

How To Update the Cx50-2/cx35-1 Update Programmer

This document applies if you have already received a programmer at some point in the past and wish to replace its pre-loaded program with a newer version. Includes HMI SD card update instructions.

1. First download the file from the email or the link we sent you in order to install the program labeled. "NuMicro ICP Programming Tool 3.05.7174r"

KB

I	Name	^		Date modif	ied	Туре		Size
	😽 NuMicro	o ICP Programming To	ol 3.05.7174r	11/11/2022	9:51 AM	Application		23,106
	Select Set	tup Language		×				
	1	Select the language to installation:	use during the					
2.		English	ж с	~ ancel				
3.	Select	'Next'						
	🛃 Setu	p - NuMicro ICP Pro	gramming To	ool	-	- 🗆	×	
			Welcom Program This will install your compute It is recommen continuing. Click Next to o	ne to the mming 1 NuMicro ICP r. Inded that you continue, or C	e NuMicro Fool Setu Programming To close all other a cancel to exit Set	o ICP p Wizard ol 3.05.7174r d applications bet tup.	dl on fore	
	SC: http: SC: http:	://torum.nuvoton.com ://www.nuvoton-mcu.co	<u>m</u>		<u>N</u> ext >	Can	cel	

4.

5. Select 'accept agreement' (accept by default), and then click 'next'



🔀 Setup - NuMicro ICP Programming Tool	_		×
License Agreement Please read the following important information before continuin	ıg.	0	
Please read the following License Agreement. You must accept t agreement before continuing with the installation.	the terms of	this	
License Agreement			-
Please read the following terms and conditions before using this Installing and using this software indicates you accept the term agreement and warranty.	s software. s of this licer	nse	
Disclaimer of Warranty The software is provided "AS IS", without warranty of any king	d, express of	r	
I accept the agreement ○ I do not accept the agreement			
EN: http://forum.nuvoton.com SC: http://www.nuvoton-mcu.com	<u>N</u> ext >	Can	icel

7. Select the storage location and click "Next"



8.



9.	Select Next
	🐻 Setup - NuMicro ICP Programming Tool – 🗆 🗙
	Select Start Menu Folder Where should Setup place the program's shortcuts?
	Setup will create the program's shortcuts in the following Start Menu folder.
	To continue, click Next. If you would like to select a different folder, click Browse.
	Nuvoton Tools WuMicro ICP Programming Tool Browse
10.	EN: http://forum.nuvoton.com SC: http://www.nuvoton-mcu.com < Back

11. Select 'Install'



vww.cniitrix.com

i 🔁 S	Setup - NuMicro ICP Programming Tool —		×
F	Ready to Install Setup is now ready to begin installing NuMicro ICP Programming Tool on your computer.		
	Click Install to continue with the installation, or click Back if you want to review change any settings.	or	
	Destination location: C:\Program Files (x86)\Nuvoton Tools\ICPTool		•
	Start Menu folder: Nuvoton Tools\NuMicro ICP Programming Tool		
			Ŧ
	4	P	
EN: SC:	http://forum.nuvoton.com http://www.nuvoton-mcu.com	Ca	ancel

13. Check install driver and click 'finish'





18. Select 'accept agreement' (accept by default), and then click 'next'



	🔂 Setup - Nu-Link USB Driver — 🗆 🗙									
	License Agreement Please read the following important information before continuing.									
	Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.									
	License Agreement									
	Please read the following terms and conditions before using this software. Installing and using this software indicates you accept the terms of this license agreement and warranty.									
	Disclaimer of Warranty The software is provided "AS IS", without warranty of any kind, express or									
	I accept the agreement									
19	< <u>B</u> ack <u>N</u> ext > Cancel									
20.	Select the storage location and click "next"									
	🔀 Setup - Nu-Link USB Driver — 🗆 🗙									
	Select Destination Location Where should Nu-Link USB Driver be installed?									
	Setup will install Nu-Link USB Driver into the following folder.									
	To continue, click Next. If you would like to select a different folder, click Browse.									
	C:\Program Files\Wuvoton Tools\Wu-Link_USB_Driver Browse									
	1 2									
	At least 19.9 MB of free disk space is required.									
21	< <u>B</u> ack <u>N</u> ext > Cancel									



22. Click "Next"

🔀 Setup - Nu-Link USB Driver	_		×
Select Start Menu Folder Where should Setup place the program's shortcuts?		Q	
Setup will create the program's shortcuts in the following Sta	rt Meni	u folder.	
To continue, click Next. If you would like to select a different folder, c	lick Bro	wse.	
Nuvoton Tools\Nu-Link USB Driver	Br	owse	
< Back Next	>	Car	icel

24. Click 'Install'



	🔂 Setup - Nu-Link USB Driver —		×
	Ready to Install Setup is now ready to begin installing Nu-Link USB Driver on your computer.		
	Click Install to continue with the installation, or click Back if you want to review change any settings.	v or	
	Destination location: C:\Program Files\Nuvoton Tools\Nu-Link_USB_Driver		•
	Start Menu folder: Nuvoton Tools\Wu-Link USB Driver		
			-
		•	_
25	< <u>B</u> ack Install	Ca	ancel
	Setup - Nu-Link USB Driver —		×
	Installing Please wait while Setup installs Nu-Link USB Driver on your computer.		
	Finishing installation		
		Ca	ncel



Offline writing

 $\mathbf{1}_{\smallsetminus}$ Open the NuMicro ICP Programming Tool application and click 'Continue'

Nuvoton NuMicro ICP	Programming Tool 3.05	×
ΠυνοΤα		
	Select Language:	
	English 🗸	
	Select Target Chip:	
	M451 Series	
N.A.	Quit Continue >>]
	Support Forum EN: http://forum.nuvoton.com SC: http://www.nuvoton-mcu.co	m/forum.php



Click 'Connect'

Nuvoton Null	Aicro ICP Pro	ogramming Tool 3.05 - M451 Series		- 🗆 X
Project Chips	Tool Lang	uage Help		
	ION			
Connect	Disconnecter	1		
Part No.				
Load File				
APROM	File Name:	C:\APROM.hex		
		File not load.	I	Offset: Ox 0
Data Flash	File Name:	C:\Data.hex		
		File not load.		
LDROM	File Name:	C:\LDROM.hex		
		File not load.		
SPROM	File Name:	C:\SPROM.hex		
		File not load.	I	Last Byte: 0x FF
Config Bits				
Setting	Config 0: 0	xFFFEFFFF Config 1: 0xFFFFFFFF	< Update History >	~
File Data		On-board Elash	Offline Flash	
APROM DATA	LDROM SE	PROM APROM DATA LDROM SPROM	APROM DATA LDROM	SPROM Info
				 8 bits 16 bits 32 bits
Programming				Refresh
Programming APROM	🗌 Data F	lash 🗌 LDROM 🗌 SPROM	Config Option	Refresh 15 Start





ject Chips	Tool Langua	age Help								
tatus Stop check	Nu-Link con	nected (ID: 778	89e47)							
Part No.										
oad File	File Herry	C.U	WD lu l	Chille and Da	225014.0		20103/11		20103/100	
APROM		vize: 72 6K B	utes checks	um: 3515	321010.50	ortware \F43	2510-01	06-0H \P43. 0	2510-V106	-UR.DIN
Data Elash	File Name:	C:\Data.hex								
		File not load.								
LDROM	File Name:	C:\LDROM.I	nex							
		File not load.								
SPROM	File Name:	C:\SPROM.I	nex							
		File not load.						L	ast Byte: 0>	(FF
onfig Bits										
Setting	Config 0: (x7FBEFFE5	Config 1:	0xFFFF	FFFF	<	: Update	History >		\sim
le Data		On-b	oard Flash			Offline F	lash			
PROM DAT	A LDROM S	PROM APRO	IM DATA	LDROM	SPROM	APROM	DATA	LDROM	SPROM	Info
0000000: 0000010: 0000020: 0000030: 0000040: 0000050: 0000060: 0000070: 00000080:	D0 21 00 20 C3 A4 00 00 D0 00 00 00 EB A4 00 00 AD 03 01 00	69 03 01 0 CD A4 00 0 00 00 00 0 00 00 00 0 AD 03 01 0 AD 03 01	00 B9 A4 00 D7 A4 00 00 00 00 F5 A4 00 AD 03 00 AD 03 00 AD 03 00 AD 03 00 AD 03	00 00 3 00 00 0 00 00 0 01 00 0 01 00 0 01 00 0 01 00 0 01 00 0 01 00 0	35 02 0 00 00 0 E1 A4 0 FF A4 0 AD 03 0 AD 03 0 AD 03 0 AD 03 0 07 A5 0 AD 03 0	0 00 0 00 0 00 1 00 1 00 1 00 1 00 1 00		^	● 8 bil ○ 16 b ○ 32 b	is bits bits
00000A0: 000000B0:	AD 03 01 00 AD 03 01 00 39 45 00 00	AD 03 01 AD 03 01 AD 03 01	00 AD 03 00 AD 03 00 AD 03	01 00 / 01 00 /	AD 03 0 AD 03 0 AD 03 0	1 00 1 00		~	Re	fresh
rogramming										
APROM	🗌 Data F	Flash 🗌 l	.DROM	SP	ROM	🗹 Con	fig	Option	<u>s</u> (Start



🛹 Open							×
\leftrightarrow \rightarrow \checkmark \uparrow	< Old S	oftware > P432S10-V106-0R	~	ē	,	P432S10-V106-0R	
Organize 🔻 🛛 Ne	w folder					EE 🔻 🔟	?
💻 This PC	^	Name	[Date mo	dified	Туре	:
🧊 3D Objects		P432S10-V106-0R	1	1/25/202	3 11:14 AM	BIN File	
📃 Desktop							
🔮 Documents							
👆 Downloads							
🁌 Music							
Pictures							
📑 Videos							
🏪 Windows (C:)							
OVD Drive (D)	:) A						
🛖 HSE (\\hse-a	pp1						
A Network	~ <						>
	File nam	e: P432S10-V106-0R		~	Binary Files (thin;*.hex;*.rom)	\sim
					Open	Cancel	



Select settings and then "m451xG6AE series"

status												
Stop c	heck	Nu-Link con	nected (ID: 77889e	47)							
Part N	No.											
.oad File												
APR	ОМ	File Name:	C:\Us	sers\Matt\E)esktop\	Chilltrix\P4	32\Old Sof	tware\P43	2S10-V10	06-0R\P43	2S10-V10	l6-0R.bin
			size: 7	2.6K Bytes	, checks	sum: 3b1b				0	ffset: Ox	0
Data F	Flash	File Name:	C:\Da	ata.hex								
			File no	ot load.								
LDR	ОМ	File Name:	C:\LD	ROM.hex								
			File no	ot load.								
SPR	OM	File Name:	C:\SF	PROM.hex								
			File no	ot load.						L	ast Byte: (Dx FF
Config Bit	te											
Setti	ina	Config 0:	x7FBEF	FE5 C	Config 1:	0×FFFF	FFFF	<	Update	History >		~
		- []			-							
File Data				On-board	l Flash—			Offline Fl	ash			
APROM	DATA	LDROM S	PROM	APROM	DATA	LDROM	SPROM	APROM	DATA	LDROM	SPROM	Info
											● 8 t	oits
											0 16	bits
											◯ 32	bits
												<i>(</i>)
											R	efresh
^o rogramm	ning											
🗹 APF	ROM	🗌 Data I	Flash	LDR	ОМ	SP	ROM	🗹 Con	fig	Option:	<u>s</u>	Start



Make sure that your screen matches as shown below.

🛹 Nuvoton Nu	Micro I	CP Programming Tool 3.05 - M4	451 Series	– 🗆 X
<u>P</u> roject <u>C</u> hips	<u>T</u> ool	<u>L</u> anguage <u>H</u> elp		
	το			
Discourset	Ch I	Chip Settings		×
Disconnect	, c	Configuration		
Part No.		- 1/0 Initial State Selection	HXT Mode Selection	1
Load File		🗿 Input Tri-state Mode	 Crystal Mode 	
APROM	Fib	O Quasi Bi-directional Mode	C External Clock Mode	-09\P432S10-V100
		Chip Booting Selection		Diffset: 0x 0
Data Flash	File	O APROM	◯ LDROM	
		◯ APROM with IAP	LDROM with IAP	
LDROM	Fib	Brown Out Voltage		
		○ 4.5V ○ 3.7V	O 2.7V ○ 2.2V	
SPROM	Fib	Brown Out Detector	Brown Out Reset	
		Watchdog Timer Mode Selection		ast Bute: 0x_FE
		○ WDT is inactive.		
Config Bits		WDT is active and WDT clock	is always on.	
Setting	Cc	○ WDT is active and WDT clock	is controlled by LIRCEN in power-down.	~
		Data Flash Options		
File Data		🗌 Data Flash Enable	Base Address: 0x FFFFFFFF	
APROM DATA	A LE		Data Flash Size: 0.00K 🚊	SPROM Info
00000000: : 00000010: : 00000020: (00000030: - 00000050: (00000050: (00000060: (00000070: (00000070: (00000080: (00000090: (70 1 27 3 00 0 4F 3 0D C 0D C 0D C 0D C 0D C	Security Lock Config Value Config 0: 0x7FBEFFE5	Config 1: 0xFFFFFFFF	 8 bits 16 bits 32 bits
Programming			OK Cancel	Refresh
				Build: 7174r



Select options

UVO tatus	Ton	5 1				
tatus			and the second			
Stop check	Nu-Link conr	nected (ID: 7788	3e47)			
Part No.						
oad File						
APROM	File Name:	C:\Users\Matt	\Desktop\Chill	trix\P432\Old Sof	tware\P432S10-V106	-0R\P432S10-V106-0R.bin
		size: 72.6K Byt	es, checksum:	ЗЬ1Ь		Offset: 0x 0
Data Flash	File Name:	C:\Data.hex				
		File not load.				
LDROM	File Name:	C:\LDROM.he	×			
	_	File not load.				
SPROM	File Name:	C:\SPROM.he	×			
		File not load.				Last Byte: 0x FF
onfin Dite						
Cotting	Config (): 0		Config 1:		z Update Hi	istoru National V
Setting		WINDEFFES		MELLELLE	(opdatern	story /
ile Data		On-boa	rd Flash		Offline Flash	
PROM DAT	A LDROM SI	PROM APROM	DATA LD	ROM SPROM	APROM DATA I	DROM SPROM Info
00000000:	D0 21 00 20 C3 A4 00 00	69 03 01 0 CD A4 00 0	0 B9 A4 00 0 D7 A4 00	00 35 02 00 00 00 00	00	▲ ● 8 bits
0000020:	EB A4 00 00	00 00 00 0	0 00 00 00 0 F5 A4 00	00 E1 A4 00 00 FF A4 00	00	O 16 bits
0000040:	AD 03 01 00 AD 03 01 00	AD 03 01 0 AD 03 01 0	0 AD 03 01 0 AD 03 01	00 AD 03 01 00 AD 03 01	00	O 32 bits
0000060:	AD 03 01 00	AD 03 01 0	AD 03 01	00 AD 03 01	00	
0000080:	AD 03 01 00	AD 03 01 0	AD 03 01	00 07 A5 00	00	
0000090: 00000A0:	AD 03 01 00 AD 03 01 00	AD 03 01 0 AD 03 01 0	0 AD 03 01 0 AD 03 01	00 AD 03 01 00 AD 03 01	00	
0000080:	AD 03 01 00	AD 03 01 0	D AD 03 01	00 AD 03 01	00	✓ Refresh
rogramming						\frown
APROM	📃 Data F	ïlash 🗌 LC	ROM	SPROM	🗹 Config	Options Start



Make sure the following options are checked.

Program Option	\times								
Operation									
Verify Checksum Verify									
Write Software Serial Number									
Reset Chip after Programming									
Offline Programming Mode									
Software Serial Number (SN)									
Increase SN from 0x 18000000									
Write Address in Flash 0x 00100010									
Options for Offline Programming Mode									
Enter Password									
Repeat Password									
Limit The Number of Offline Programming									
Max Number 100									
Auto-programming (Attention!)									
Trigger by external input signal									
Nu-Link Pro ID Voltage Power control is used on Nu-Link-Pro, and is valid only if target power is not detected. 1.8V 2.5V 3.3V 5.0V									
Default OK Cancel									



Select start

aus											
Stop check	Nu-Link con	nected (II	D: 77889e	e47)							
Part No.											
oad File											
APROM	File Name:	C:\Use	ers\Matt\[Desktop\	Chilltrix\P4	32\Old Sol	ftware\P43	2S10-V1	06-0R\P43	2S10-V10	6-0R.bin
		size: 72	2.6K Bytes	s, checks	um: 3b1b				C)ffset: Ox 🛛)
Data Flash	File Name:	C:\Da	ta.hex								
		File not	load.								
LDROM	File Name:	C:\LDI	ROM.hex								
		File not	load.								
SPROM	File Name:	C:\SPI	ROM.hex								
		File not	load.						L	ast Byte: ()x FF
onfig Bits											
Setting	Config 0: (x7FBEFF	E5 (Config 1:	0xFFFF	FFFF	•	(Update	History >		\sim
le Data			On-board	d Flash			Offline F	lash			
PROM DATA	LDROM S	PROM	APROM	DATA	LDROM	SPROM	APROM	DATA	LDROM	SPROM	Info
				-		-				● 8 E ○ 16	iits bits
										○ 32	bits



Select ok

NuMicro ICP Programming Tool	×
a) You select option "Offline Mode" will only write flash data to ICE. Continue anyway?	
OK Cancel	
NuMicro ICP Programming Tool X	
Programming offline flash, OK! _{Or}	
ОК	

You are now ready to flash the main pcb board on the chiller as before.



HMI Updating using SD card.

To update the hmi, all you need is a micro sd card. In the file labeled "HMI-P432-US-Vx.x.x.zip" there will be a folder labeled "Compile" Drag this to the sd card and follow the instructions below.

10.11		Name	Date modified	Туре	Size
Quick access		📙 compile	8/9/2023 11:25 AM	File folder	
Desktop	*				
Documents	A				
👆 Downloads	*				
Pictures	*				
Chilltrix					
cx50-2					
P432					
VW - Audi					
📥 OneDrive - Perso	onal				
💻 This PC					
🧊 3D Objects					
E Desktop					
🔮 Documents					
👆 Downloads					
👌 Music					
E Pictures					
Videos					
🏪 Windows (C:)					
OVD Drive (D:)	ADG				
素 HSE (\\hse-app	p1) (F				
i Network					

Note the above shows what the sd card should contain.



HMI Update Instructions CX 35-1/CX 50-2

Step 1. If we sent you an Sd card with the software already loaded then Insert the SD card into the SD card slot at the upper right corner of the Controller with power on but <u>with the chiller</u> <u>shut down</u>. If you are supplying your own SD card then contact Support for the latest file for your chiller and load the folder labeled "Compile" onto the SD card.



Step 2. When the upgrade prompt appears, click "Upgrade HMI Data"







Step 3. In the process of updating, it will take about 1 minute.





Step 4. The screen will go black and restart. Remove the SD card after the screen restarts.





Step 5. Click "Setting".





Step 6. Continue to click "Setting".





Step 7. Click "Factory Reset" before startup to initialize the program.

