

# Intech XU Programming Software



# Installation Guide.

# INTECH XU USB PROGRAMMING SOFTWARE

#### Software Download

Download the latest version of XU Programming Software from Intech Instruments website: www.intech.co.nz/downloads/software-installation/xu-programming-software

# XU Programming Software Supports (Ver 1.50):

- XU2.
- XU4.
- XU2HN.
- XU2HI.
- Z-2400-A2I.
- Z-2400-Sleeper.

#### **Installation Notes:**

- Install software before attaching XU-USB programming cable, the driver is included in the setup software and will auto install when the XU-USB is plugged in for the first time.
- The XU-USB plugs into a Standard size computer USB port.
- The XU software requires Microsoft .NET Framework 2.0 to be installed first (Microsoft .NET 3.5 SP1, which includes .NET 2.0, can be downloaded free).
  - Note: Windows 10/8.1/8 require Internet access to install .NET Framework 3.5/2.0
- Windows users:
  - Installation requires the user to be an administrator.
  - Desktop shortcut icon will only be installed to the currently logged on user.
  - ♦ Extract all files to a folder.
  - A Right click on setup.exe and click 'run as administrator'.

**WARNING:** Ensure that all programming is carried out BEFORE any wiring takes place!

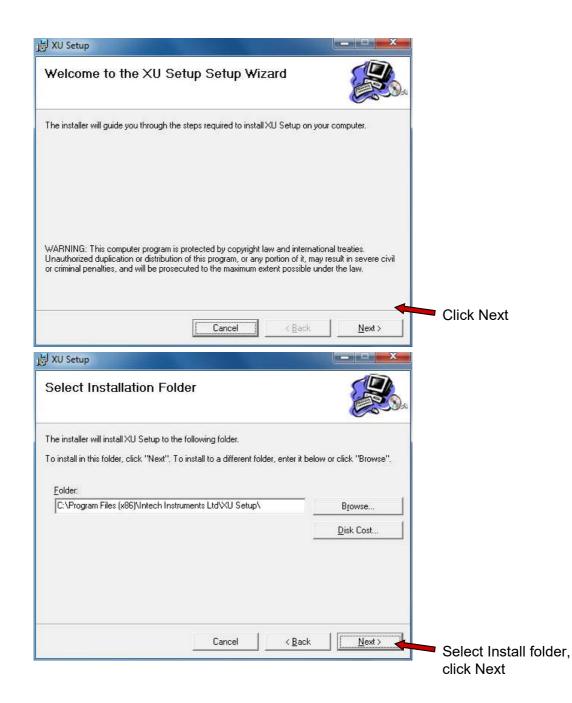
**Product Liability.** This information describes our products. It does not constitute guaranteed properties and is not intended to affirm the suitability of a product for a particular application. Due to ongoing research and development, designs, specifications, and documentation are subject to change without notification. Regrettably, omissions and exceptions cannot be completely ruled out. No liability will be accepted for errors, omissions or amendments to this specification. Technical data are always specified by their average values and are based on Standard Calibration Units at 25C, unless otherwise specified. Each product is subject to the 'Conditions of Sale'. **Warning: These products are not designed for use in, and should not be used for patient connected applications. In any critical** 

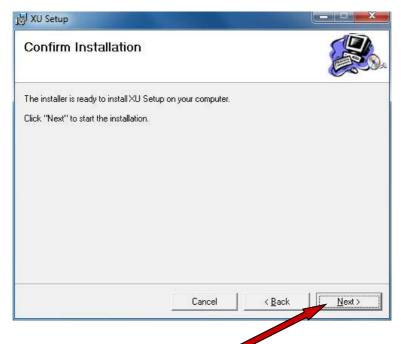
Warning: These products are not designed for use in, and should not be used for patient connected applications. In any critical installation an independent fail-safe back-up system must always be implemented.

# **Software Installation**

To install the XU programming software, double Click XUInstall.msi

#### Start Screen





All options have been set, click Next to begin installation.

岃 XU Setup			
Installation Complete			
XU Setup has been successfully installed	i.		
Click "Close" to exit.			
Please use Windows Update to check fo	r any critical update	s to the .NET Fran	nework.
	Cancel	< <u>B</u> ack	Close

Installation completed.

*Note*: some time may be required for windows to install the XU-USB drivers.

Double click the XU Setup icon 🥨 on your desktop to begin using the software.

**VERY IMPORTANT!** Before you plug anything into your PC USB port, ensure that all cables and adaptors are securely connected to both the USB programmer and the transmitter. Always use the windows 'Safely remove hardware' function before unplugging from your PC. Failure to follow these instructions may result in damage to your PC!

# **XU Setup Software**

First, attach XU-USB programming cable and wait for windows to auto install the USB driver. Double click the XU Setup icon.

Note: To setup the	Transmitter, only	the USB con	nection is requ	uired (i.e. p	power via	4~20mA o	output loop is
not required).							

Intech XU USB Setup Program				- 🗆 🗙
Connect	Model Details Module ID 1 - XU2 Loop Powered Transmitter Version Status	Wiring XU Transmi	itters	
Input & Output Setup	Test			
Input Pt100 RTD DIN V	Input			
Units (  Deg C  Deg F	CJC Sensor Output		XUM SSS	
Filter None	Output Trace mA 20	Z-2400 Wireless		
Range Oto 100 ~	16 12 8	Wireless		
Program Read	Comms TX Idle RX Idle View Data			
<b>Input Zero Adjust</b> Value	Logs	Supplied By		
Help Information	Tools	Int	ecl	ň
<u>Transmitter Installation Guide</u> <u>Software User Guide</u>	File Load File Save		Instrume	
	1 Instally	Windows 10		1.50

Connect the XU transmitter to the USB plug and click Connect. Wait for the software to establish a connection.

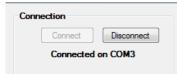
Connecting To Auto	Cancel
	Carlor
Checking COM3 Connected	
Unit Found ModuleId = 1 - XU2	
USB Ports Found COM3 Silabs USB Driver Version 6.3	

The settings will then be read from the transmitter and displayed.

# **Connection Panel**

Depending of the transmitter connected, you can get different connection panels, this example shows the **XU2**:

Filter       1 Second       Image       Output Trace       mA       20       16       12       16       12       8       4       Image	Connection	Model Details	Wiring
Connected on COM4       Version 3.7       Serial 0000000         Status NO LOOP       Input 6 Output Setup       Test       Scaled Input 1802.6°C       Input 21.00 mA Disconnected         Input P100 RTD DIN       Output 21.00 mA Disconnected       Output Trace       mA       20       36       37500V isolation barrier         Filter       1 Second       Image 0 to 100       Image 0 to 100 </th <th>Connect Disconnect</th> <th></th> <th></th>	Connect Disconnect		
Status NO LOOP         Input & Output Setup         input & Output Setup         input & Dio RTD DIN         Units       Deg C O Deg F         Sensor Fail       High (US)         Filter       Scoled Input 1802.6°C         Output 21.00 mA Disconnected       Output 12.100 mA Disconnected         Output 7 Trace       mA 20         15       12         8       15         12       8         Mage       0to 100         Vew Data       1/6         No K, 331 Messages       1/6         No K, 331 Messages       1/6         Name       View Data    Supplied By           Help Information         Transmitter Installation Guide Software User Guide	Connected on COM4		
Imput 8 Output Setup       Fest         Input Pt100 RTD DIN       Scaled Input 1802.6°C         Units       Deg C       Deg F         Sensor Fail       High (US)         Filter       1 Second         Range       Oto 100         Tx       OK, 332 Messages         Tx       OK, 331 Messages         Tx       OK, 331 Messages         Vew Data       1/6         Note:       Tools         File Load       File Load         File Load       File Save			
Input PHOURID DIN V Units Opeg C Opeg F Sensor Fail High (US) V Fiter 1 Second V Range 0 to 100 V Program Read View Data 1/6 Nput Zero Adjust Value 0.0 °C Date 3/01/1980 Time 12:00 AM Calibrate Logs Help Information Transmitter Installation Guide Software User Guide Note Calibrate Logs	Input & Output Setup		
Units  Deg C Deg F Sensor Fail High (US) Filter 1 Second Range 0 to 100 Program Read Units 21.00 mA Disconnected Output Trace mA 20 16 12 8 4 Comms TX OK, 332 Messages 1/6 RX OK, 331 Messages View Data Indicator 4-20mA Loop Program Read View Data Supplied By Supplied By Control File Load File Save Software User Guide	Input Pt100 RTD DIN ~	Scaled Input 1802.6°C	
Sensor Fail High (US) Filter 1 Second Range 0 to 100 Program Read New Data Input Zero Adjust Value 0.0 °C Date 3/01/1980 Time 12:00 AM Calibrate Logs Help Information Transmitter Installation Guide Software User Guide Software User Guide	Units 💿 Deg C 🔿 Deg F		56
Filter 1 Second Range 0 to 100 Program Read Messages Program Read Messages View Data Messages View Data View Data	Sensor Fail High (US) 🗸		
Range       0 to 100       Image       12       12       8       4         Image       Comms       TX OK, 332 Messages       1/6       Image	Filter 1 Second ~	20	
Program       Read         Imput Zero Adjust       View Data         Value       0.0 °C         Date 3/01/1980       Time 12:00 AM         Calibrate       Logs         Help Information       Time 12:00 AM         Transmitter Installation Guide       File Load         Software User Guide       File Load	Range 0 to 100 v		C () () () () () () () () () () () () ()
Program       Read         Imput Zero Adjust       View Data         Value       0.0 °C         Date 3/01/1980       Time 12:00 AM         Calibrate       Logs         Help Information       Transmitter Installation Guide         Software User Guide       File Load			
Tx       OK, 332 Messages       1/6         Tx       OK, 331 Messages       1/6         Rx       OK, 331 Messages       1/6         View Data       View Data       9000         Input Zero Adjust       View Data       9000         Value       0.0 °C       Date 3/01/1980       Time 12:00 AM       Calibrate       Logs         Help Information       Tools       File Load       File Save       Input Save       Input Color         Software User Guide       File Load       File Save       Input Save       Input Color       Input Color		4	
Program       Read       No of cost modesges       No of cost modesges       No of cost modesges       Input         Program       Read       View Data       No of cost modesges       No of cost modesges       Input         Input Zero Adjust       View Data       View Data       Supplied By         Value       0.0 °C       Date 3/01/1980       Time 12:00 AM       Calibrate       Logs         Help Information       Tools       File Load       File Save       Input       Input         Software User Guide       File Load       File Save       Input       Input			a supply indicator
Input Zero Adjust Value 0.0 °C Date 3/01/1980 Time 12:00 AM Calibrate Logs Help Information Transmitter Installation Guide Software User Guide			- i typically 4 Eoline ;
Value 0.0 °C Date 3/01/1980 Time 12:00 AM Calibrate Logs Help Information Transmitter Installation Guide Software User Guide			
Help Information Tools Transmitter Installation Guide Software User Guide	Program Read	View Data	
Software User Guide		View Data	Supplied By
Software User Guide	Input Zero Adjust		
	Input Zero Adjust Value 0.0 °C Date 3/01/1980 Help Information	Time 12:00 AM Calibrate Logs	
	Input Zero Adjust Value 0.0 °C Date 3/01/1980 Help Information Transmitter Installation Guide	Time 12:00 AM Calibrate Logs	Intech



Click Connect to connect to a Transmitter, or disconnect to stop communications.

Click Disconnect to stop the communications to the transmitter.

If you disconnect the transmitter from the XU-USB, the connection will timeout and close automatically. If you connect another transmitter before the timeout period expires the settings will be read out of the new transmitter and communications will start again.

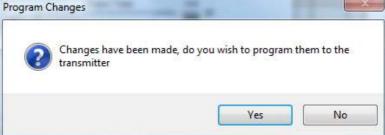
# Input & Output Setup

For input type and range selection.

Select the options required and click Program to write changes to the transmitter. The Program button will change to Bold text if changes need to be written to the controller.

Input & (	Output Setup
Input (	Pt100 RTD DIN 🔹
Units	Deg C O Deg F
Sensor Fa	ail High (US) 🔻
Filter (	None 🔹
Range (	0 to 100 👻
Pr	rogram Read

If you close the software or click the Disconnect button with unwritten changes, the following will be displayed:



Click Yes to program changes to the TX. The software will program the changes and then close.

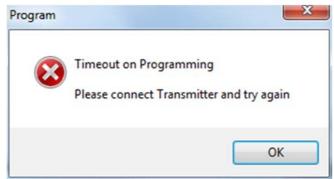
# Programming status

ne TX Progress	×
Programming Data Completed	_

When the programming is complete, the Test and Wiring panels will be updated to reflect the new changes.

**WARNING!** Do not disconnect the transmitter while programming is taking place.

If you do so, the transmitter will be left in an unknown state and may not operate properly. The following display appears to show comms errors during programming:



The software closes the connection, connect the transmitter to the computer again then click Connect and do the programming operation again.

# Output:

Adjusting the Zero pot on the transmitter will affect factory output calibration. Adjusting the Zero pot does NOT affect Test Panel values - Input and Output values and output trace.

Help Information	
Transmitter Installation Guide	
Software User Guide	
Web Ma	

If the computer is connected to the internet, the Help links will look for the help manuals from the web locations giving you the most up to date information. If an internet connection cannot be found, the latest manuals production at time of software update will be shown. Once a link is clicked "Web Manuals" or "Local Manuals" will be shown to indicate the source of the manual.

Click **Transmitter Installation Guide** to view the installation guide for the attached transmitter. If no transmitter is attached a page will display in your web browser with links to each XU transmitter Installation Guide.

Click Software User Guide to view this manual.

These files are in Adobe® PDF format.

# Model Details

Model Details				
Module ID	1 - XL	12		
	Loop P	owered Transmitter		
Version	1.20	Serial 35100023		
Status	NO LO	OP		

Shows a panel giving transmitter name, software version and status.

**Example Status Values** 

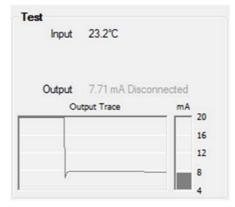
OK	Input and Output OK
NO LOOP	No 4~20mA output connected
SENS	Input sensor High or Low

INIT, BUSY Internal Error Codes, please advise. FLASH ERR

# Test

Shows a panel giving current input and output value, and a short duration trend graph of the output.

This panel will show a live input reading when the transmitter is only powered by the USB connection.



# Model Details indicating No 4~20mA output connected

Status shows "NO LOOP".

Model Details			
Module ID	1 - XL	12	
Loop Powered Transmitter			
Version	1.20	Serial 35100023	
Status	NO LO	OP	

# Test Panel indicating No 4~20mA output connected

Output Value shows in gray text, with "Disconnected" text added.

Test Input	1802.6°C	
-	21.00 mA Disco tput Trace	mA 20
		16 12
		8

Comms

TX OK, 64 Messages

RX OK, 63 Messages

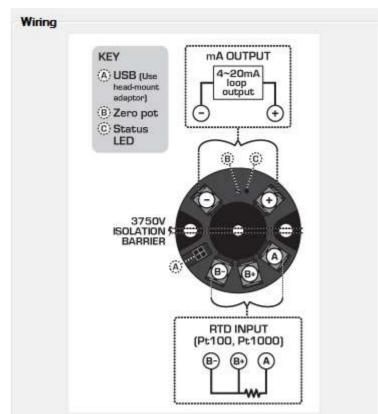
View Data

# Comms

Shows TX and RX message counts, indicating good communications to the unit.

# Wiring

Example showing **XU2HI**:



This panel shows the connections to the Transmitter required for the input type selected.

Tools	
File Load	File Save
	History
	History

Click File Load to load a txcal file into the TX.

Click File Save to save current settings to a txcal file.

Click History button to see a text file history of all transmitters programmed so far. This can be used to review the settings of transmitters programmed on this computer (File name txhistory.txt)

Save Settings To File	But the set	-			
)	Documents		<b>▼ *</b> <del>†</del>	Search Documents	
Organize 👻 New fold	ler				)= <b>•</b> (
🔄 Recent Places 🔺	Documents library Includes: 2 locations			Arrange by:	Folder 🔻
Documents	Name	Date modified	Туре	Size	
J Music	🍌 CaptureWiz	30/08/2010 4:42 p	File folder		
E Pictures	\mu XU Setup	31/08/2010 3:34 p			
<ul> <li>Videos</li> <li>Computer</li> <li>Boot (C:)</li> <li>Data (D:)</li> <li>Archive (Backup)</li> <li>Intech_Web (ints</li> </ul>					
• NI-4-1-4-1					
File name: Pt100	0 RTD DIN 0 to 100 C US.txcal				
Save as type:					
Hide Folders				Save	Cancel

When saving, the file name will be auto named based on the current range settings from the example above

Pt100 RTD DIN	Input Type
0	Zero Value
100	Span Value
С	Centigrade (or F Fahrenheit)
US	Upscale Sensor Break.

*Note:* Once a txcal file has been saved, this can be used to auto program transmitters to the same settings as follows:

Close XU Setup program.

Attach new XU Transmitter to the computer.

Double click on the txcal file. The XU Setup program will auto start, connect and then program the XU Transmitter and then close again.

To repeat program several transmitters with the same ranges:

- 1. Connect to the first transmitter, make the range selections and click Program.
- 2. Click File Save and save the file. Close the XU setup program.
- 3. Attach the new transmitter to the computer, locate the txcal file an double click on it.
- 4. Repeat step 3 for each transmitter required.

# Input Zero Adjust

The Input Zero Adjust allows you to apply an offset calibration value to the input.

Input Z	ero Adjust		
Value	0.0 °C	Calibrate	Logs

Click the Calibrate button to begin calibration.

Input Zero Adju	st
Calibration	OK Cancel
Input Reading	20.3°C Limits -10 to +10 °C Format X.X
Notes	After adjusting calibration value, please allow a couple of seconds to allow the input value to stabilize.
	If you change the input type of the transmitter (i.e RTD to TC), the calibration value will be cleared.
	In Deg C, Calibration is a "best fit" because of internal maths of the transmitter, and input resolution. You may therefore need to adjust the value a few times to get the best result.

To make the input reading go up, enter a positive value.

To make the input reading go down, enter a negative value.

Input can only be Calibrated when a correct input signal is applied.

Click OK to write the change to the transmitter and wait for the display to show Waiting, and then Input Updated.

Limits are shown for the range of figures that can be entered, also the data format is shown (i.e. in Deg C a 0.1 degree offset is the smallest offset that can be entered; trying to enter 0.05 as an offset will not work).

Click Close to exit the calibration screen.

It is not necessary to program changes to the transmitter after calibration, as this panel does the whole operation for you.

At the time of calibration, a date and time stamp is recorded to the transmitter, and you can see this in the Input Zero Adjust panel.

Input Z	ero Adjust				
Value	0.0 °C	Date 16/09/2010	Time 12:01 p.m.	Calibrate	Logs

The Calibration information is also stored to a text file on the computer doing the calibration using the file name "cal serialnumber.txt". Click Logs to view this file.

If no transmitter is connected, a folder will be shown with all calibration logs calibrated so far. These files are located in "My Documents\XU Setup" folder.

When you change the Input Type of the transmitter (i.e. from RTD to TC etc) the calibration value is cleared as the transmitter uses the same offset for all ranges in the transmitter. Changing the Range Scaling does not clear the calibration information.

\*This software requires transmitter software 1.20 or later (as shown in the Model Details Panel)

Model Detai	le	
Model Deta		
Module ID	1 - XU	12
	Loop P	owered Transmitter
Version	1.20	Serial 35100023
Status	NO LO	OP

If the transmitter does not have the correct software installed, the following will be shown:

N	Aodel Deta	Model Details	
	Module ID		<b>12HI</b> d Transmitter Iso
	Version	1.13	Serial 24100061
	Status	NO LO	OP
Input Zero Adjust			
Calibration Not Available	in this transr	nitter vers	ion

If you desire this feature, you must obtain a replacement transmitter. It is not possible to upgrade the software for older transmitters.



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