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:





How do vo	u want to s	earch for	driver so	oftware?

•	Search automatically for updated driver software Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.			
•	Browse my computer for driver software Locate and install driver software manually.			
	Browse for driver software on your computer			
	Search for driver software in this location:			
	Browse			

Idgi-usb.cat
LDGI-USB.inf



Unknown device





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

10 Zeiss ZFN X-Cite Undater	1₩ Zeiss ZEN X_Cite Undater
Select Installation Folder	Welcome to the Zeiss ZEN X-Cite Updater Setup Wizard
The installer will install Zeiss ZEN X-Cite Updater to the following folder. To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse". Eolder:	The installer will guide you through the steps required to install Zeiss ZEN X-Cite Updater on your computer.
C:\Program Files (x86)\Excelitas Technologies Corp\Zeiss ZEN X-Cite Browse Disk Cost Install Zeiss ZEN X-Cite Updater for yourself, or for anyone who uses this computer:	WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel < Back Next >	Cancel < Back Next >
😸 Zeiss ZEN X-Cite Updater 📃 🗉 💽	🛃 Zeiss ZEN X-Cite Updater
Confirm Installation	Installation Complete
The installer is ready to install Zeiss ZEN X-Cite Updater on your computer. Click ''Next'' to start the installation.	Zeiss ZEN X-Cite Updater has been successfully installed. Click "Close" to exit. Please use Windows Update to check for any critical updates to the INET Framework.
Cancel < Back Next >	Cancel Close

After the installation is completed, you should have a new program group "Excelitas" under the "Start" menu:





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:



OK

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:







Carl Zeiss USB Enabled Device

X-Cite 120LED



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:

🖌 🛆 Channels	🗸 Show All 🛛 🖉	A Channels	🗸 Show All 🛛 🖉	🔹 📥 Channels	🗸 Show All 🕑
▼ DAPI	Ref. 🔲 🕶	▼ DAPI	Ref. 🔲 🔻	✓ DAPI	Ref. 🗖 🕶
✓ EGFP	— •	✓ EGFP		GFP	
✓ DsRed		✓ DsRed	-	✓ DsRed	•
- × へ + 節 Focus Ref.	Ø		¢	- ~ + 道 Focus F	Ref. 🌣 🗸
Selected Lightsource HXP 120 V		Selected Lightsource HXP 120 V		Selected Lightsource HXP 12	ov 🗟
Intensity 00	25 %	Intensity ,	50 %	Intensity 00	100 % 💲

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

Contrast Method	Fluorescence	Fluorescence	Fluorescence
	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.



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