AHF ANALYSENTECHNIK

USER MANUAL

AHF TriggerBox

USB-controlled TTL Triggering for CoolLED, Excelitas and Lumencor Light Sources

Version 3 – June 2024

TABLE OF CONTENTS

1. INTRODUCTION

The AHF TriggerBox has been designed to allow control of an 8 channel CoolLED, Excelitas or Lumencor illumination system from an USB port of a PC to specific TTL port of the light source.

The AHF TriggerBox is fully compatible to the National Instruments USB-6501 (NI-6501). Therefore, both products will work in all software packages which the NI-6501 has been integrated into.

The AHF TriggerBox allows the specified light sources to be controlled in any third-party software packages, which supports the NI-6501.

In addition to the software integration, the light source can generally be triggered via AHF TriggerBox with higher frequency than it would be possible with direct USB control.

This user manual provides the information required to setup the AHF TriggerBox.

2. SAFETY PRECAUTIONS

The AHF TriggerBox does not pose any real safety risk themselves, however as they are designed to be used with high intensity light sources the appropriate precautions should be taken.

2.1

When installing the AHF TriggerBox, 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, minimizing risk of injury and damage.

2.2

The AHF TriggerBox must 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 AHF TriggerBox, use a slightly dampened cloth.

3. GETTING STARTED – SYSTEM COMPONENTS

The AHF TriggerBox is supplied with the following components:

- AHF TriggerBox
- USB-A-to-B cable

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

4. INSTALLATION AND SETUP

4.1

Carefully unpack the components from the shipping box.

4.2

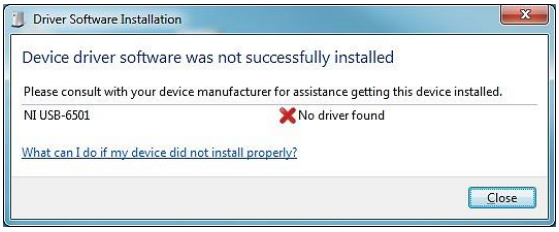
The AHF TriggerBox has 8+2 connectors on the front which provide TTL outputs. All of them are realized via BNC connector.

4.3

Attach the supplied USB cable to the PC (USB A type connector) and attach the other end of the cable to the AHF TriggerBox (USB B type connector).

4.4

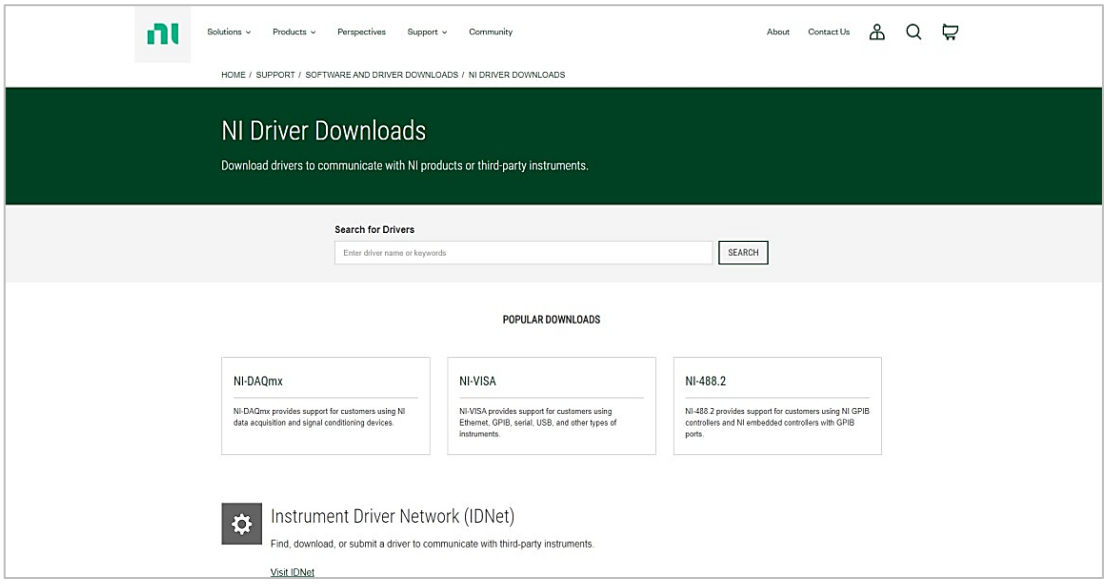
When the AHF TriggerBox is first connected to a PC it shall attempt to locate a driver file. If your PC is connected to the internet, the driver will be automatically installed, and you can skip to point 4.8. If the PC is not connected to the internet, the driver will not be automatically installed, 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

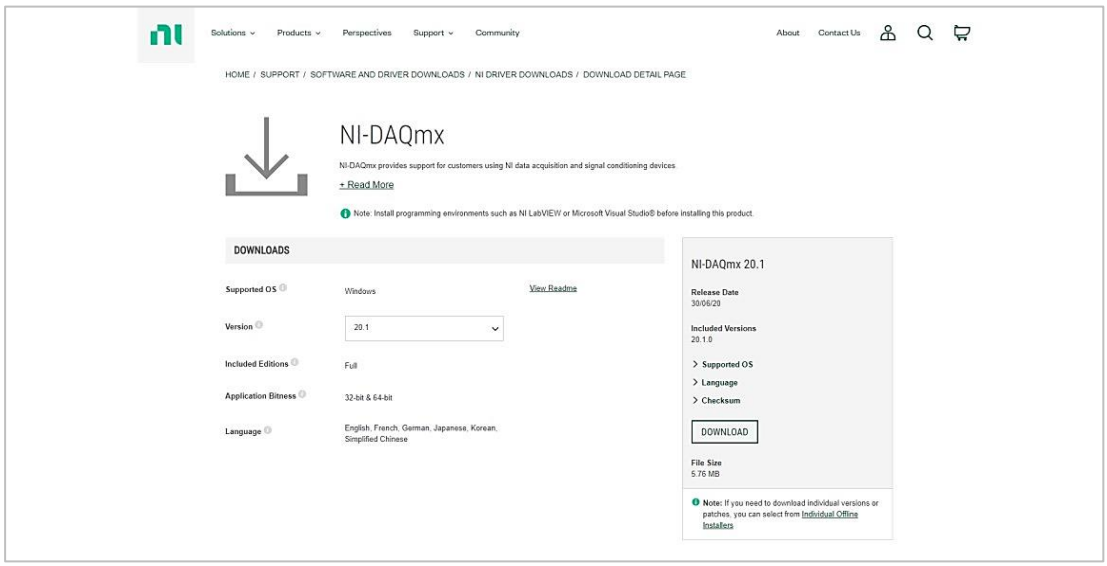


An example of the National Instruments website the hyperlink will take you to.

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.

In most cases only the basic installation is required.



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

4.7

Connect the BNC cable connector (not delivered with AHF TriggerBox) to the AHF TriggerBox.

4.8

Attach the other end of the specific cable (depending on the light source) to the ‘TTL’ port of used light source.

4.9

Open your specific software package. The AHF TriggerBox 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 AHF TriggerBox in specific imaging software packages, please see the specific leaflet.

5. ROUTINE CARE AND MAINTENANCE

AHF TriggerBox will require little or no maintenance throughout its life. There are no field serviceable parts so there is no need for disassembly.

6. PRODUCT SPECIFICATIONS

Dimensions (W x H x D):	160 mm x 55 mm x 120 mm
Weight:	0.31 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!

7. WARRANTY AND REPAIRS

Please refer to AHF analysentechnik’s current Warranty Policy available on our website *www.ahf.de*. 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, contact

AHF analysentechnik
info@ahf.de

for further assistance.

8. COMPLIANCE

For current compliance statements and environmental information please refer to our website *www.ahf.de*

9. CONTACT DETAILS

AHF analysentechnik AG
Kohlplattenweg 18
72074 Tübingen
GERMANY

PHONE: +49 (0) 7071 53 952-00 (worldwide)
EMAIL: info@ahf.de
WEB: www.ahf.de