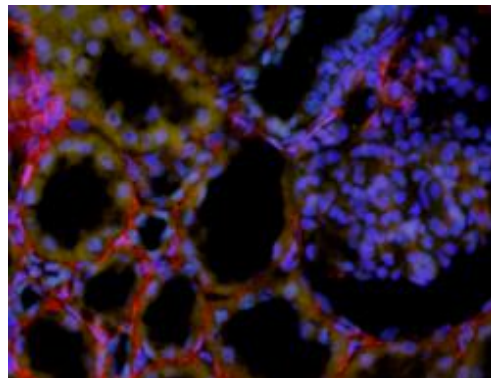
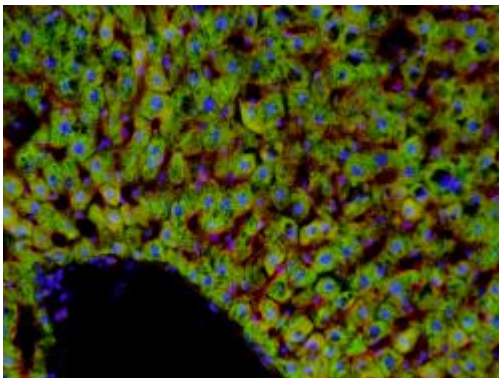
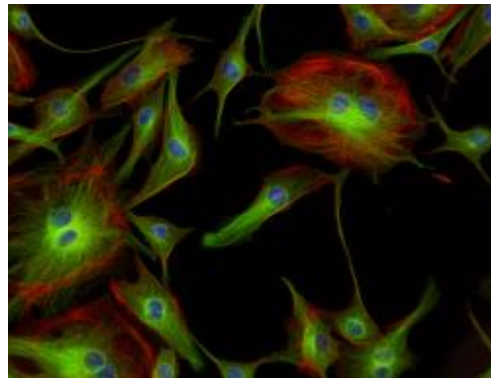
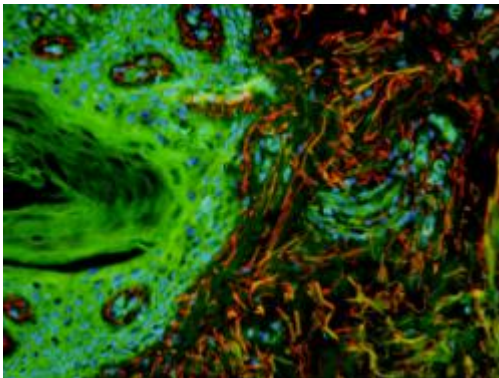


User Manual

pE-6501-8



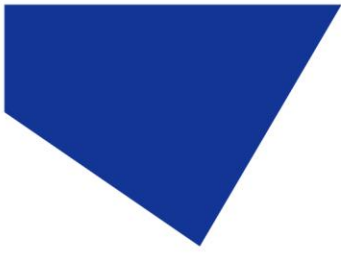
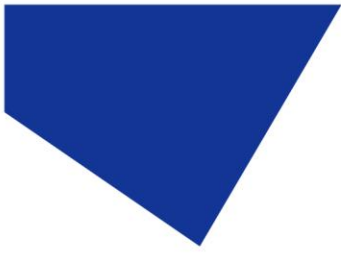


Table of Contents

1.	Introduction	3
2.	Safety Precautions	3
3.	Getting Started – System Components.....	4
4.	Installation and Setup	4
5.	Additional information.....	9
6.	Routine Care and Maintenance	10
7.	Product Specifications.....	10
8.	Product Options and Order Codes.....	11
9.	Warranty and Repairs	11
10.	Compliance	11
11.	Contact Details	12



1. Introduction

The pE-6501-8 has been designed to allow control of a pE-800 Illumination System from the USB of a PC to the TTL port of the Light Source. The pE-6501-8 utilises the National Instruments USB-6501. The pE-6501-8 will therefore function in all software packages which the USB-6501 has been integrated into.

The pE-6501-8 allows the pE-800 to be controlled in third party software packages, which are yet to fully integrate certain products. In addition to the increased integration, the pE-6501-8 can be triggered at a higher frequency than is possible with direct USB control.

This User Manual should provide all the information required to setup the pE-6501-8.

Additional information may be found on our website at www.cooled.com.

2. Safety Precautions

The pE-6501-8 does not pose any real safety risks itself, however as it is designed to be used with CoolLED's range of high intensity light sources the appropriate precautions should be taken.

2.1.

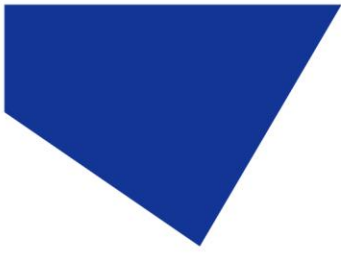
When installing the pE-6501-8, do not switch on the Light Source until it has been securely fitted to the microscope. By following this basic safety rule, protection from the collimated light beam will be provided by the microscope itself, minimising risk of injury and damage.

2.2.

The pE-6501-8 should not be operated with the external covers removed, as this will result in the safety of the unit being impaired.

2.3.

To clean the exterior of the pE-6501-8, use a slightly dampened cloth with a simple water/detergent solution only.



3. Getting Started – System Components

The CoolLED pE-6501-8 is supplied with the following components:

- pE-6501-8.
- 15-way to 15-way HD cable.
- A USB cable (not pictured).
- A USB stick with Product User Manuals (not pictured).

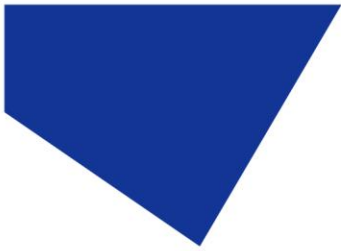


If any components are missing or appear damaged, please contact CoolLED immediately.

4. Installation and Setup

4.1.

Carefully unpack the components from the shipping cartons.



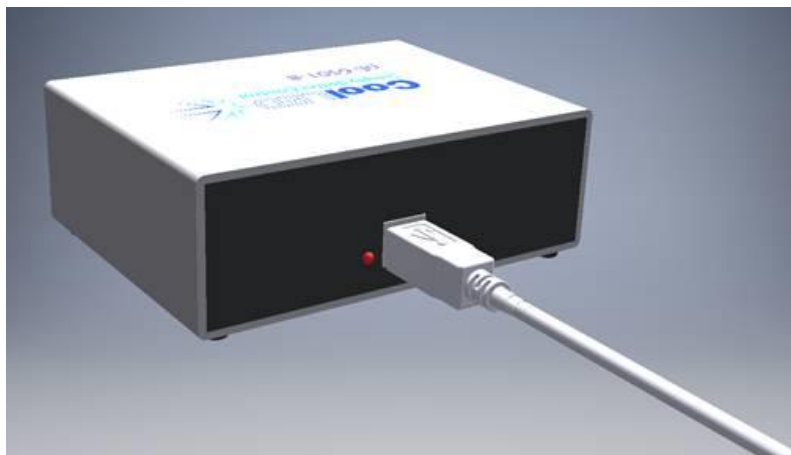
4.2.

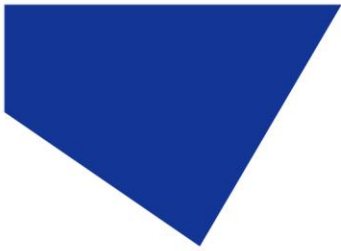
The pE-6501-8 has two connectors on the front which provide TTL outputs. Eight of these TTL outputs come from the 15-way connector which connects to the pE-800. A further global TTL connection is available via the BNC connector, which allows the control of additional hardware such as the pT-100 for transmitted applications (selected software only e.g. μ Manager).



4.3.

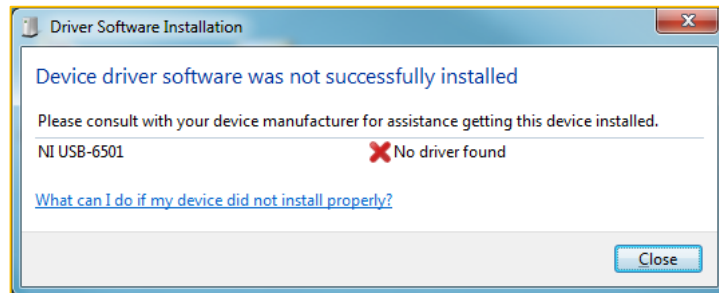
Attach the supplied USB cable to the PC (USB A type connector) and attach the other end of the cable to the pE-6501-8 (USB B type connector).





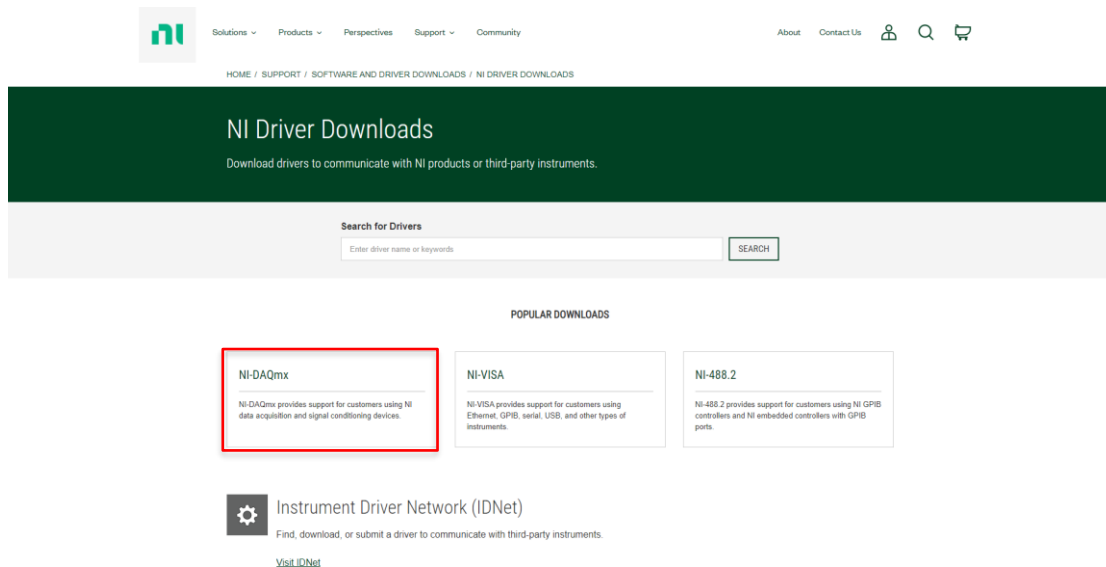
4.4.

When the pE-6501-8 is first connected to a PC it shall attempt to locate a driver file. If your PC is connected to the internet, the driver will be automatically installed, and you can skip to point 4.8. If the PC is not connected to the internet, the driver will not be automatically installed, and the pop-up below will be displayed.

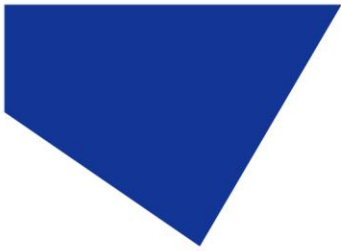


4.5.

If the driver needs to be manually installed, please follow the hyperlink below to the National Instruments website to download the latest NI-DAQ Hardware Driver- <https://www.ni.com/en-gb/support/downloads/drivers.html>

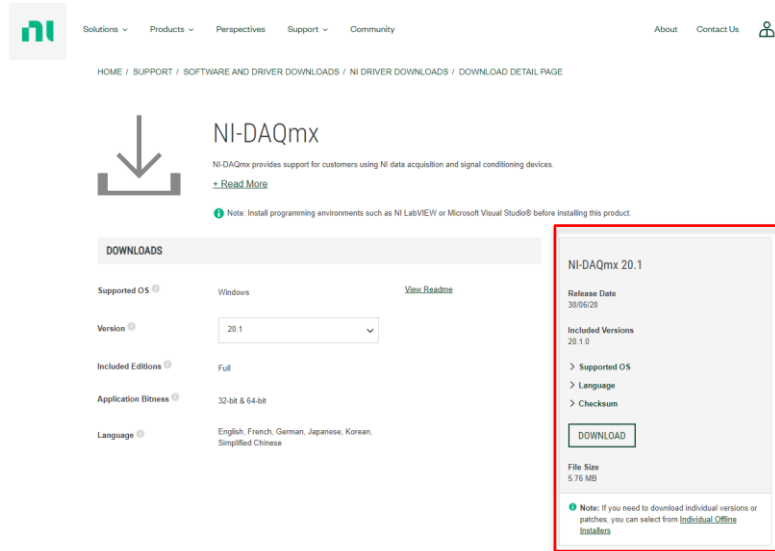


An example of the National Instruments website the hyperlink will take you to.



4.6.

Once a driver file has been selected you will be directed to a page where you can download the required driver file. Select the driver version from the dropdown on this page and click on the download link. Follow the prompts to complete the download.
For operation with CoolLED products only the basic installation is required.

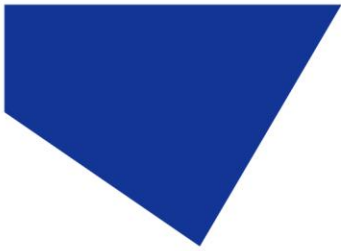


An example of the National Instruments website where the driver file can be downloaded.

4.7.

Connect the 15-way to 15-way HD cable to the pE-6501-8.





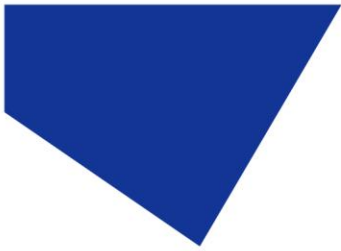
4.8.

Attach the other end of the 15-way to 15-way HD cable to the 'TTL' port of the pE-800.



4.9.

Open your specific software package. The pE-6501-8 will be controllable under the National Instruments USB-6501 integration (this may be labelled in different ways depending on the software used). For further details on using the pE-6501-8 in specific imaging software packages, please visit our webpage - www.cooled.com/support/imaging-software/.

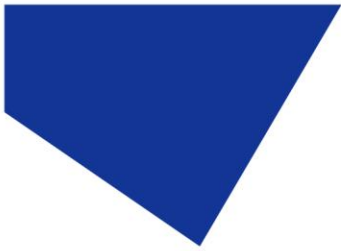


5. Additional information

5.1. Connection information

The below table shows the pin allocation of the pE-6501-8 to control the pE-800.

TTL Port		
15 Position D-Sub, High Density Receptacle, Female Sockets Connector		
Pin #	Name	Type
1	635 nm	Digital output
2	550 nm	Digital output
3	470 nm	Digital output
4		
5		
6	GROUND	Power
7	GROUND	Power
8	GROUND	Power
9		
10	GROUND	Power
11	500 nm	Digital output
12	435 nm	Digital output
13	365 nm	Digital output
14	740 nm	Digital output
15	580 nm	Digital output
Global output		
BNC Connector Jack, Female Socket 50 Ω		
Pin #	Name	Type
1	GLOBAL TTL	Digital output



6. Routine Care and Maintenance

6.1.

The pE-6501-8 will require little or no maintenance throughout its life. There are no field serviceable parts so there is no need for disassembly.

6.2.

Cleaning of the external surfaces can be carried out with a mild soap and water solution used to lightly dampen a lint-free cloth. Ensure that no liquid is allowed to enter the product.

7. Product Specifications

7.1.

Dimensions

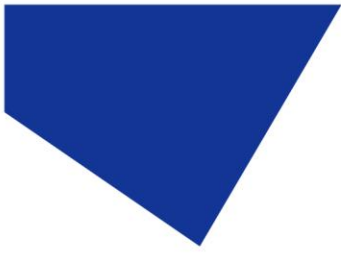
pE-6501-8: 115.5 mm(w) x 105 mm(d) x 42 mm(h)

Weight

pE-6501-8: 0.2 kg
pE-6501-8 &
15-way to 15-way HD cable: 0.45 kg

Environmental Operating Conditions

Temperature: 0 – 55 °C
Humidity: 10 – 90 % RH, noncondensing.
Maximum altitude: 2000 m (at 25 °C ambient temperature)
Indoor use only.



8. Product Options and Order Codes

See website ([Microscope Illuminators | LED Illumination Systems | CoolLED](#)) for full details of product options and order codes.

9. Warranty and Repairs

Please refer to CoolLED's current Warranty Policy available on our website [CoolLED Warranty - CoolLED](#). Although warranty terms are fixed at the time of ordering according to the terms and conditions of sale in place, the Warranty Policy may be subject to periodic change so please check to avoid confusion.

For any warranty queries or in the event of the product developing a fault, make contact with support@cooled.com for further assistance. You shall be asked to provide your microscope make and model, the product serial number and a brief description of the issue. You shall then be issued with a Support Case to manage your issue.

10. Compliance

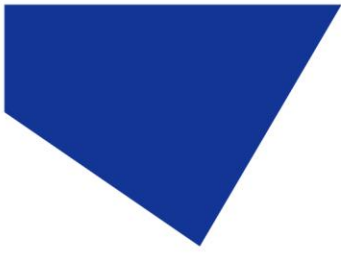
For current compliance statements and environmental information please refer to our website <https://www.cooled.com/support/environment/>

10.1. CoolLED's Recycling Program

At CoolLED, we recognize the importance of preserving the global environment. We are proud to provide a Recycling Program that enables CoolLED customers and end-users to send back used CoolLED Light Sources for recycling, free of charge.

Together we can reduce the burden on our environment through responsible disposal and recycling of End-of-Life Light Sources. You can help us by filling in our online contact form and providing us with your contact details and the serial number of the CoolLED Light Source that you wish to return, and we will collect it free of charge.

If you are taking delivery of a replacement CoolLED Light Source, why not send the old one back in the packing box of the new one?



11. Contact Details

CoolLED Ltd
26 Focus Way
Andover
Hampshire
SP10 5NY
UK

Phone +44 (0) 1264 323040 (Worldwide)
 1-800-877-0128 (USA + Canada)

Email info@cooled.com

Online www.CoolLED.com