Installation of X-Cite 120LED, 110LED and 120LED mini on ZEN 2

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A. Requirements

After installation of ZEN 2 Blue Pro download the latest drivers from Excelitas you will need to install them before you install this update. You will need the following file from "Software and Drivers" section of the X-Cite 120LED site:

Windows Drivers: » X-Cite 120LED Windows Driver
Direct link: http://www.excelitas.com/Downloads/032-00179.zip
Download the files and unzip them on your desktop or other convenient location.

B. Driver installation

1. Connect your X-Cite illumination source to a free USB port and turn it on. Windows will install the driver and assign a virtual COM port to the new device:
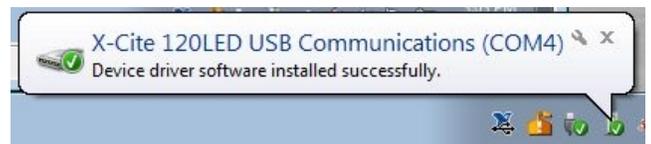
Keep a note on the COM port number as we'll need it to configure the MTB. On the Device Manager you should now have a new COM Port. Go to "Start" and type "Device manager " to verify that the port has been assigned. Your COM port might be different form the one seen here:

If this is not there, or there is a device with a yellow exclamation mark triangle:

Right click on the device and choose "Update Driver software…", then "Browse my computer for driver software"

Go to the folder you unzipped the Windows Drivers to and browse to the folder where you exported the Windows Drivers and point it to where the driver files are located:

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ZEISS

This will install the drivers and you should now have the COM port in the Device manager.
   2. **Run "Setup.exe" from the folder where you extracted this compressed file:**

This will start the installation of the Updater, accept the installation folder path and click next until the installation is completed:

Install Zeiss ZEN X-Cite Updater.msi
setup.exe
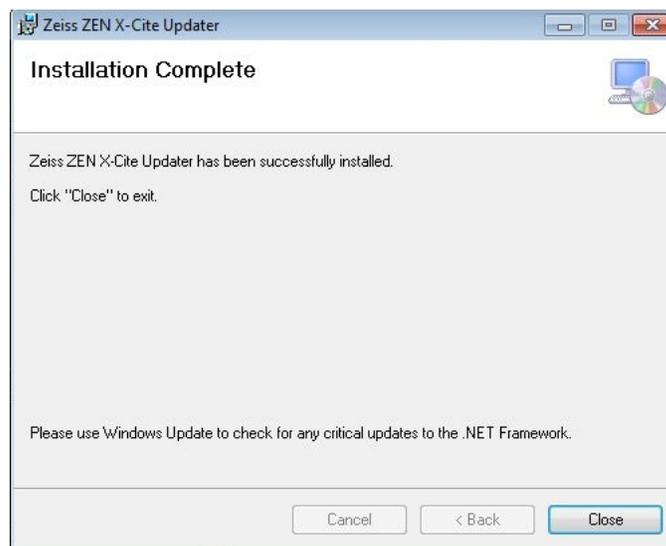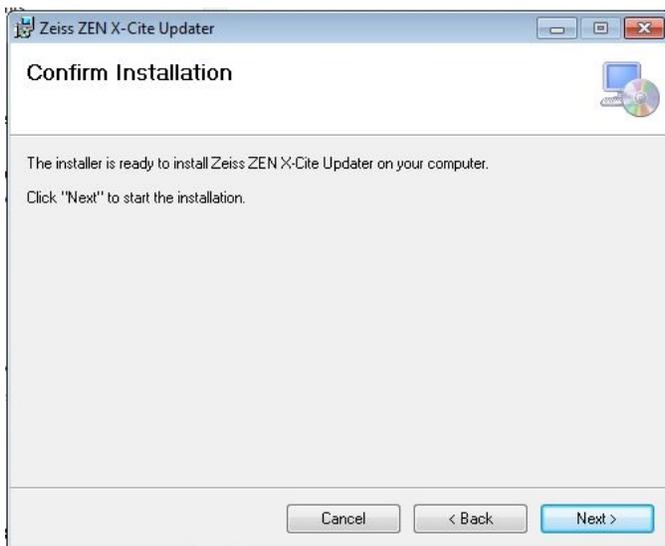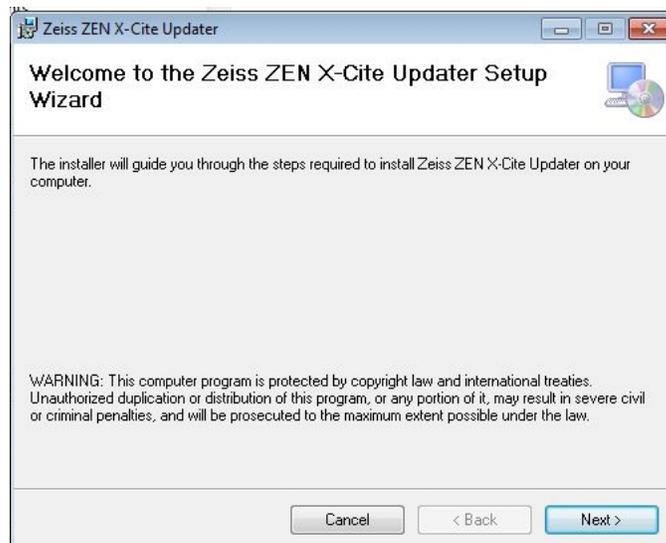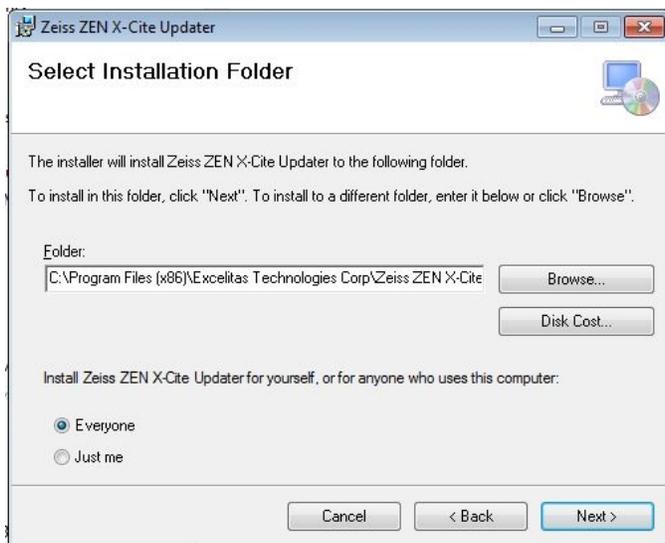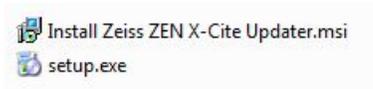
After the installation is completed, you should have a new program group "Excelitas" under the "Start" menu:

Excelitas
Un-Install Carl Zeiss Drivers for X-Cit
X-Cite Update for Zeiss ZEN
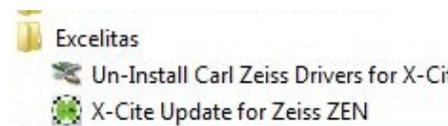
3. **Run "X-Cite Update for Zeiss ZEN" and click "Start" on the installer window. This will install the ZEISS specific firmware (v.1.3) if the device did not come with it (units older than Serial Number 1115 require the firmware update) and the ZEN specific drivers and configuration files:**
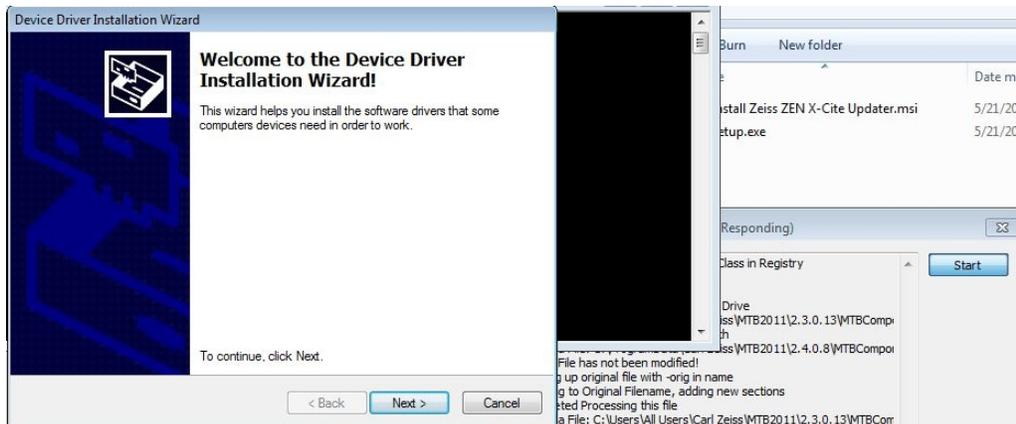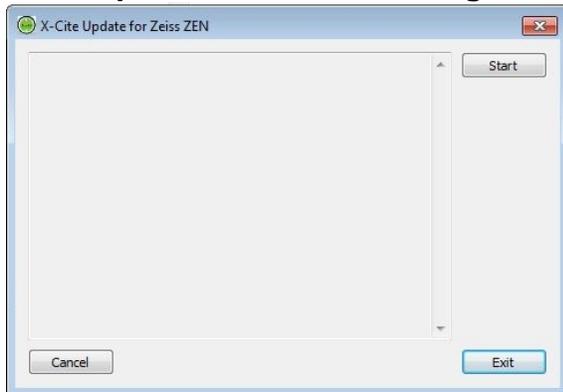
Windows will ask you to verify that you want to install the driver. Select "Install this driver anyway"

The installer will notify you of the successful installation of the drivers and configuration files:

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After the completion of the installation you should have instead of the COM device, a new "Carl Zeiss USB Enabled Device" in your Device Manager:
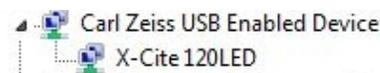
C. MicroToolBox Configuration

Open MTB Configuration 2.3.0.13 and go to your "reflected light" section. Now you have the option to configure th 120LED and 110LED as your illumination sources:
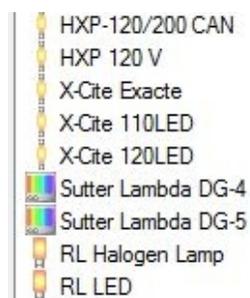
Choose your light source and double click it to insert it to your active configuration. Configure the COM port to match the port number the device was enumerated to during installation, number 4 in this case.
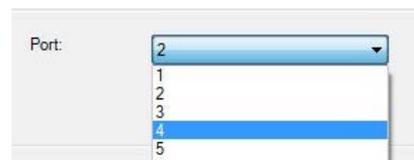
Testing for connectivity will not work but this does not mean that the device is not connected. Use MTB Test or ZEN instead to test connectivity and functionality:
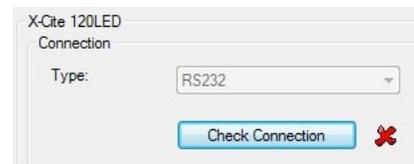
D. Use in ZEN 2

Once the light source is configured in MTB, open ZEN and check to see if your light source appears in the "Locate" tab and the illumination level and virtual shutter (LED ON/OFF) are working.

You can now set up experiments in "Acquisition" using your LED light source as "HXP-120V". Keep in mind that illumination level will be properly recorded only if the camera is ON while the illumination level is set. You can save individual illumination levels for each channel and save them in your experiment setup for future use:

The illumination level used per channel is saved in the acquired image file's metadata:

Contrast Method	Fluorescence	Fluorescence	Fluorescence
Light Source Intensity	25.00 %	50.00 %	100.00 %
Channel Name	DAPI	EGFP	DsRed

NOTES:
1. While the drivers and installer have been shown to work on ZEN2012 SP2 HF10 Pro, and ZEN Core 2.0.56.0, operation is only currently supported in ZEN 2 Blue Pro.
2. Operation has been verified up to ZEN 2 Hotfix 3.
3. Tests were conducted on HP Z800 and HP Z820 workstations and these are the only officially supported PC platforms to date.
4. Operation with a combination of device driver and TTL triggering is not recommended as it can lead to inconsistent results. If you need to operate the light source in TTL triggered mode, you are advised to disconnect the USB cable and use it as standalone device.
5. If the version of ZEN this update is installed on, is upgraded to a new one, please re-run X-Cite Update for Zeiss ZEN and re-configure your MTB configuration after installation of the new version of ZEN.