

Cx34-4/cx50-1 main PCB programmer instruction

Needed Tools:

To do this install you will need to get access to the main circuit board.

1. a Philips head screw driver to remove the front access panel.
2. a Windows pc laptop that is portable to the chiller.

Included Tools:

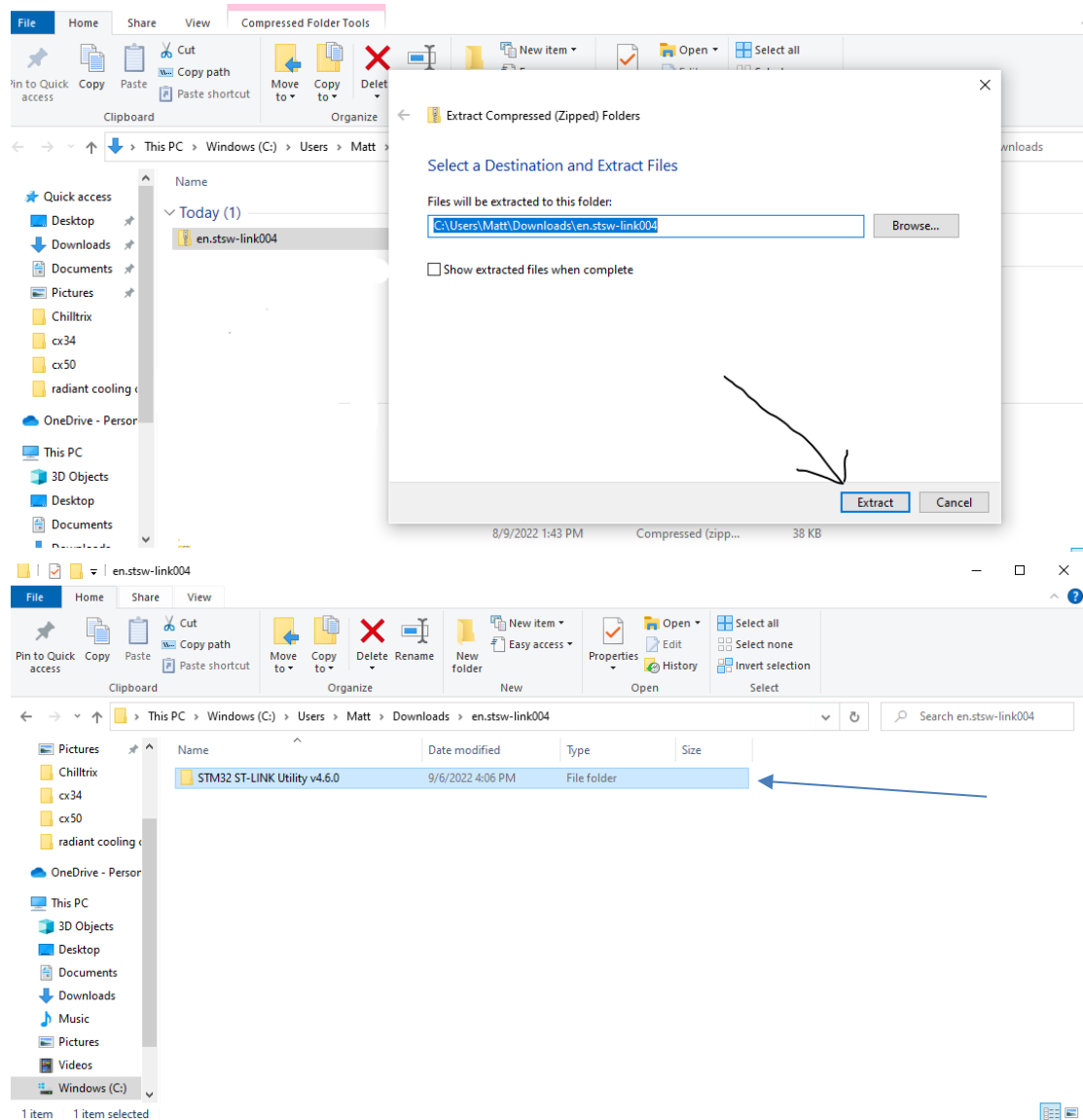


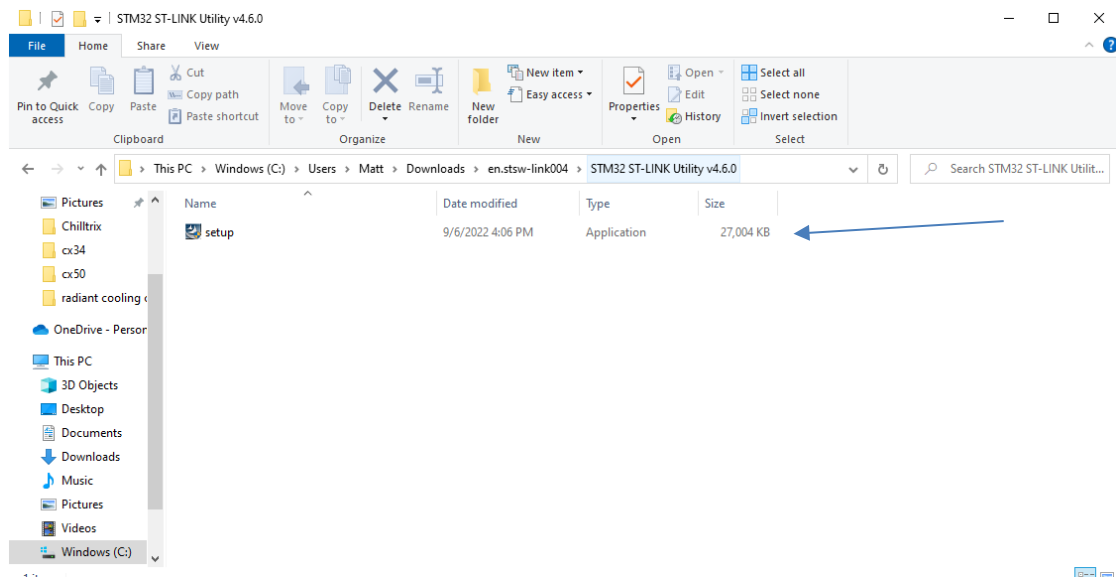
Warning: Before uploading the software, you must disconnect the power supply to the main PCB.(Not just turn off heat pump, you must shut off power supply to heat pump at the circuit breaker or disconnect)

Quick overview

1. READ THIS WHOLE MANUAL
2. Request the download link from Chiltrix support dept. & download software to your Windows notebook pc and become familiar with it. You may also download the latest HMI (Human Machine Interface, i.e., “the controller”) software at this time.
3. Turn power off to the chiller by the disconnect or circuit breaker.
4. Get access to the chillers main PCB board.
5. Plug the programmer into the PC using a USB port.
6. Connect the programmer to the Chiltrix mainboard as shown below.
7. Install the software on to the heat pump.
8. Unplug the programmer and re install the covers onto the heat pump being careful to not strip any screws.
9. Restore power connection to the heat pump. Stop the heat pump with the OFF button and confirm STOP.
10. Install the HMI software using the instructions at the end of this document.
11. Perform a “Factory Reset”

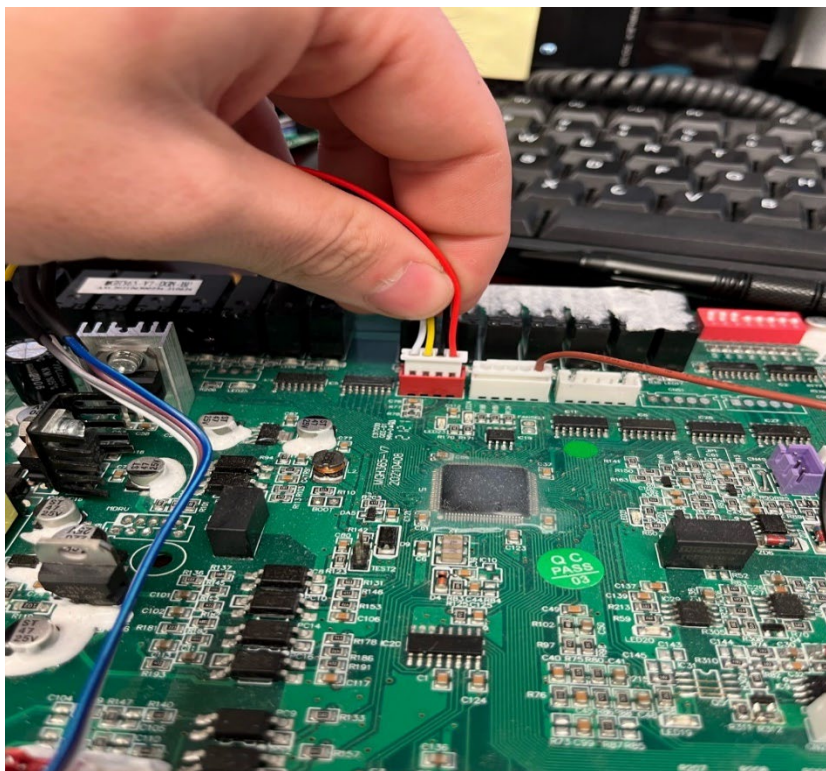
1. Install software STM32 ST-LINK Utility v4.5. on to your PC. Click the following link [STSW-LINK004 - STM32 ST-LINK utility \(replaced by STM32CubeProgrammer\) - STMicroelectronics](#) And download according to the following instructions. You will have to input your email and you will get a download link in your email address. Extract this file as show below and follow the on screen instructions to install.



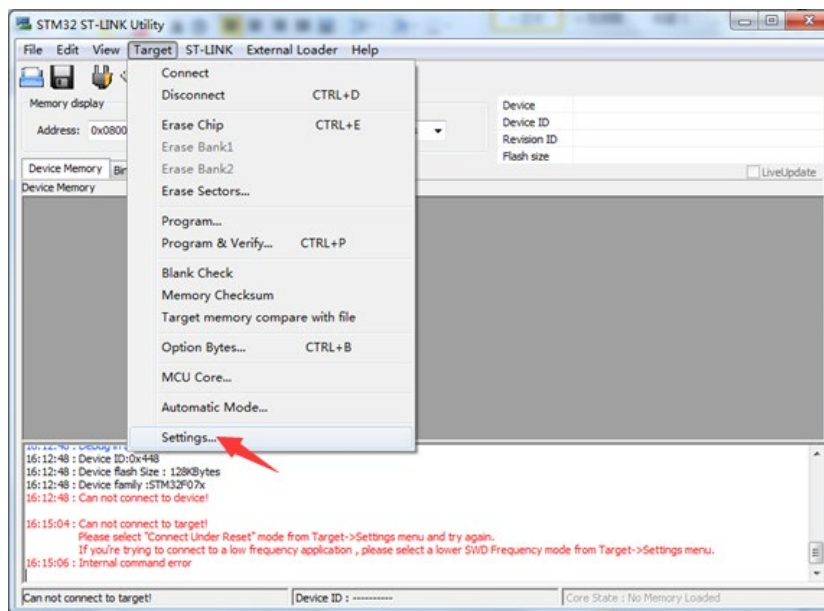


After software download and setup is complete:

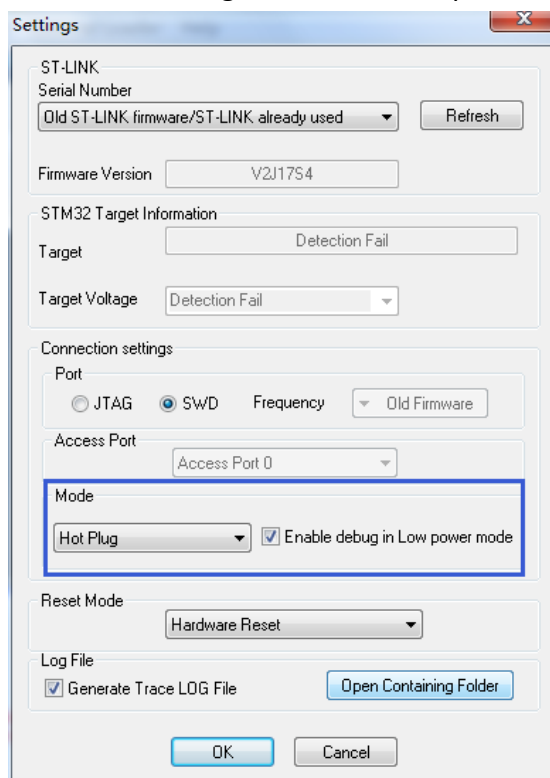
2. Plug in the programmer to computer, it should install driver automatically.
3. Connect Programmer to the main PCB CN23 socket.



4. On the PC, open the STM32 ST-LINK Utility. And press Target->Setting



5. Select Hot Plug at the Mode. -> press "OK"



6. Click connect to the target as below. It will show the read Device is STM32....

The screenshot shows the STM32 ST-LINK Utility software interface. A red arrow points to the 'Connect to the target.' button in the 'Memory display' section. The 'Device' information box is highlighted with a red border, showing the following details:

Device	STM32F07x
Device ID	0x448
Revision ID	Rev Z
Flash size	128KBytes

The 'Target memory' section displays a memory dump with the following columns: Address, 0, 4, 8, C, and ASCII. The address range is [0x08000000 0x08012E84].

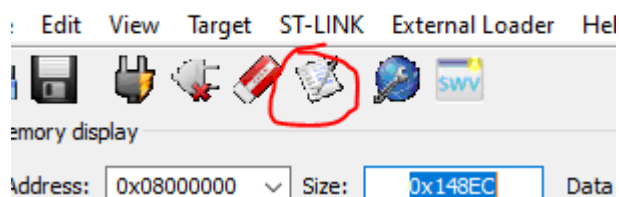
Address	0	4	8	C	ASCII
0x08000000	200011A0	080000D1	08003641	0800309D	?.. ?.. A 6 .. ?0 ..
0x08000010	00000000	00000000	00000000	00000000
0x08000020	00000000	00000000	00000000	080039DD ?9 ..
0x08000030	00000000	00000000	08003689	08003A21 ?6 .. !:..
0x08000040	08000E3	08000E3	08000E3	08000E3	?.. ?.. ?.. ?..
0x08000050	08000E3	0800D59	0800D63	0800D73	?.. Y... c... s ...
0x08000060	08000E3	08000E3	0800B11	0800B21	?.. ?.. !... !...
0x08000070	08000E3	08000E3	08000E3	08000E3	?.. ?.. ?.. ?..

The console window at the bottom shows the following log messages:

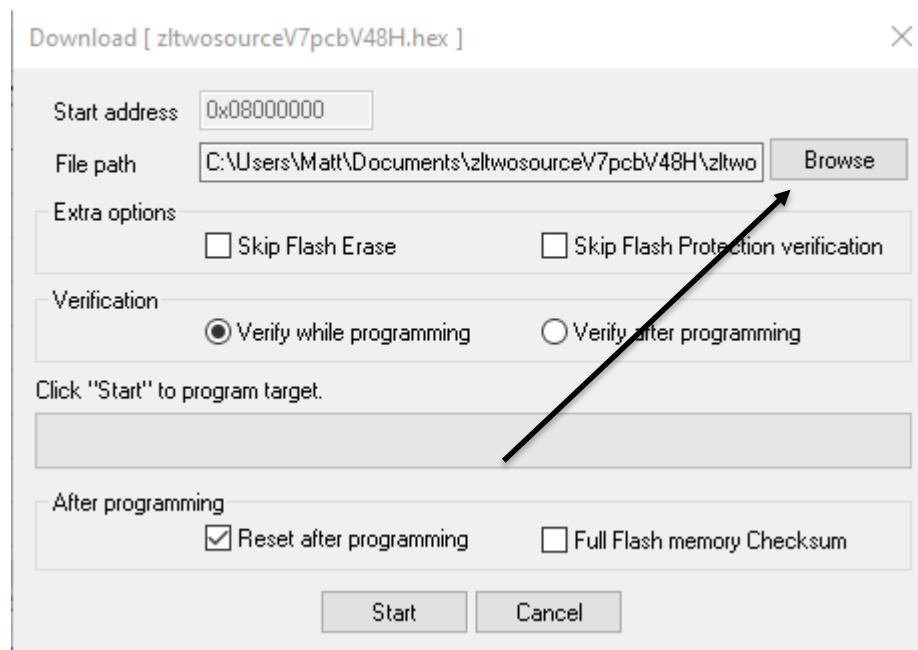
```
16:20:30 : Device flash size : 128KBytes  
16:26:58 : Device family : STM32F07x  
16:27:31 : ST-LINK SN : Old ST-LINK firmware/ST-LINK already used  
16:27:31 : V2J1754  
16:27:31 : Connected via SWD.  
16:27:31 : Connection mode : HotPlug.  
16:27:31 : Debug in Low Power mode enabled.  
16:27:32 : Device ID:0x448  
16:27:32 : Device flash Size : 128KBytes  
16:27:32 : Device family : STM32F07x
```

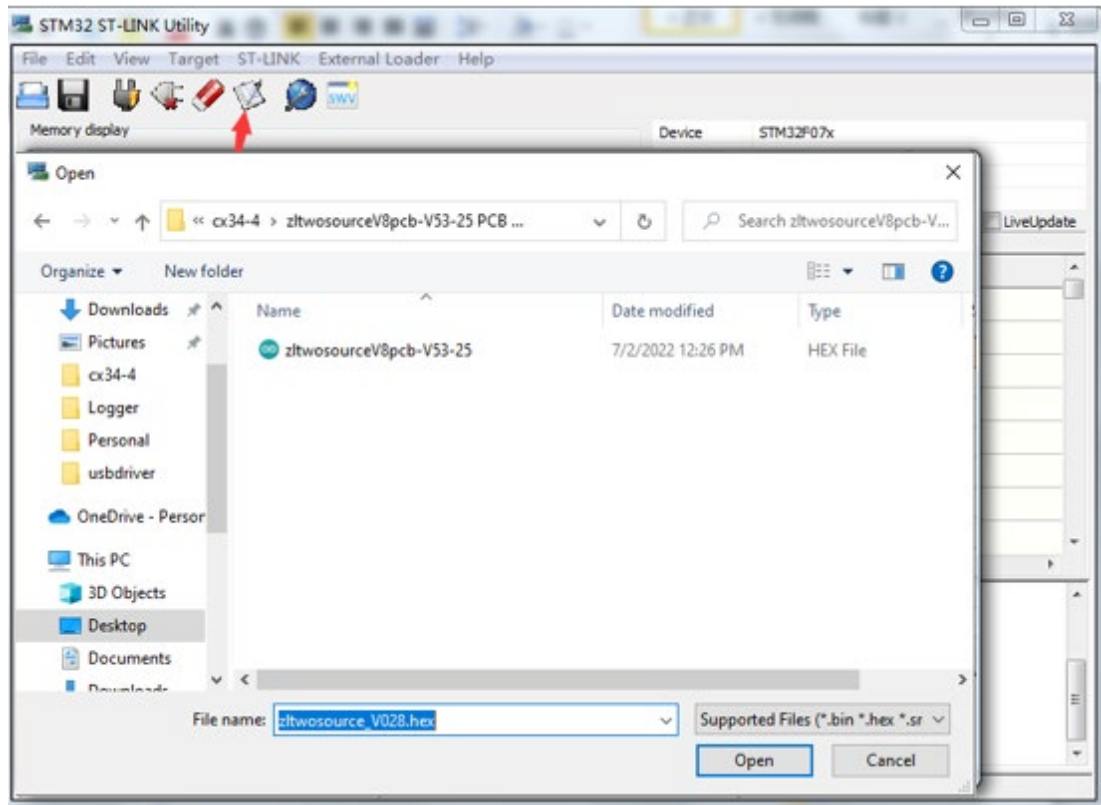
At the bottom of the window, the status bar shows: 'Debug in Low Power mode enabled.', 'Device ID:0x448', and 'Core State : Live Update Disabled'.

7. Click below “Program Verify” (the white button) button to select the hex file and open it.

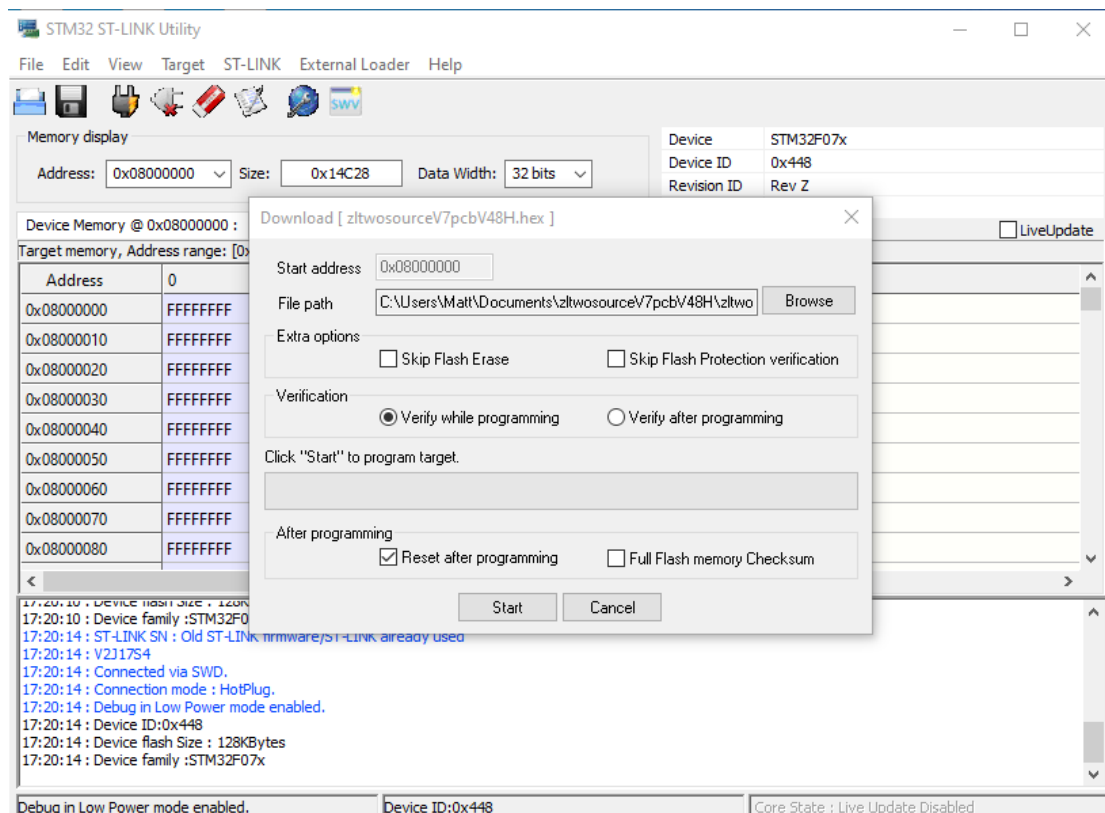


Click the Browse button to find the file you downloaded which is a hex file ONLY. The file we sent may or may not be program V53-25 as shown in the example below.

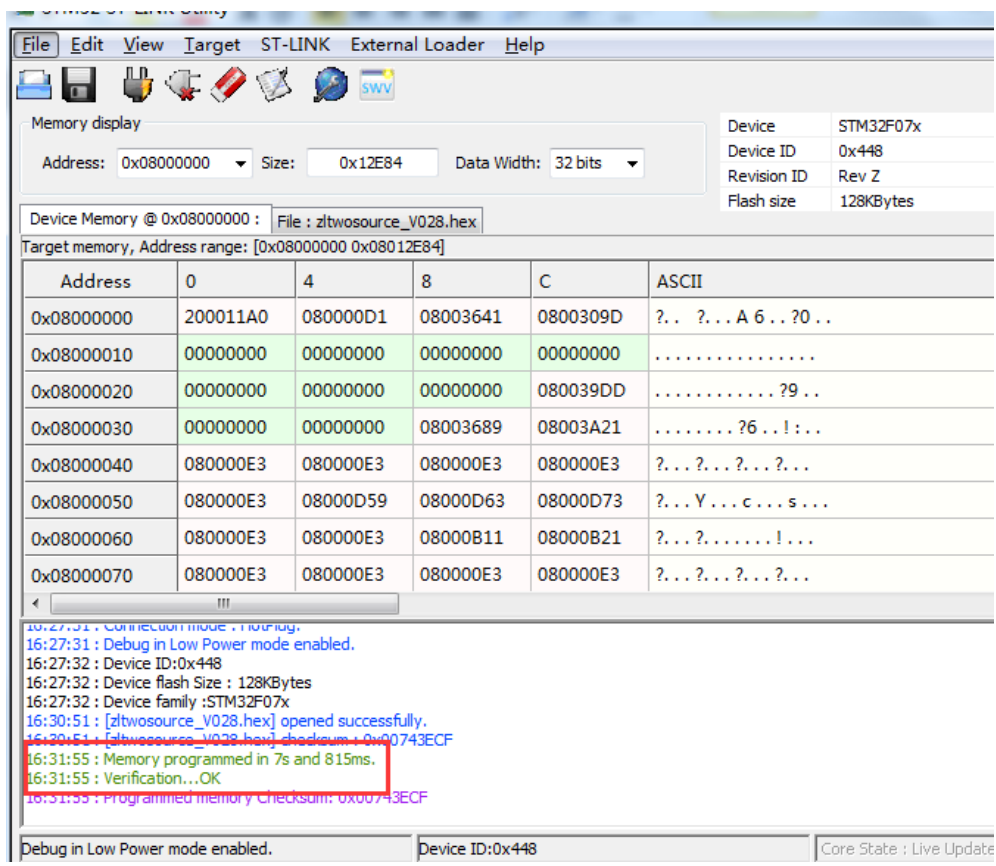




8. Click "Start" as below to start upload the software.



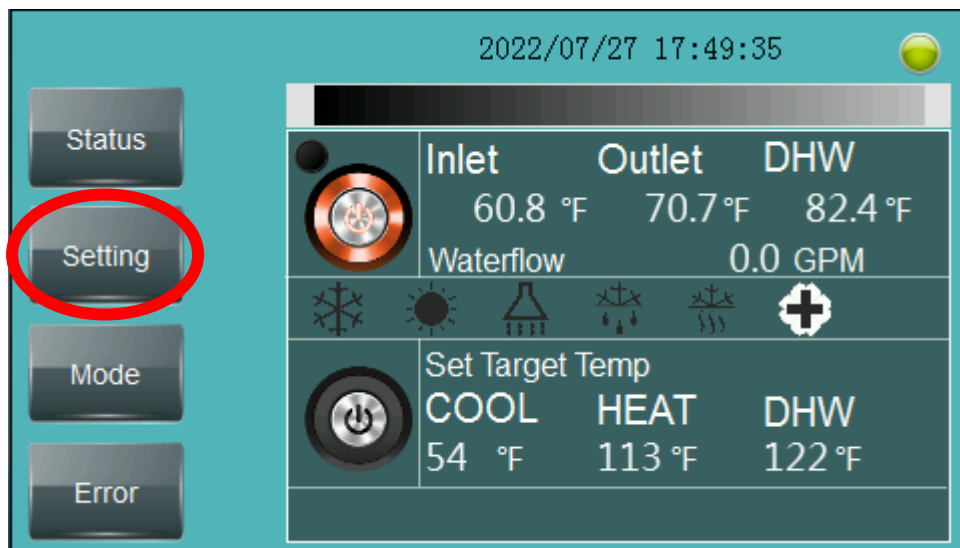
9. When you see below Memory programmed and verification ok. Then it means the software is upload successfully.



Now apply power to the unit and initialize the board by performing a Factory Reset in the controller under settings>settings.

10. Initializing the board

Go to settings on the home screen.



Then go to settings

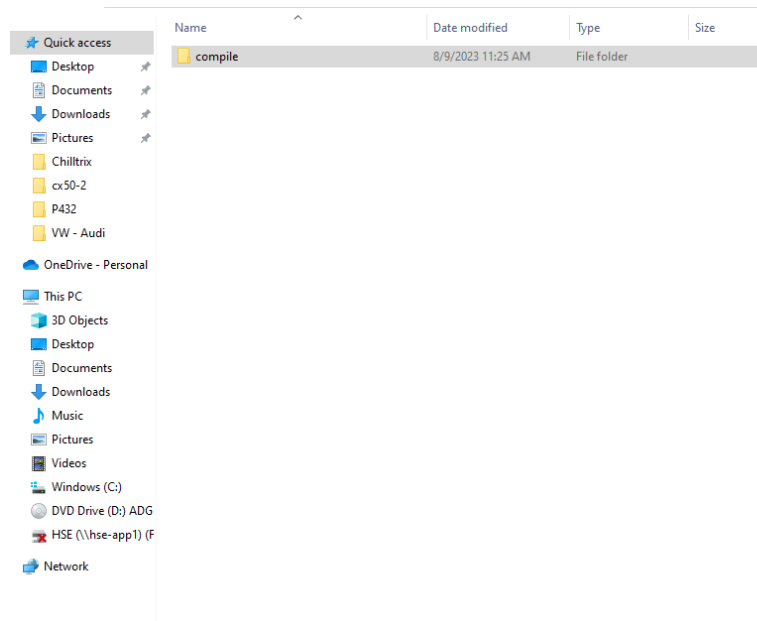


Then go to factory reset, if you press this once then the board will initialize. (if you press it more than once that's ok too). Once you press factory reset, press the home button in the upper left and go back to the home screen.

HMI Updating using SD card.

To update the HMI, all you need is a micro SD card plugged into your PC. In the file you downloaded is a folder labeled “Chiltrix-amsv12-mgh365-xxx” there will be a subfolder labeled “Compile”

Drag this to the SD card and follow the instructions below.



Note the above shows what the SD card should contain.

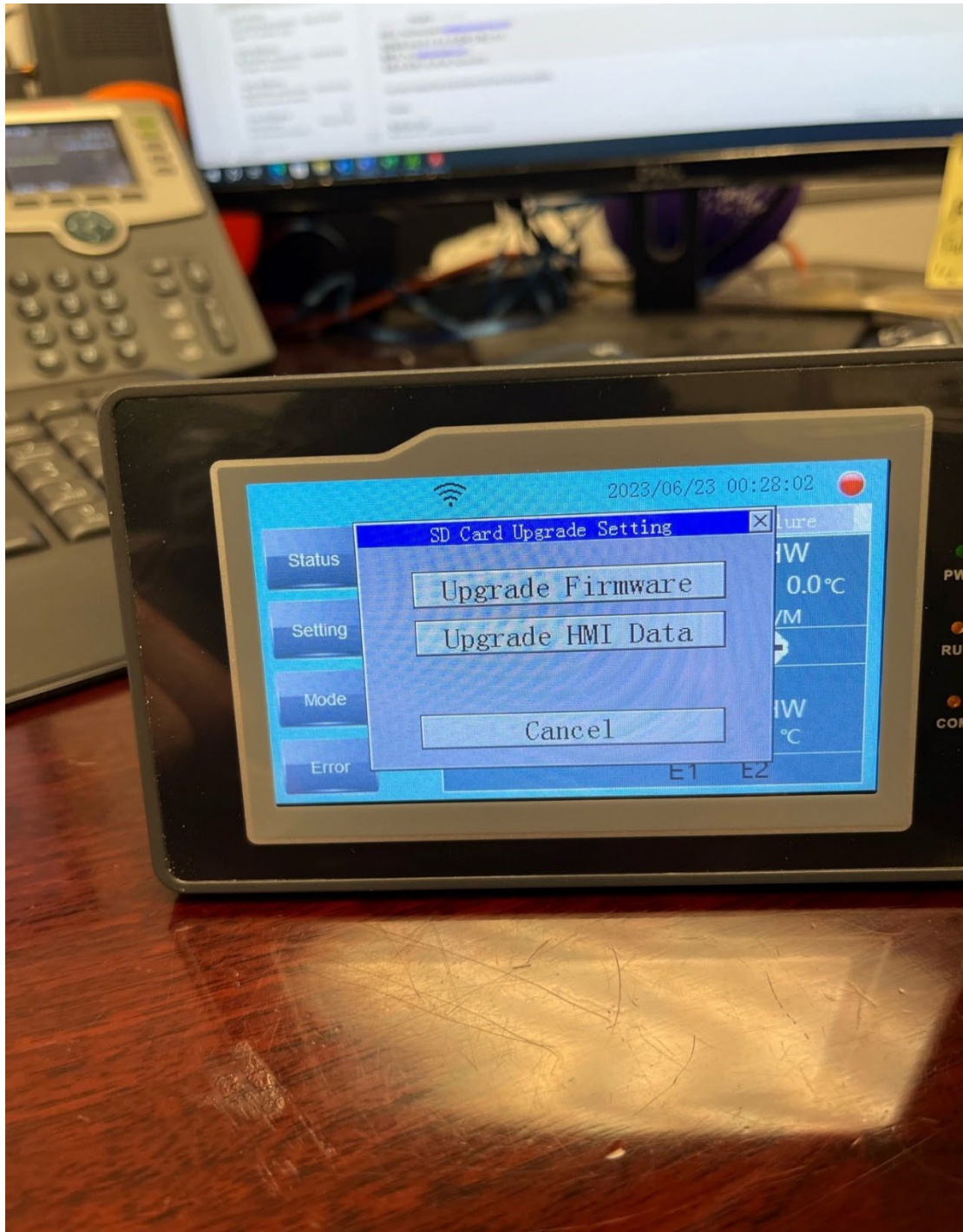
HMI Update Instructions

CX 34-4/CX 50-1

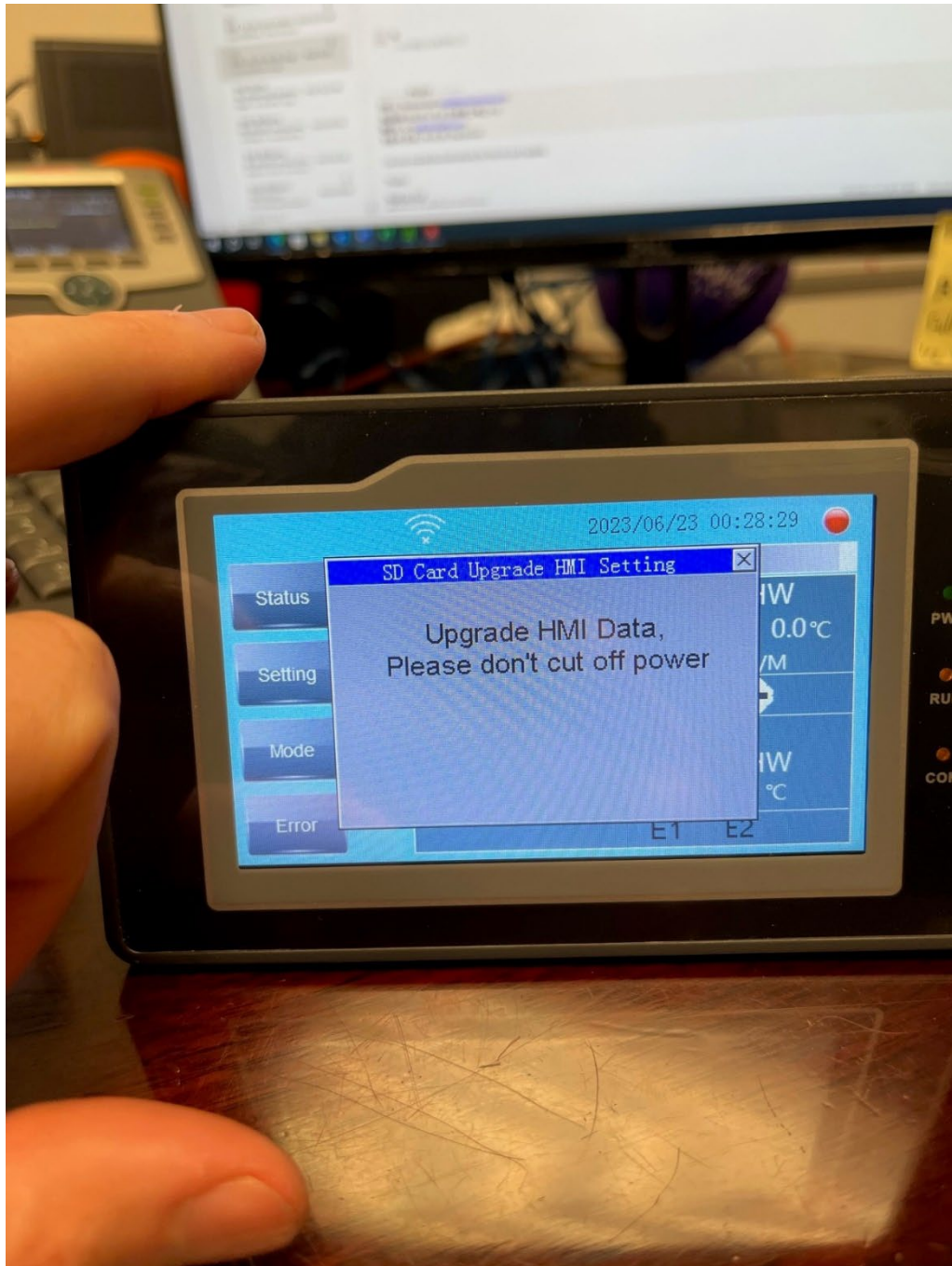
Step 1. If we sent you an SD card with the software already loaded then Insert the SD card into the SD card slot at the upper right corner of the Controller with power on but with the chiller shut down. If you are supplying your own SD card then contact Support for the latest file for your heat pump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



Step 2. After inserting the SD card into the HMI, when the upgrade prompt appears, click "Upgrade HMI Data"



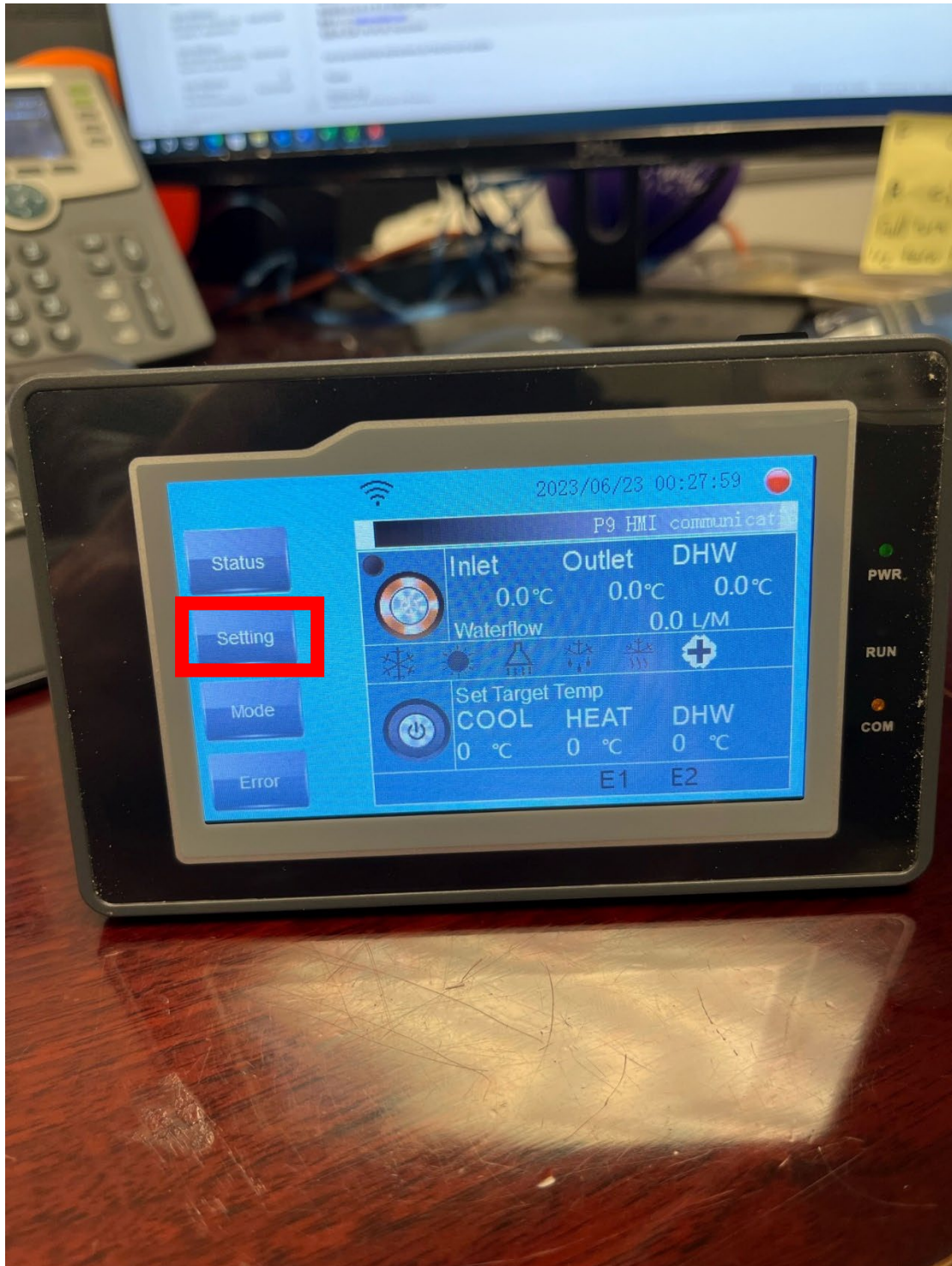
Step 3. In the process of updating, it will take about 1 minute.



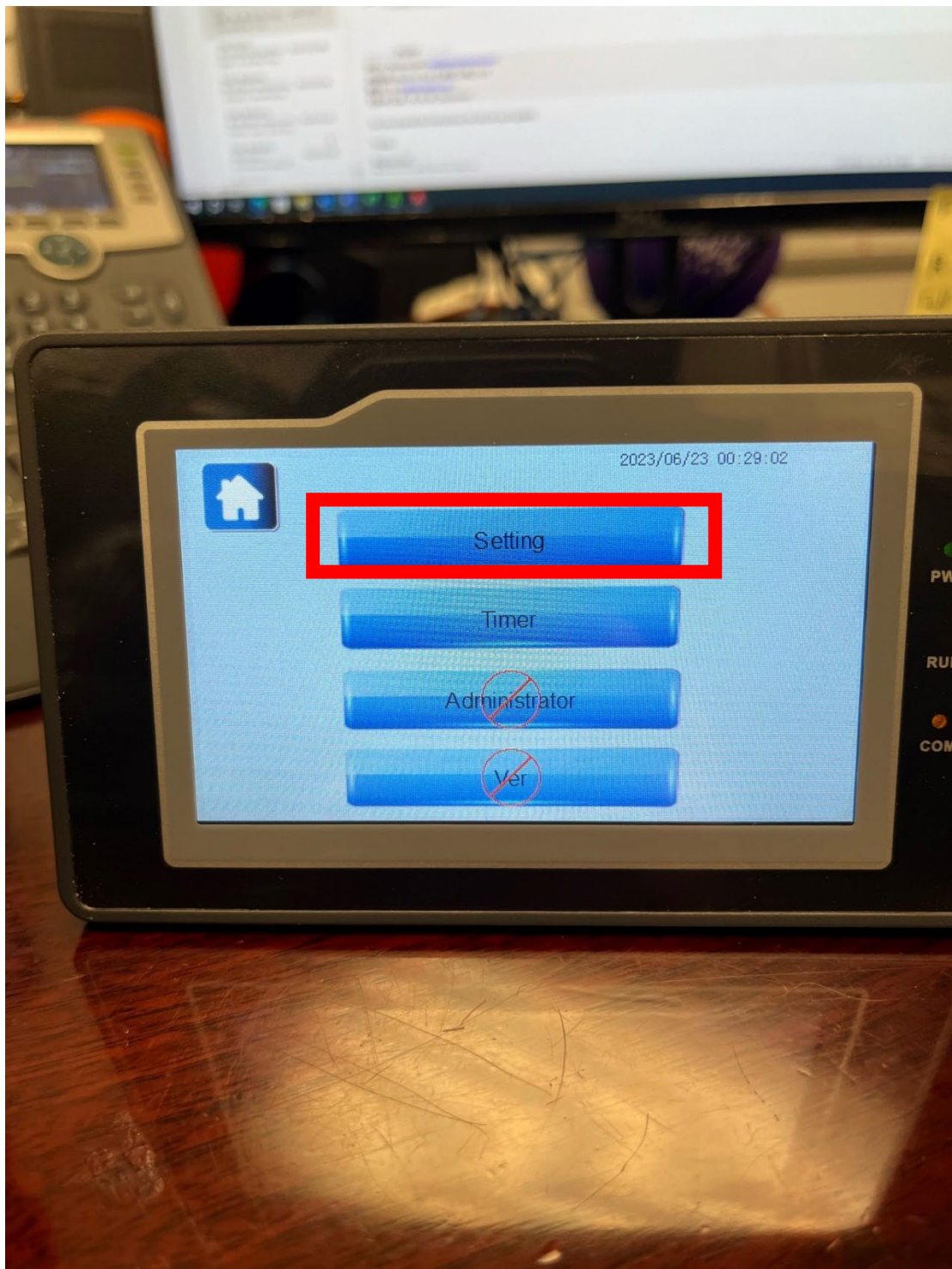
Step 4. The screen will go black and restart. Remove the SD card after the screen restarts. Save the card for future use.



Step 5. Click "Setting".



Step 6. Continue to click "Setting".



Step 7. Click "Factory Reset" before starting the heat pump to initialize the program.

