THORLABS

Multichannel USB Temperature Logger

upTEMP™
Operation Manual



2022

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We aim to develop and produce the best solutions for your applications in the field of optical measurement techniques. To help us to live up to your expectations and constantly improve our products, we need your ideas and suggestions. We and our international partners are looking forward to hearing from you.

Thorlabs GmbH

Warning

Sections marked by this symbol explain dangers that might result in personal injury or death. Always read the associated information carefully before performing the indicated procedure.

Attention

Paragraphs preceded by this symbol explain hazards that could damage the instrument and the connected equipment or may cause loss of data.

Note

This manual also contains "NOTES" and "HINTS" written in this form.

Please read this advice carefully!

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1 General Information

The upTEMP™ is a multichannel USB temperature data logger for temperature sensors. The upTEMP™ supports up to 8 negative temperature coefficent (NTC) sensors or four resistance temperature detector (RTD) sensors that match the specifications listed in the Appendix 16. This includes the Thorlabs TH100PT RTD and the TH10K thermistor. Sensors can be used in parallel and are connected via push-in spring connections.

The upTEMP™ comes with firmware and the upSERIES™ software package. The Thorlabs upSERIES™ software provides a graphical user interface to display, access, and evaluate data when the upTEMP™ data logger is connected to a PC via a USB 2.0 connection. The upSERIES™ software and its operating manual are available for download from the product website.

When using multipne upTEMP™s or upLED LED driver in parallel, these devices can be conveniently stacked up as they feature the same stackable housing 7 and can be both be controlled by the same upSERIES™ Software interface.

To mount the upTEMP™ onto an optical board, Thorlabs offers the upBASE base plate.

Attention

Please find all safety information and warnings concerning this product in the chapter Safety 18 in the Appendix.

1.1 Ordering Codes and Accessories

upTEMP™	Multichannel USB Temperature Logger, two Sensor Connectors with 8 Push-in Spring Connections each, USB-ABL-60 2.0 USB Cable.

Optional Accessories:

• **upBASE**	Base Plate for Stable Mounting of the upTEMP to an Optical Board
• **Power Supply**	DS5
• **Sensor Connectors**	8-connection Printed-Circuit Board Connector: PTSM 0,5/ 8-PL-2,5 BK - 1709449 by PhoenixContact (https://www.phoenixcontact.com Item Number: 1709449). Please Purchase the Sensor Connectors Directly at PhoenixContact or Contact Thorlabs.

1.2 Requirements

The following PC specifications are required for remote operation of the upTEMP™ USB Temperature Logger.

Hardware Requirements:

- CPU: 1 GHz
- RAM: 512 MB
- Graphics Card Resolution: 1280 x 768 (Minimum)
- Hard Drive: 200 MB (Minimum) of Available Disk Space (64 bit)
- Interface: Free USB 2.0 Port

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Software Requirements:

The upSERIES™ software package to operate the upTEMP™ is compatible with the following operating systems:

- Windows® 8.1 (64-bit)
- Windows® 10 (64-bit) (recommended)

For operation of the upTEMP™, the Microsoft .NET Framework V 4.7.2 or later is required. This software (V 4.7.2) is included with the Thorlabs upSERIES™ installation package.

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2 Getting Started

2.1 Parts List

Please inspect the shipping container for damage. Do not cut through the cardboard, as the box might be needed for storage or returns.

If the shipping container appears to be damaged, keep it until you have inspected the contents for completeness and tested the upTEMP™ mechanically and electrically.

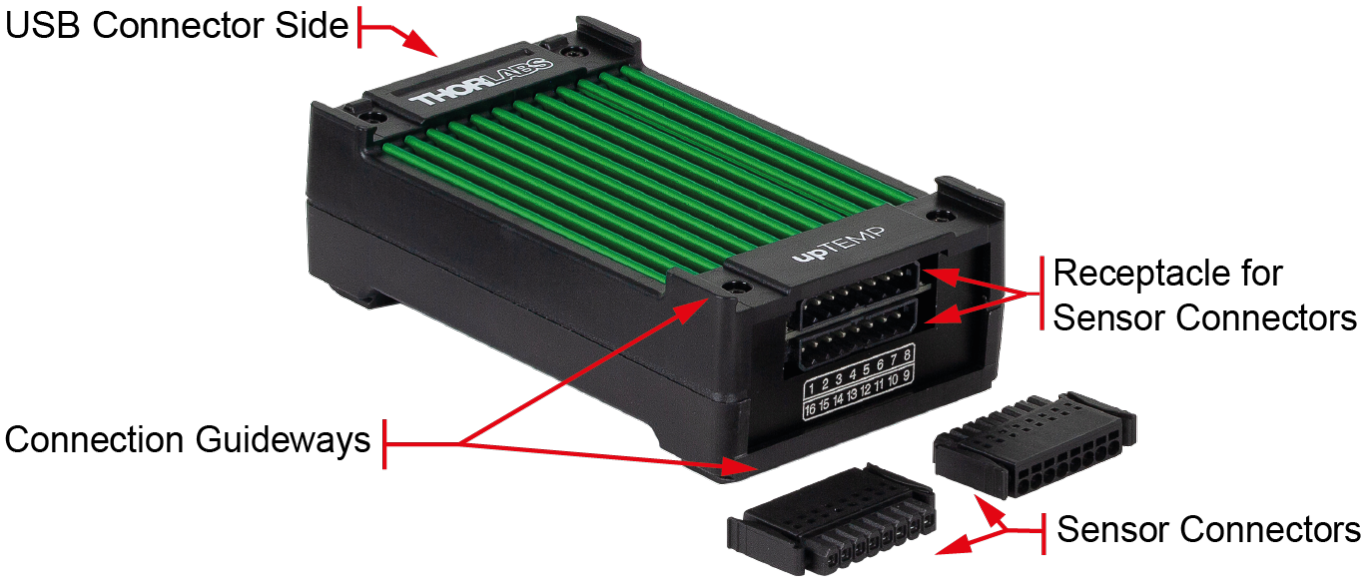
Verify that you have received the following items within the package:

1. upTEMP™ Multichannel USB Temperature Logger
2. Two Sensor Connectors with Push-In Spring Connections
3. USB 2.0 Type-A to Mini-B Cable with Locking Screw. 1.5 m
4. Quick Reference

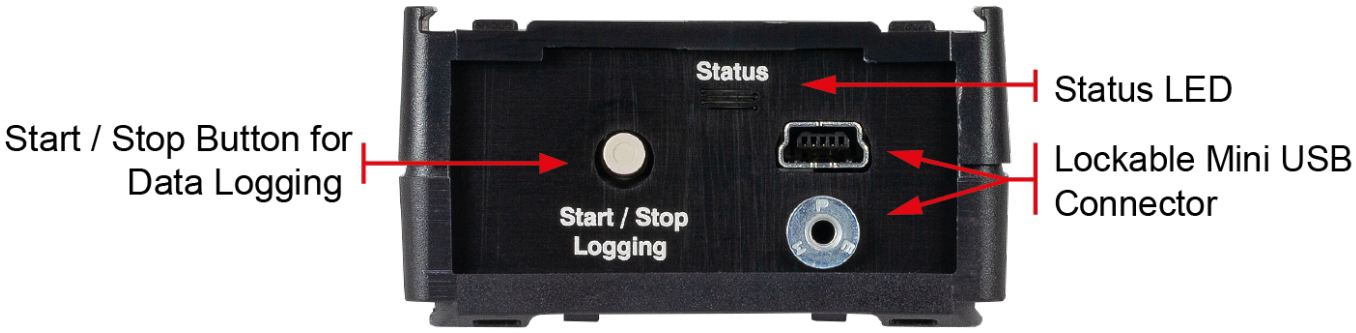
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3 Operation

3.1 Operating Elements



Rear Panel



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3.2 Installing Software

The upSERIES software package supports the upTEMP™ and is available for download from the website.

Instructions for the software are provided in the software manual.

Note **Do not connect the upTEMP™ to the PC prior to software installation!**

Attention

Exit all running applications on your PC as the installer may require a reboot of your PC during installation!

Thorlabs is breaking new ground in saving our environment. We decided to refrain from shipping a data carrier and to offer a download of the software from our website instead. As an additional advantage to this distribution method, the most recent version of the software will always be available online.

3.3 Setup

To install the upTEMP™ for operation, please follow the instructions below:

1. When using several upTEMP™ modules, the housings may be stacked on top of each other as described below in the section Stacking upSERIES Modules 7.

   For stable mounting of the upTEMP to an optical table or bread board, please use the upBASE base plate (not included) and follow the instruction given in section Mounting upTEMP via upBASE 8.
2. Connect the sensor wires of NTCs or RTDs to the provided sensor connectors with the push-in spring connections.

   Note Please obey the pin assignments 9 and the orientation of the sensor connector.

   Note To use both NTCs and RTDs in one measurement, please connect them to two separate upTEMP™ modules, one for NTCs and one for RTDs.
3. Push the sensor connector(s) into the receptacle(s).
4. Connect the provided USB 2.0 cable to each upTEMP™ module and secure it using the locking screw.

   Note Do not connect the upTEMP™ to the PC prior to software installation!
5. Power up the PC to be used with the devices.
6. Download and install the upSERIES™ software.
7. Connect the upTEMP™ module(s) to the PC via the provided USB 2.0 cable(s).
8. Start the upSERIES™ software.
9. To start a measurement, go through the software as described in the software manual and set the correct configuration for the connected sensors. A measurement can then be started though the software or directly on the upTEMP™, using Start/Stop button. For this please see the chapter "Measurements without Software 6".
10. When running the upTEMP™ through the software, the status LED will be green to indicate that data are measured, yellow blinking means that data are logged onto the internal memory of upTEMP™.

Note It is the intended use of this system to turn off automatically when incurring exposure to electrostatic discharge. In this case, please disconnect and reconnect the USB cable on the PC or upTEMP.

3.4 Measurements without Software

Temperature measurements can be run without the upSERIES™ software package as long as power is supplied via the USB port, the correct settings were previously configured using the software, and the upTEMP™ has available internal memory.

When using the upTEMP™ without the software, please follow these instructions:

1. Configure the measurement by clicking though the software dialog. When loading previously saved configurations, please activate the sensors of choice and click STORE in the upSERIES™ software to activate data saving on the EPROM of the upTEMP™.
2. The status LED will be green.
3. Turn off the software.
4. Use the Start / Stop button on the upTEMP™ rear panel 4 to start and stop measurements.
5. The status LED will blink yellow when data are logged onto the upTEMP™ internal memory.
6. When data logging is stopped by pushing the ON / Off button again, the status LED will return to green.

Note When the internal memory is full, data will no longer be logged and the status LED returns to green. Without software connected and no available internal memory, no data will be saved or visible.

Note When using the upTEMP™ with a Thorlabs' DS5 power supply, please exchange the USB cable which supplies the power within one minute. The time stamp will be lost after 1 minute due to lack of power.

Please be aware that data can only be viewed by using the upSERIES™ software package.

For a power supply, we recommend using the Thorlabs' DS5 power supply.

3.5 Status LED

The status LED indicates the following states:

Use States:

Green:	Measurement Mode (default state): Data is dispalyed on the software window but not logged to the internal memory of the upTEMP™
Yellow Blinking:	Data is saved to the internal memory of the upTEMP™. Status LED blinks yellow regardless of whether logging was activated through the software or on the upTEMP™ itself.

Special States:

Red:	Firmware Start
Blue:	Firmware Update
White / Magenta Blinking:	Fatal Hardware Error

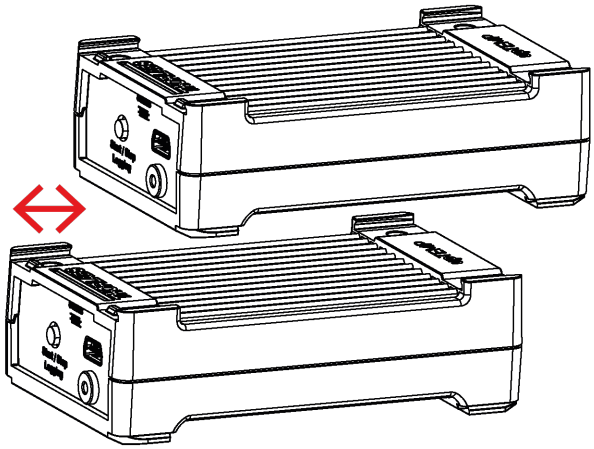
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3.6 Stacking upTEMP™ Modules

For extended applications, several upTEMP™ modules can be used in parallel. This might be the case when more than 8 temperature sensors are used or when different sensor types are employed in one measurement. For such setups, the upTEMP™ modules can be stacked. The stacking system results in a stable assembly and safe connections. Please follow the steps as illustrated below.

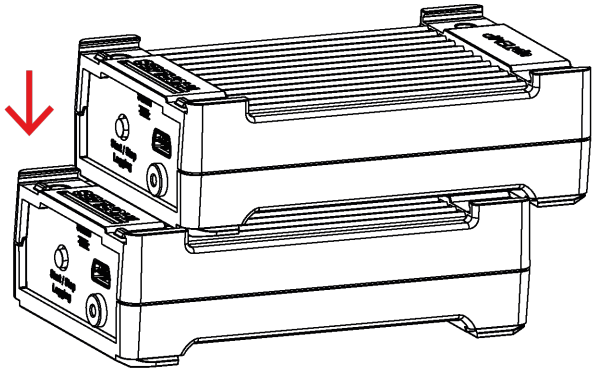
1)

Hold two modules on top of each other, shifted such that the upper module is behind the lower module and can slide into the guides of the lower module.



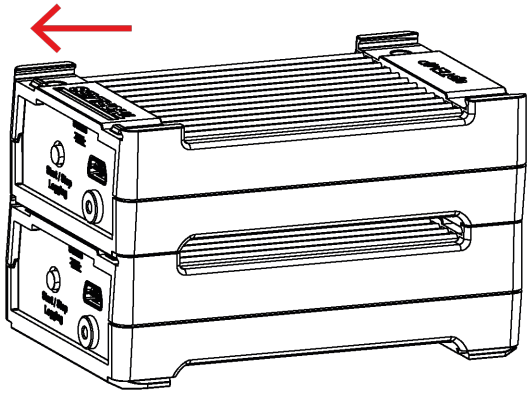
2)

Place the upper module down onto the lower module



3)

Slide the modules on top of each other until they hit a stop.



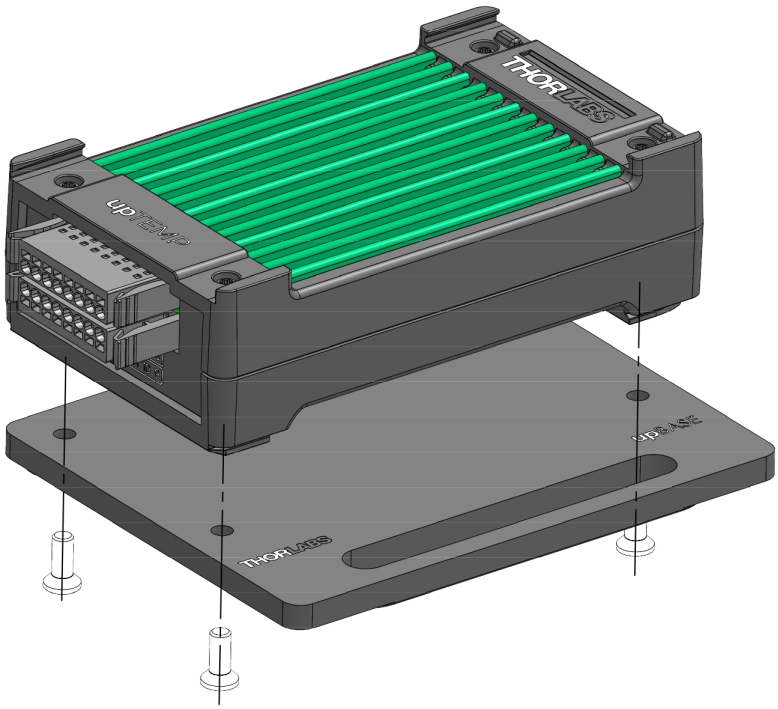
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3.7 Mounting upTEMP via upBASE

The upBASE is used to mount the upTEMP to an optical table or bread board. This accessory is not included with the upTEMP and can be purchased separately.

The instructions for mounting to the upBASE are as follows:

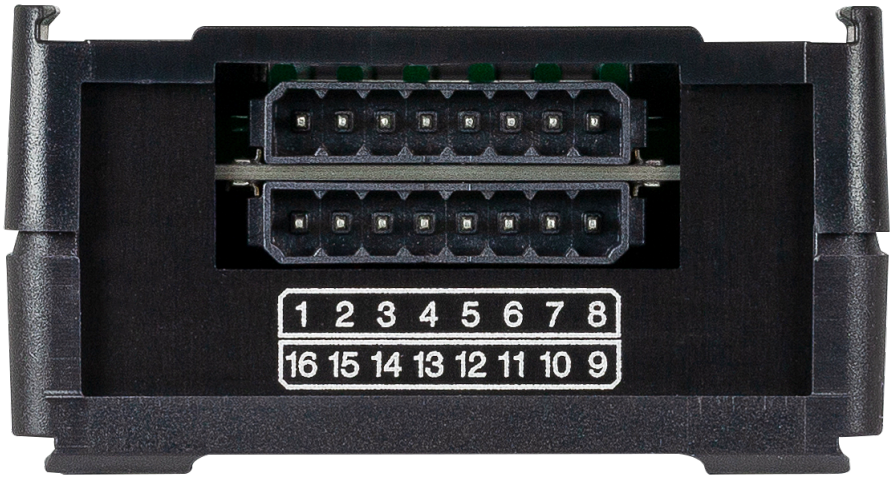
1. Place the upTEMP onto the flat side of the upBASE.
2. Use the included countersunk screws to mount the upTEMP to the upBASE.
3. Place the upBASE on the breadboard of choice and mount the upBASE using M6 or 1/4" cap screws.



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3.8 PIN-OUT Diagram

The upTEMP™ features 16 pins which are labeled as shown on the housing. The pin assignment is described in the table below.



PIN	NTC/ Configuration	RTD Configuration
1	NTC1	RTD_1F
2	NTC1	RTD_1S
3	NTC2	RTD_1S
4	NTC2	RTD_1F
5	NTC3	RTD_2F
6	NTC3	RTD_2S
7	NTC4	RTD_2S
8	NTC4	RTD_2F
9	NTC5	RTD_3F
10	NTC5	RTD_3S
11	NTC6	RTD_3S
12	NTC6	RTD_3F
13	NTC7	RTD_4F
14	NTC7	RTD_4S
15	NTC8	RTD_4S
16	NTC8	RTD_4F

RTD_xF: Current connector

RTD_xS: Sensor to measure resistance

Note

A 2-wire RTD sensor should be connected to the "inner two pins" RTD_xS. For example, for channel one the RTD should be connected to pins 2 and 3. In this case pins 1 and 2 and pins 3 and 4 need to be shorted out to allow the excitation current to flow to the RTD.

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4 Write Your Own Application

In order to write your own application, you need a specific instrument driver and some tools for use in different programming environments. The driver and tools are being installed to your computer during software installation and cannot be found in the installation package.

In this section the location of drivers and files, required for programming in different environments, are given for installation under Windows 8.1 and Windows 10 (32 and 64 bit).

In order to fully support 64 bit LabView version, the installation offers an installer:

- for Windows 8.1 (32/64 bit) and Windows 10 (32/64 bit): Install "upSERIES_Setup.exe"

In other words, the 32 bit VXIpnp driver works with both 32 and 64 bit operating systems, while the 64 bit driver requires a 64 bit operating system.

Note

upTEMP™ and drivers contains 32 bit and 64 bit applications.

In 32 bit systems, only the 32 bit components are installed to

```
C:\Program Files\...
```

In 64 bit systems the 64 bit components are being installed to

```
C:\Program Files\...
```

while 32 bit components can be found at

```
C:\Program Files (x86)\...
```

In the table below you will find a summary of what files you need for particular programming environments.

Programming environment	Necessary files
C, C++	*.h (header file) *.lib (static library) *.dll (dynamic linked library)
CVI	*.fp (function panel) *.h (header file) *.lib (static library for linking) *.dll (dynamic library)
C#	*.dll (dynamic library) *.Interop.dll (.net wrapper assembly)
LabView	*.fp (function panel) *.llb VXIpnp Instrument Driver Beside that, LabVIEW driver vi's are provided with the *.llb container file.

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4.1 32 bit Operating System

Note

According to the VPP6 (Rev6.1) Standard the installation of the 32 bit VXIpnp driver includes both the WINNT and GWINNT frameworks.

VXIpnp Instrument driver:

`C:\Program Files\IVI Foundation\VISA\WinNT\Bin\TLUP_32.dll`

`C:\Program Files\Thorlabs\upSERIES\Drivers\Instr\bin\TLUP_32.dll`

Note

This instrument driver is required for all development environments!

Header file

`C:\Program Files\IVI Foundation\VISA\WinNT\Include\TLUP.h`

or

`C:\Program Files\Thorlabs\upSERIES\Drivers\Instr\incl\TLUP.h`

Static Library

`C:\Program Files\IVI Foundation\VISA\WinNT\lib\msc\TLUP_32.lib`

`C:\Program Files\IVI Foundation\VISA\WinNT\Lib_x64\msc\TLUP_64.lib`

or

`C:\Program Files\Thorlabs\upSERIES\Drivers\Instr\msvc\TLUP_32.lib`

`C:\Program Files\Thorlabs\upSERIES\Drivers\Instr\msvc64\TLUP_64.lib`

Function Panel

`C:\Program Files\IVI Foundation\VISA\WinNT\TLUP\TLUP.fp`

or

`C:\Program Files\Thorlabs\upSERIES\Drivers\Instr\CVI\TLUP.fp`

Online Help for VXIpnp Instrument driver:

`C:\Program Files\IVI Foundation\VISA\WinNT\TLUP\Manual\TLUP.html`

or

`C:\Program Files\Thorlabs\upSERIES\Drivers\Manual\TLUP.html`

NI LabVIEW driver

The LabVIEW Driver is a 32 bit driver and compatible with 32bit NI-LabVIEW versions 8.5 and higher only.

`C:\Program Files\National Instruments\LabVIEW xxxx\instr.lib\TLUP\…`

`…TLUP.llb`

(LabVIEW container file with driver vi's and an example. "LabVIEW xxxx" stands for actual LabVIEW installation folder.)

.net wrapper dll

`C:\Program Files\Microsoft.NET\Primary Interop Assemblies\…`

…Thorlabs.TLUP_32.Interop.dll

…Thorlabs.TLUP_64.Interop.dll

or

C:\Program Files\IVI Foundation\VISA\VisaCom\…

…Primary Interop Assemblies\Thorlabs.TLUP_32.Interop.dll

.net wrapper dll - NuGet Package

C:\Users\Public\Documents\Thorlabs\NuGet\…

…Thorlabs.TLUP_32.Interop.x.x.x.x.nupkg

…Thorlabs.TLUP_64.Interop.x.x.x.x.nupkg

("x.x.x.x" stands for the driver version)

Example for C++

Solution file:

C:\Program Files\IVI Foundation\VISA\WinNT\TLUP\Examples\C\…

…upSERIES_CSample.sln

Project file:

C:\Program Files\IVI Foundation\VISA\WinNT\TLUP\Examples\C\…

…upSERIES_CSample\ upSERIES_CSample.vcxproj

Source file:

C:\Program Files\IVI Foundation\VISA\WinNT\TLUP\Examples\C\…

…upSERIES_CSample\ upSERIES_CSample.cpp

Example for C#

Project file:

C:\Program Files\IVI Foundation\visa\WinNT\TLUP\Samples\…

…MS.NET_CS\Thorlabs.TLUP_32.Sample.csproj

Example for LabView

C:\Program Files\National Instruments\LabVIEW xxxx\Instr.lib\TLUP\…

…TLUP.llb

(LabVIEW container file with driver vi's and an example. "LabVIEW xxxx" stands for actual LabVIEW installation folder.)

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4.2 64 bit Operating System

Note

According to the VPP6 (Rev6.1) Standard the installation of the 64 bit VXIpnp driver includes the WINNT, WIN64, GWINNT and GWIN64 frameworks. That means, that the 64 bit driver includes the 32 bit driver as well.

In case of a 64 bit operating system, 64bit drivers and applications are installed to

"C:\Program Files"

while the 32 bit files - to

"C:\Program Files (x86)"

Below are listed both installation locations, so far applicable.

VXIpnp Instrument driver:

```
C:\Program Files (x86)\IVI Foundation\VISA\WinNT\Bin\TLUP_32.dll
C:\Program Files\IVI Foundation\VISA\Win64\Bin\TLUP_64.dll
```

or

```
C:\Program Files\Thorlabs\upSERIES\Drivers\Instr\bin\TLUP_32.dll
C:\Program Files\Thorlabs\upSERIES\Drivers\Instr\bin\TLUP_64.dll
```

Note

This instrument driver is required for all development environments!

Header file

```
C:\Program Files\IVI Foundation\VISA\Win64\Include\TLUP.h
```

or

```
C:\Program Files\Thorlabs\upSERIES\Drivers\Instr\incl\TLUP.h
```

Static Library

```
C:\Program Files (x86)\IVIFoundation\VISA\WinNT\lib\msc\…
…TLUP_32.lib
C:\Program Files\IVI Foundation\VISA\Win64\Lib_x64\msc\TLUP_64.lib
```

or

```
C:\Program Files\Thorlabs\upSERIES\Drivers\Instr\msvc\TLUP_32.lib
C:\Program Files\Thorlabs\upSERIES\Drivers\Instr\msvc64\TLUP_64.lib
```

Function Panel

```
C:\Program Files\IVI Foundation\VISA\Win64\TLUP\TLUP.fp
```

or

```
C:\Program Files\Thorlabs\upSERIES\Drivers\Instr\CVI\TLUP.fp
```

Online Help for VXIpnp Instrument driver:

```
C:\Program Files\IVI Foundation\VISA\Win64\TLUP\Manual\TLUP.html
```

or

C:\Program Files\Thorlabs\upSERIES\Drivers\Manual\TLUP.html

NI LabVIEW driver

The LabVIEW Driver supports 32bit and 64bit NI-LabVIEW version 2009 and higher.

C:\Program Files\National Instruments\LabVIEW xxxx\Instr.lib\TLUP\…

…TLUP.llb

(LabVIEW container file with driver vi's and an example. "LabVIEW xxxx" stands for actual LabVIEW installation folder.)

.net wrapper dll

C:\Program Files (x86)\Microsoft.NET\Primary Interop Assemblies\…

…Thorlabs.TLUP_32.Interop.dll

…Thorlabs.TLUP_64.Interop.dll

C:\Program Files\IVI Foundation\VISA\VisaCom64\…

…Primary Interop Assemblies\Thorlabs.TLUP_64.Interop.dll

.net wrapper dll - NuGet Package

C:\Users\Public\Documents\Thorlabs\NuGet\…

…Thorlabs.TLUP_32.Interop.x.x.x.x.nupkg

…Thorlabs.TLUP_64.Interop.x.x.x.x.nupkg

("x.x.x.x" stands for the driver version)

Example for LabView

C:\Program Files\National Instruments\LabVIEW xxxx\Instr.lib\TLUP\…

…TLUP.llb

(LabVIEW container file with driver vi's and an example. "LabVIEW xxxx" stands for actual LabVIEW installation folder).

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5 Maintenance and Service

Protect the upTEMP™ from adverse weather conditions. The upTEMP™ is not water resistant.

Attention

To avoid damage to the instrument, do not expose it to spray, liquids or solvents!

The unit does not need regular maintenance by the user. It does not contain any modules and/or components that could be repaired by the user himself. If a malfunction occurs, please contact Thorlabs 21 for return instructions.

Do not remove covers!

5.1 Troubleshooting

- **Noisy Performance when Combined with a PT100 Sensor**
  - ➢ In cases where the measurement accuracy of a PT100 type temperature sensor is insufficient and shows too much noise, Thorlabs recommends using a PT1000 type sensor.

6 Appendix

6.1 Technical Data

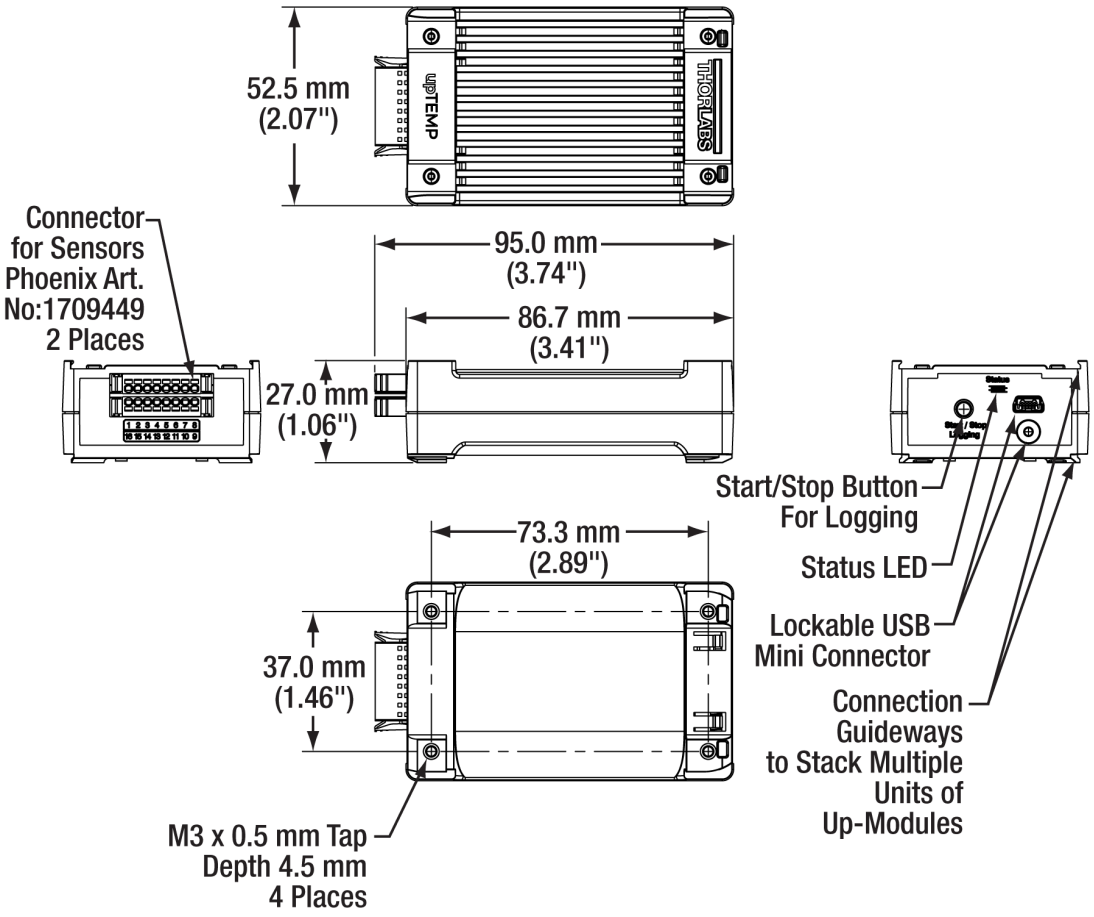
upTEMP Specifications	
Compatible Temperature Sensors	Negative Temperature Coefficient (NTC) Thermistor, Resistance Temperature Detector (RTD)
Measurement Capabilities	
Measurement Rate (Sum of All Channels)	5 Samples Per Second (Max)
Logging Capabilities	
Built-In Non-Volatile Flash Memory	128 MBit
Maximum Data Points (Sum of All Channels)	100,000 Data Points
Sensor Interface	
Connector	Push-In Spring Connections
General Specifications	
Control Interface	Lockable Mini USB Connector
Power Supply	5 V; 200 mA via USB (Max)
DC Input	via USB-ABL-60 USB Cable (Provided)
USB Protocol	USB 2.0 (USB CDC Class Device)
Maximum USB Cable Length	5.0 m
Operating Temperature Range upTEMP (non-condensing)	-20 °C to 70 °C
Storage Temperature Range upTEMP	-40 °C to 70 °C
Housing Dimensions (W x H x D)	86.7 mm x 27.0 mm x 52.5 mm (3.41" x 1.06" x 2.07")
Mass (Weight)	70 g

upTEMP with NTC Thermistors	
Sensor Channel Count	up to 8
Sensor Resistance Range	40 Ω to 900 kΩ
Sensor Temperature Range (Max)[1]	-40 °C to 120 °C
Excitation Current for NTCs	250 nA; 500 nA; 1 µA; 5 µA; 10 µA; 25 µA; 50 µA; 100 µA
Accuracy (at 25 °C)	±0.5 °C + Sensor Accuracy
Accuracy (from -10 °C to 70 °C)	±1 °C + Sensor Accuracy
Resolution	10 mK
upTEMP with RTD Sensors	
Sensor Channel Count	up to 4
Sensor Resistance Range	1.95 Ω to 3450 Ω
Sensor Temperature Range (Max)[1]	-200 °C to 400 °C
Supported RTD Sensors	RTD PT-100; RTD PT-200; RTD PT-500; RTD PT-1000
Excitation Current for RTDs	100 µA
Calibration Curves	European Standard, American, Japanese, IST-90
Accuracy (at 25 °C)	±0.5 °C + Sensor Accuracy
Accuracy (from -10 to 70 °C)	±1 °C + Sensor Accuracy
Resolution	10 mK

[1] The upTEMP™ module itself needs to stay within the limits of its own operating temperature range as stated above. Additional sensor temperature limits as stated by the sensor supplier may apply. Provided that the sensor is rated for a smaller or equal temperature window, these are accommodated for.

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6.2 Dimensions



6.3 List of Acronyms

NTC: Negative Temperature Coefficient

RTD: Resistance Temperature Detector

6.4 Safety

Attention

The safety of any system incorporating the equipment is the responsibility of the assembler of the system.

All statements regarding safety of operation and technical data in this instruction manual will only apply when the unit is operated correctly as it was designed for. The upTEMP™ must not be operated in explosion endangered environments!

Do not obstruct the air ventilation slots in the housing! Do not remove covers! There are no user-serviceable parts inside!

This precision device is only serviceable if returned and properly packed into the complete original packaging including the cardboard inserts. If necessary, ask for replacement packaging.

Refer servicing to qualified personnel!

Changes to this device cannot be made nor may components not supplied by Thorlabs be used without written consent from Thorlabs.

Attention

Mobile telephones, cellular phones or other radio transmitters are not to be used within the range of three meters of this unit since the electromagnetic field intensity may then exceed the maximum allowed disturbance values according to IEC 61326-1.

This product has been tested and found to comply with the limits according to IEC 61326-1 for using connection cables shorter than 3 meters (9.8 feet).

Note

It is the intended use of this system to turn off automatically when incurring exposure to electrostatic discharge. In this case, please disconnect and reconnect the USB cable on the PC or upTEMP.

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6.5 Certifications and Compliances

EU Declaration of Conformity

in accordance with EN ISO 17050-1:2010

We: Thorlabs GmbH

Of: Münchner Weg 1, 85232 Bergkirchen, Deutschland

in accordance with the following Directive(s):

2014/30/EU	Electromagnetic Compatibility (EMC) Directive
2011/65/EU	Restriction of Use of Certain Hazardous Substances (RoHS)

hereby declare that:

Model: ***upTEMP***

Equipment: ***Multichannel USB Temperature Logger***

is/are in conformity with the applicable requirements of the following documents:

EN 61326-1	Electrical Equipment for Measurement, Control and Laboratory Use - EMC Requirements	2013
EN 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use	2019

and which, issued under the sole responsibility of Thorlabs, is/are in conformity with Directive 2011/65/EU of the European Parliament and of the Council of 8th June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment, for the reason stated below:

contains no substances in excess of the maximum concentration values tolerated by weight in homogenous materials as listed in Annex II of the Directive

I hereby declare that the equipment named has been designed to comply with the relevant sections of the above referenced specifications, and complies with all applicable Essential Requirements of the Directives.

Signed: *On:* 18 May 2021

Name: Dr. Bruno Gross

Position: General Manager

EDC - upTEMP -2021-05-18

CE

6.6 Return of Devices

This precision device is only serviceable if returned and properly packed into the complete original packaging including the complete shipment plus the cardboard insert that holds the enclosed devices. If necessary, ask for replacement packaging. Refer servicing to qualified personnel.

General directions for returns are described here:

https://www.thorlabs.com/support.cfm?section=7&viewTab=1

6.7 Manufacturer Address

Manufacturer Address Europe
Thorlabs GmbH
Münchner Weg 1
D-85232 Bergkirchen
Germany
Tel: +49-8131-5956-0
Fax: +49-8131-5956-99
www.thorlabs.de
Email: europe@thorlabs.com

EU-Importer Address
Thorlabs GmbH
Münchner Weg 1
D-85232 Bergkirchen
Germany
Tel: +49-8131-5956-0
Fax: +49-8131-5956-99
www.thorlabs.de
Email: europe@thorlabs.com

6.8 Warranty

Thorlabs warrants material and production of the upTEMP™ for a period of 24 months starting with the date of shipment in accordance with and subject to the terms and conditions set forth in Thorlabs' General Terms and Conditions of Sale which can be found at:

General Terms and Conditions:

https://www.thorlabs.com/Images/PDF/LG-PO-001_Thorlabs_terms_and_%20agreements.pdf

and

https://www.thorlabs.com/images/PDF/Terms%20and%20Conditions%20of%20Sales_Thorlabs-GmbH_English.pdf

6.9 Copyright and Exclusion of Liability

Thorlabs has taken every possible care in preparing this document. We however assume no liability for the content, completeness or quality of the information contained therein. The content of this document is regularly updated and adapted to reflect the current status of the product.

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Please refer to the general terms and conditions linked under Warranty 20.

6.10 Thorlabs Worldwide Contacts - WEEE Policy

For technical support or sales inquiries, please visit us at
https://www.thorlabs.com/locations.cfm for our most up-to-date contact information.



USA, Canada, and South America
Thorlabs, Inc.
sales@thorlabs.com
techsupport@thorlabs.com

UK and Ireland
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China
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chinasales@thorlabs.com

Thorlabs 'End of Life' Policy (WEEE)

Thorlabs verifies our compliance with the WEEE (Waste Electrical and Electronic Equipment) directive of the European Community and the corresponding national laws. Accordingly, all end users in the EC may return “end of life” Annex I category electrical and electronic equipment sold after August 13, 2005 to Thorlabs, without incurring disposal charges. Eligible units are marked with the crossed out “wheelie bin” logo (see right), were sold to and are currently owned by a company or institute within the EC, and are not dissembled or contaminated. Contact Thorlabs for more information. Waste treatment is your own responsibility. “End of life” units must be returned to Thorlabs or handed to a company specializing in waste recovery. Do not dispose of the unit in a litter bin or at a public waste disposal site. It is the users responsibility to delete all private data stored on the device prior to disposal.



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