

**PiCAN FD and LIN-Bus
Firmware update
USER GUIDE V1.0
June 2022**

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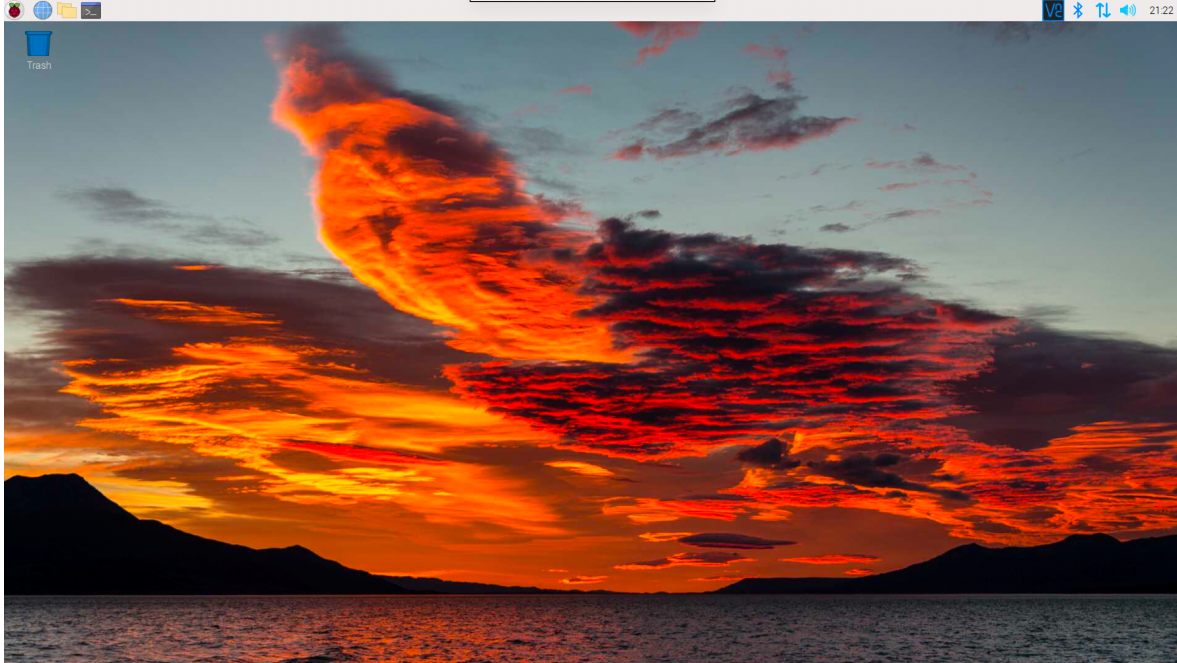
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1. Introduction

This document describes the procedure required to do a firmware update on the PiCAN FD LIN board.

The Raspberry Pi would need to be running the Raspberry Pi OS with desktop GUI.



2. Software Install

First do an update:

```
sudo apt update
```

Then reboot the Pi.

Next install LibericaJDK :

```
cd /home/pi
```

```
wget https://download.bell-sw.com/java/13/bellsoft-jdk13-  
linux-arm32-vfp-hflt.deb
```

```
sudo apt-get install ./bellsoft-jdk13-linux-arm32-vfp-  
hflt.deb
```

```
sudo update-alternatives --config javac
```

```
sudo update-alternatives --config java
```

Now download the java Unified Bootloader Host Application from:

<https://ww1.microchip.com/downloads/aemDocuments/documents/MCU16/ProductDocuments/SoftwareTools/UnifiedHost-1.19.0.zip>

Unzip the file and change into the directory:

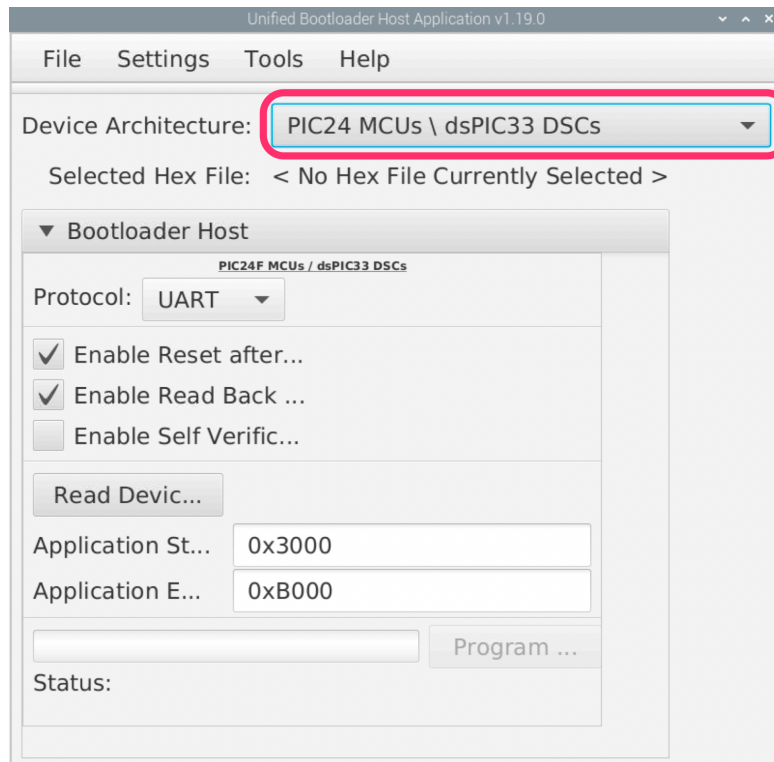
```
cd UnifiedHost-1.19.0
```

3. Using UnifiedHost App

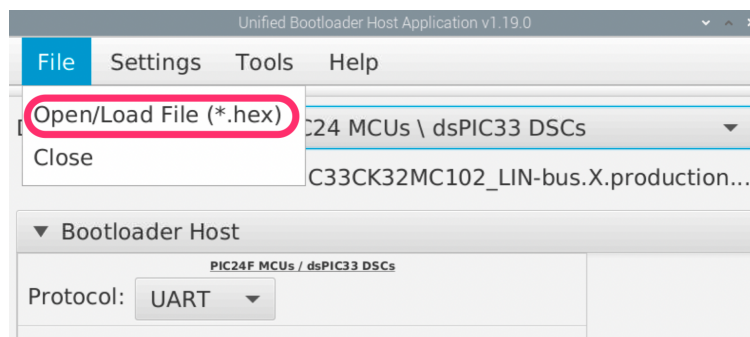
Start the app by:

```
java -jar UnifiedHost-1.19.0.jar
```

Select Device Architecture as PIC24 MCUs \ dsPIC33 DSCs

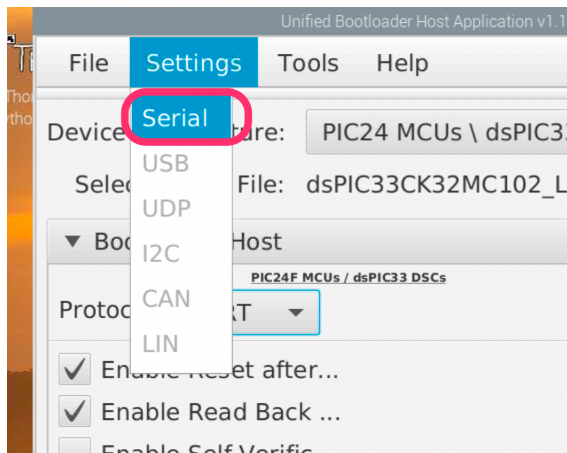


Now click File | Open/Load File (*.hex) to load the firmware hex file.

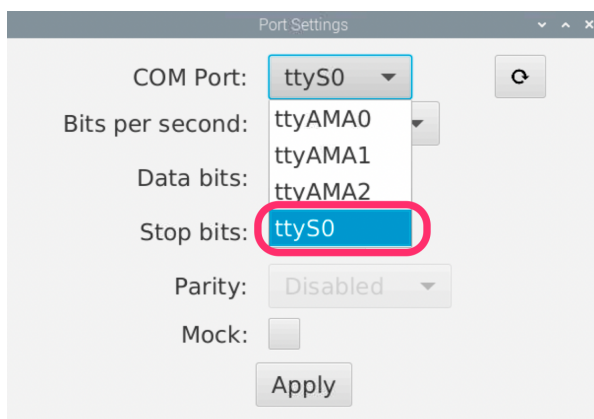


Select the required firmware hex file.

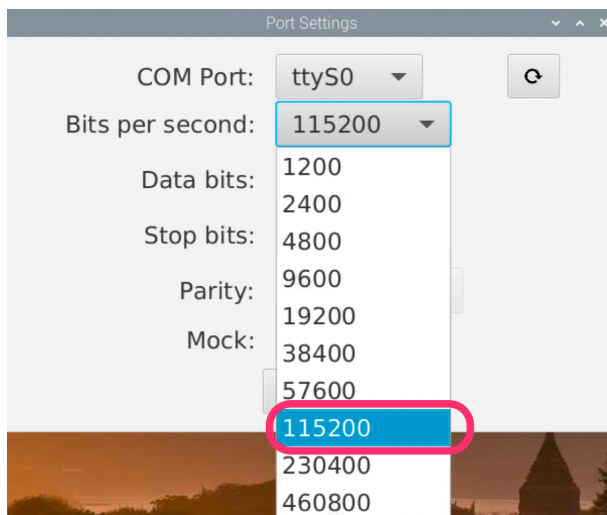
Now click Settings|Serial.



Select the COM Port to be ttyS0:



Select the Bits per second to be 115200:



Now click Apply.

Download the boot.py from github:

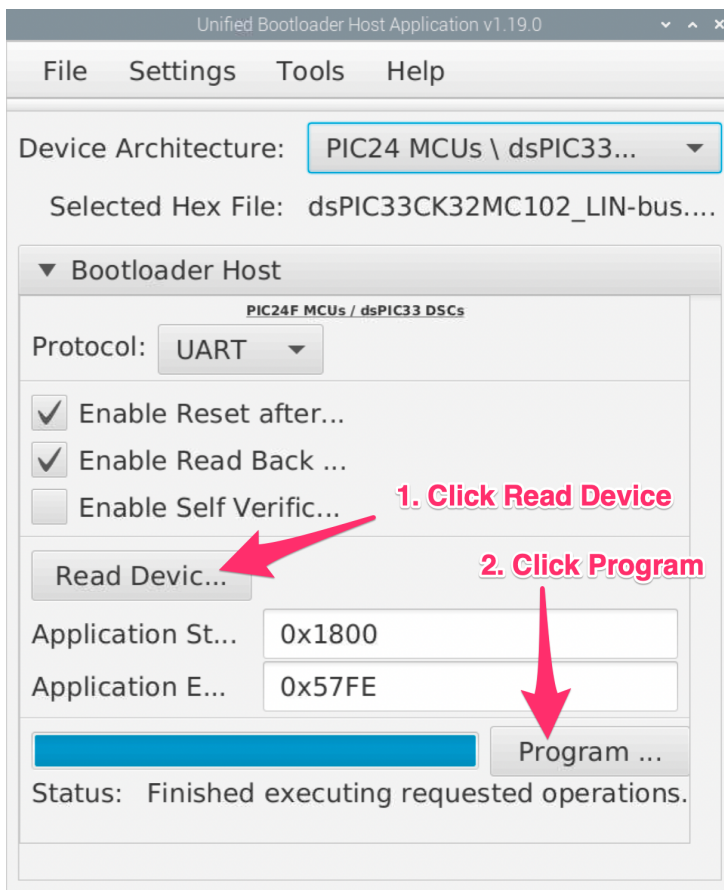
Start a terminal and run the boot.py program by:

```
python3 boot.py
```

```
pi@raspberrypi: ~/UnifiedHost-1.19.0
File Edit Tabs Help
pi@raspberrypi:~/UnifiedHost-1.19.0 $ python3 boot.py
LIN-bus board firmware upgrade
Setting reset and boot pin low
Setting reset and high
Setting boot and high
pi@raspberrypi:~/UnifiedHost-1.19.0 $
```

This will put the dsPIC33 micro-controller into bootloader mode. Check LED2 is flashing rapidly.

Now click 1. Read Device follow by 2. Program.



Check the Status shows Finished executing requested operations.