

# DIAMOBILE XL™

## TECHNICAL NOTES

For DiaMobile XL installation, please refer to “DiaMobile XL Quick Installation Guide”.

For DiaMobile XL components review and quick setup, please refer to “DiaMobile XL Components Review & Quick Setup”.

### uEye Camera

- The DiaMobile XL contains a new Camera- **uEye**
- The camera's frequency is 24 [MHz]
- In order to check and set the frequency, open registry  
→ HKEY\_LOCAL\_MACHINE\SOFTWARE\Sarin\Camera

uEye software:

- Found under “Control Panel” – “uEye Camera Manager”
- Through the manager it is possible to:
  - Check communication with camera
  - Find camera information
  - Find the installed uEye drivers and their version

### Calibration

The calibration's application for the system is XCaliber. The XCaliber is used to calibrate:

- Light parameters
- Laser parameters
- Stretch definition
- Table calibration (only for DiaVision)
- Lens-Stage definition

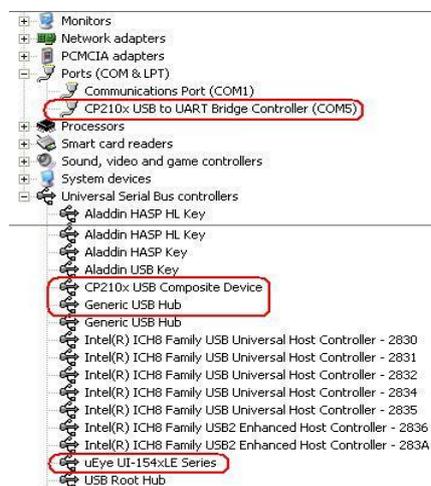
### Calibration steps to follow:

1. **Select machine Type** - DiaMobile\_X\_L machine
2. **Light Calibration** – pay attention to the next parameters:
  1. DiaMobile XL's lens number – lens number 2
  2. Gain value – 40
  3. Exposure value – 802 new buttons were added to the Light Calibration control:
  1. Hide Histogram – allows hiding the Histogram
  2. Continues Hysto – shows live Histogram
3. **Lens-Stage Selection**
  1. Select lens number 2
4. **Stretch Calibration**
  1. For the DiaMobile XL - use stones 13, 17 & 23
  2. If stone 17 is not available, use stone 20 instead
  3. Stretch value should be within range of  $\pm 10$  microns

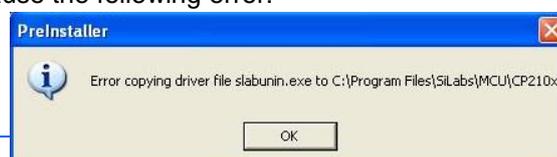
5. **SingleLine and TruScan calibration**
  1. An additional calibration control was added – “**Laser Mapping Calibration**”
  2. In order to calibrate the laser mapping, open the Fan Laser Calibration and click on “Start” (under Laser Mapping Calibration region)
  3. RMS values should be between 0-25 (will be displayed in the table beneath the live video)

### Known issues

1. **Stone movement or “Can't build 3D model”** problems can be caused due to a shift of the stone. Therefore, it is possible to control the speed of the motor. There are 3 different motor speeds.  
There are 3 options (as described from the fastest to the slowest):
  - Regular
  - Slow
  - SlowerIn order to set the motor speed double click on the requested speed file (Regular.reg, Slow.reg or Slower.reg), located in - Version Updates\DiaMobile XL motor speeds.  
(It must be activated after Engine.reg since they share the same key).
2. The computer must have **USB<sub>2</sub>** (not the old USB1)!!! See the **Device Manager** to indicate what kind of USB is installed.
3. Connect the USB cable (Also **USB<sub>2</sub>**) **directly** to the computer port. Use of USB HUB is not recommended and may cause the application work slower.
4. DiaExpert / DiaMention / DiaScan ... or other Machine should be disconnected when working with the DiaMobile XL.
5. **Device Manager** – The picture below shows the devices which should be added after the installation.



6. In case of Crashes check that the **Advisor** process is dead in the **Task Manager**, otherwise kill it
7. Advisor can now work on COM ports 1-16 (previously 1-4 only)
8. Workaround for communication problems:
  1. Disconnect the USB plug + electricity
  2. Restart computer
  3. Reconnect electricity
  4. Reconnect the USB plug
9. Installing CP210xVCPInstaller while the software is already installed on the computer will cause the following error:



You may ignore this error and press ok.

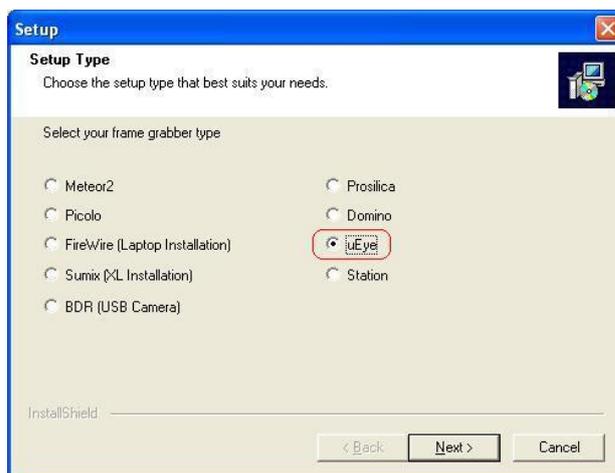
10. Under C:\Program Files\Sarin Technologies you will find new folder – Ueye. Please don't delete this folder. Use for uninstall the Ueye drivers.
11. In some cases strips appear on the Video image. These strips do not disturb the measuring process.  
Changing to High Resolution may fix the problem.
12. While measuring, the next messages can appear:



Click the  button to continue working.  
In some cases you will have to close Advisor through the Task Manager and re-open it.

### **SW Installation with an additional calibration disk**

While installing Advisor/DiaVision without having the calibration files in the installation disk, a disk with the calibration files is needed. There will be some more windows added to the installation wizard. As described below:



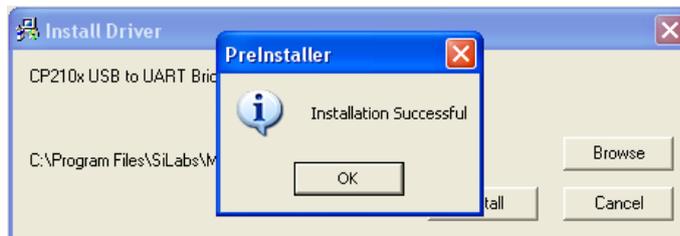
1. Select uEye frame grabber and click the  button.



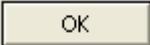
2. Ensure that the machine's USB cable is disconnected and then click the  button.

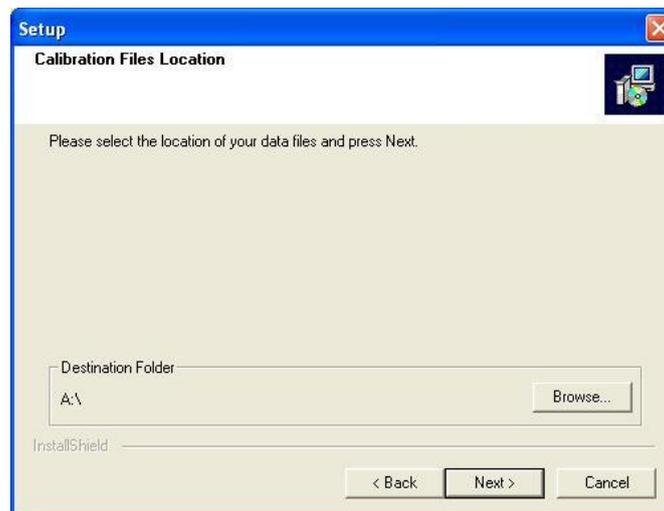


3. Click the  button to install the driver



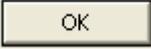
The installation was successful.

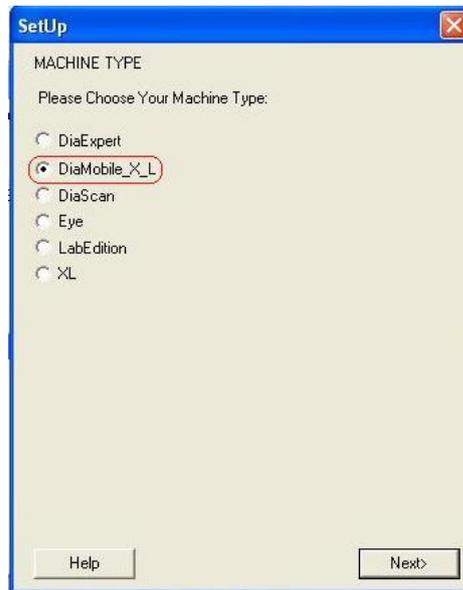
4. Click the  button to close the message box.



5. Click the  button for calibration files location. When found, click the  button.



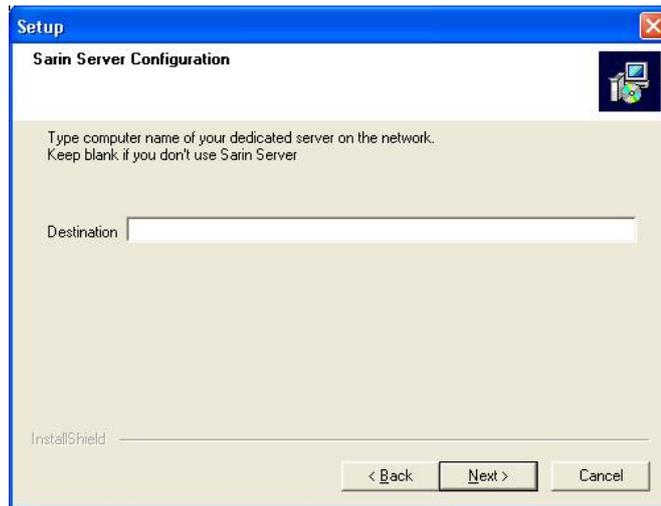
6. Click the  button to close the message box.



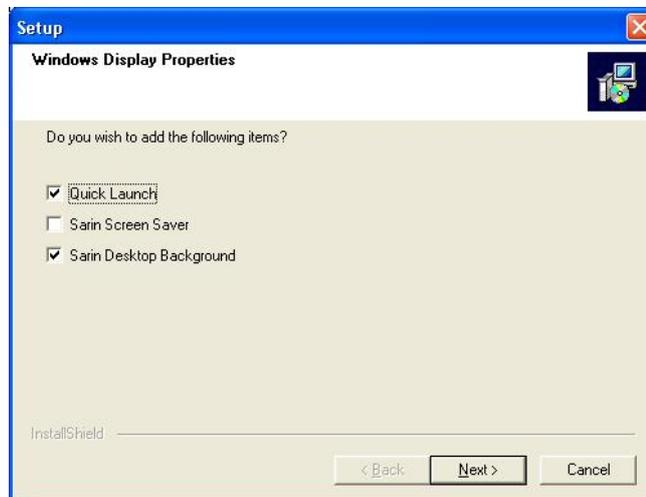
7. Choose DiaMobile\_X\_L and click  button.



8. Select the language you want to install and Click the  button.



9. Click the **Next >** button (for future purpose).



10. Select the additional features and Click the **Next >** button.



11. You have successfully installed the new software and must now restart your computer.

Click the **Finish** button to restart your computer.