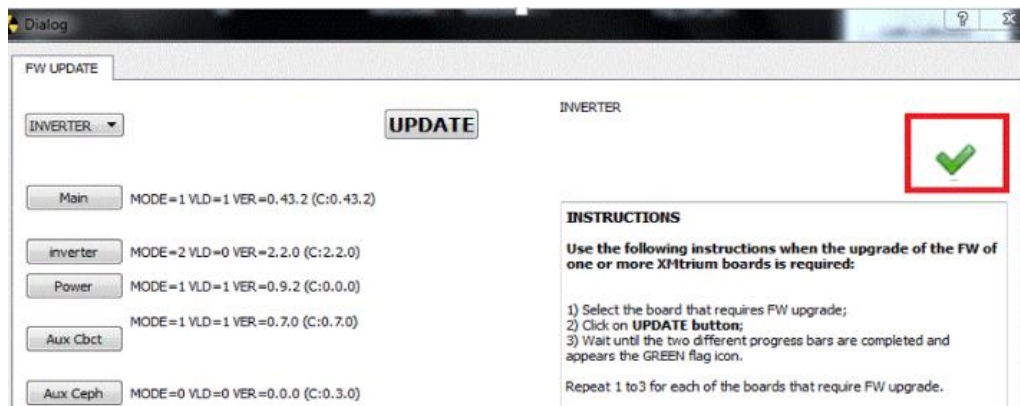


**UPGRADE AUX CEPH ONLY IF CEPH IS
PHISICALLY INSTALLED ON TRIUM.
IF YOU UPDATE IT WITHOUT CEPH
INSTALLED, THE UPGRADE FOR THIS
BOARD WILL FAIL**

- Wait until the two different progress bars are completed and appears the GREEN flag icon



- When the GREEN round icon stops blinking and becomes a flag, the upgrade is finished



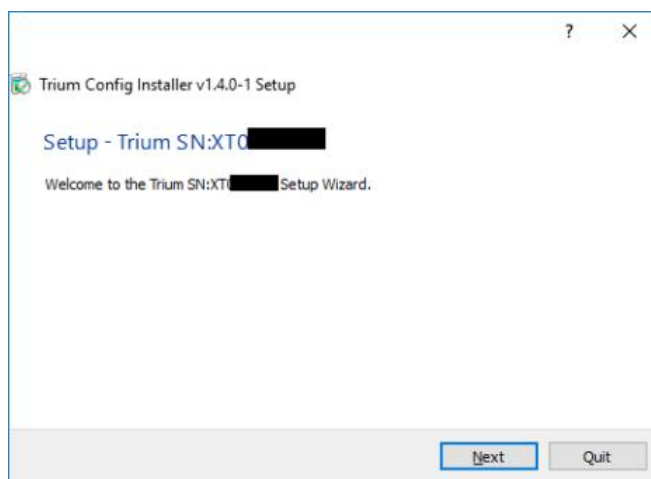
- Make effective the modification:
 - ✓ Turn OFF XM trium (do not use emergency stop to turn OFF trium) and **leave OFF at least:**
 - 2 minutes after inverter board FW upgrade
 - 30 seconds after other boards FW upgrade

For each board mounting old versions, upgrade the firmware, restarting from step 1 of this chapter

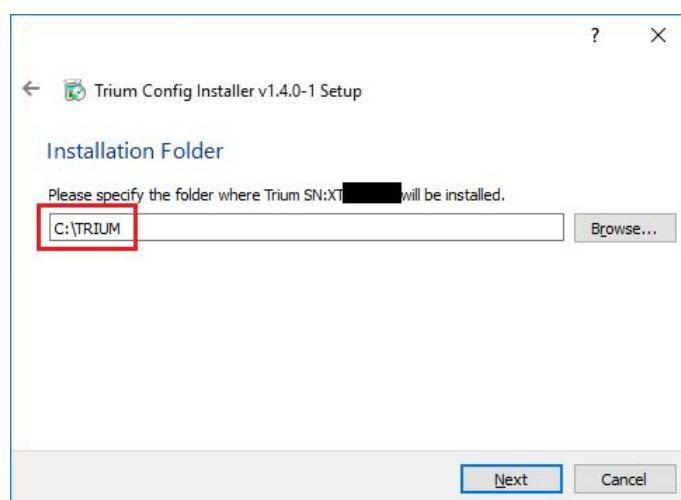
9. TRIUM VARIABLE CONFIGURATION SERVICE TOOL

After the installation of Trium TWAIN driver 1.2 and later run this tool to transfer and configure the Trium variable data setting in the workstation. This operation is mandatory having the Trium calibration data and factory test data inserted in the workstation. Without this data setting, the machine will not be functional.

1. Run TriumConfig_Installer_v1.4, double clicking on the setup file.
2. Click on 'Next' to proceed with the installation path :



3. You MUST change the installation path to **C:\TRIUM**, or the machine will not be functional.



4. Proceed with license agreement, the click on 'Next'

5. Click in 'Install' to start the installation
6. Click on 'Finish' to complete the installation.

10. RX TUBEHEAD CALIBRATION

INTRODUCTION

In this paragraph you can find instructions to calibrate the RX tube.

These instructions are applicable to all the X-MIND Trium models.

Perform this calibration when:

- ✓ You replace the whole U-arm group
- ✓ You replace the RX tube
- ✓ You replace the Inverter board
- ✓ In some cases of RX tube failures, depending on troubleshooting diagnostic messages.

PROCEDURE

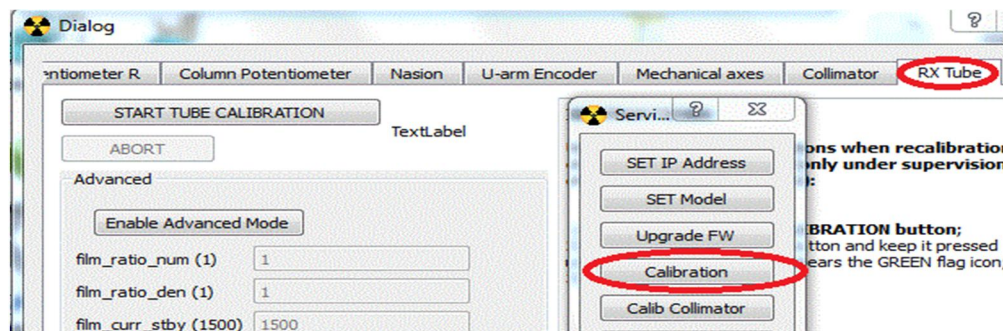
LOGIN to SERVICE

- a. End execution of AIS.
- b. Turn OFF then ON X-MIND trium.
- c. Start XMdriver Show double clicking on the file: C:\AISSoftware\XMdriver\XMdriverShow.bat
- d. Verify that SERVICE tab has green flag (WorkStation and X-MIND trium are communicating).
- e. Click on SERVICE tab and enter the required password: rdtech.

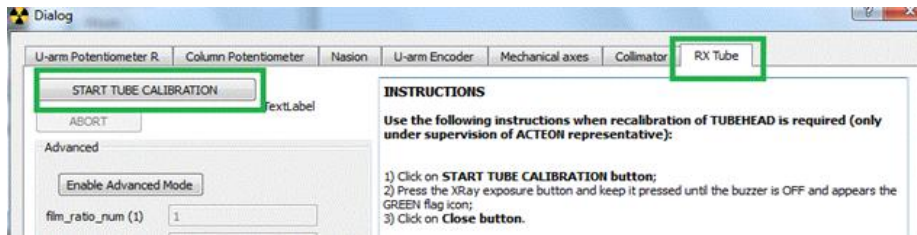


RX TUBE CALIBRATION

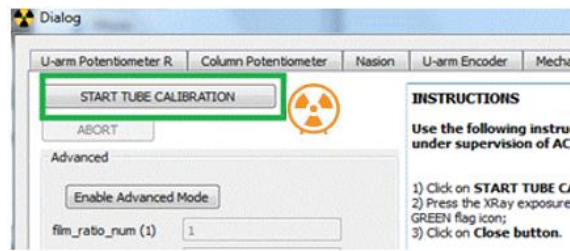
- f. Click on Calibration tab and then click on RX tube tab.



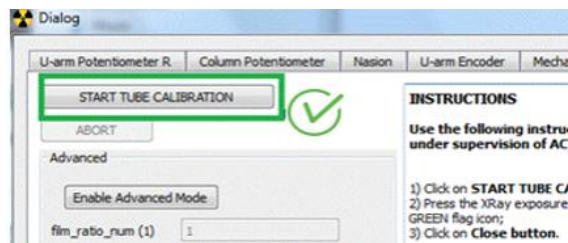
- g. Click on on START tube calibration.



- h. Keep continuously pressed the X-ray exposure button



until the buzzer is OFF and appears the green fixed icon.



→ **It can take up to 2 minutes: DO NOT INTERRUPT the procedure**

- i. To make effective the modification turn OFF X-MIND trium.
- j. End X-MIND driver SERVICE.

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