

STM32H750 + Arduino IDE

ponedeljek, 02. oktober 2023 00:01

Navodila STM32H750 in Arduino IDE

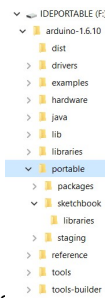
Osnovna instalacija

- Instalacija Arduino IDE

- <https://www.arduino.cc/en/software>
- Portable instalacija :
 - Zadnja portable verzija:
Arduino IDE 1.8.19

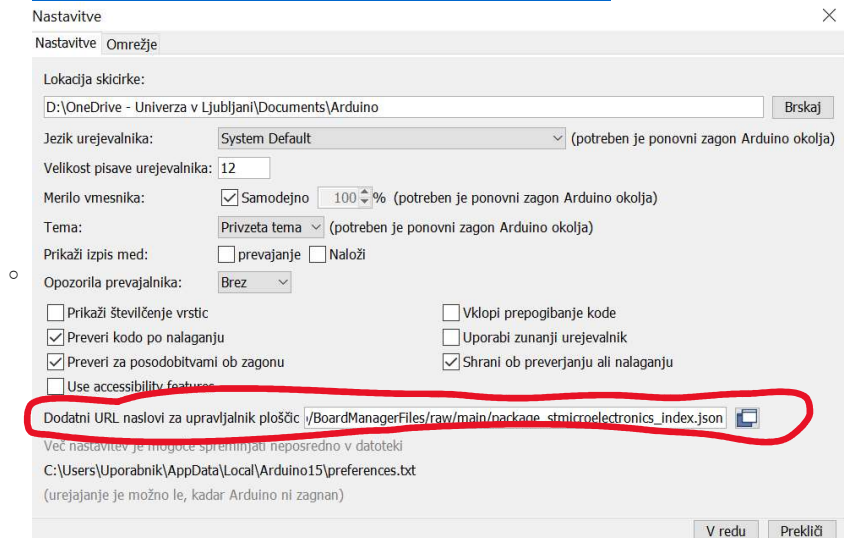
Z naslova <<https://www.arduino.cc/en/software>>

- [Download](#) a compressed version of the Arduino IDE according to your OS;
- Once download has been completed, extract the archive content on the chosen unit (local or pendrive);
- Open the extracted folder and in its root **create a new directory called portable**, alongside the others;
 - Z naslova <<https://docs.arduino.cc/software/ide-v1/tutorials/PortableIDE>>



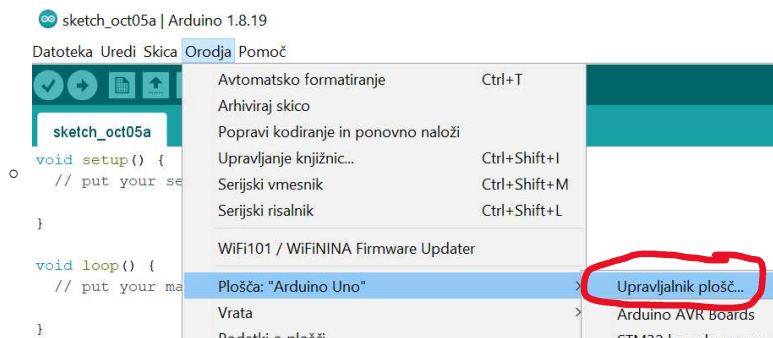
- Instalacija STM32Duino knjižnice

- https://github.com/stm32duino/Arduino_Core_STM32/wiki/Getting-Started

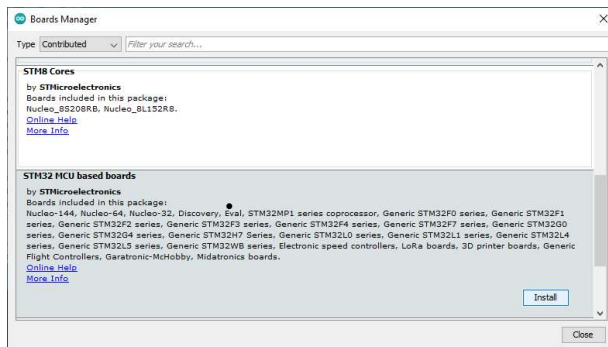


https://github.com/stm32duino/BoardManagerFiles/raw/main/package_stm32electronics_index.json

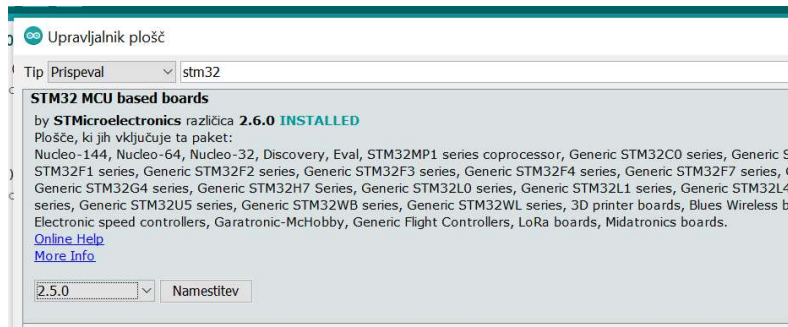
Z naslova <https://github.com/stm32duino/Arduino_Core_STM32/wiki/Getting-Started>



Select **"Contributed"** type.



Select the "STM32 MCU based boards" and click on install.



Z naslova <https://github.com/stm32duino/Arduino_Core_STM32/wiki/Getting-Started>

o

Dodatne spremembe v datotekah

• Dopolnitev datoteke "boards.txt"

- o V datoteko:
 - C:\Users\Uporabnik\AppData\Local\Arduino15\packages\STMicroelectronics\hardware\stm32\2.6.0\boards.txt
 - Ali pri portable instalaciji :
 - D:\RA_VIN_OR_Rozman_2023\RAVINOR\Apps\arduino-1.8.19\portable\packages\STMicroelectronics\hardware\stm32\2.6.\boards.txt
 -
- o Dodam


```
#####
# Discovery boards
....

# STM32H750B-DK
Disco.menu.pnum.STM32H750B_DK=STM32H750B-DK
Disco.menu.pnum.STM32H750B_DK.upload.maximum_size=131072
Disco.menu.pnum.STM32H750B_DK.upload.maximum_data_size=884736
Disco.menu.pnum.STM32H750B_DK.build.board=GENERIC_H750XBHX
Disco.menu.pnum.STM32H750B_DK.build.product_line=STM32H750xx
Disco.menu.pnum.STM32H750B_DK.build.variant=STM32H7xx/H742X(G-I)H_H743X(G-I)H_H745X(G-I)H_H747X(G-I)H_H750XBH_H753XIH_H755XIH_H757XIH
```

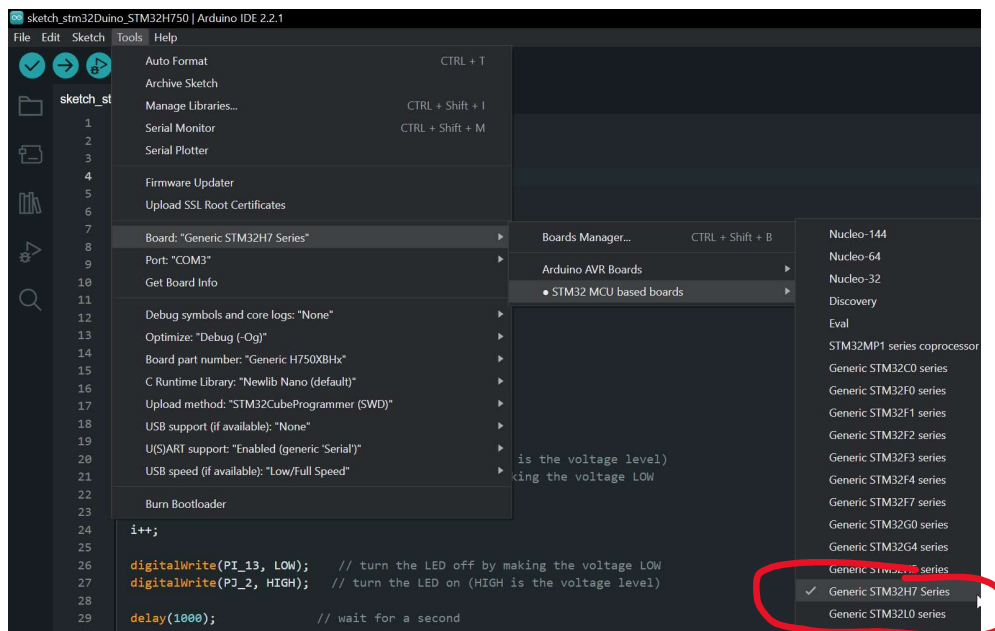
- o Zbrišem user data cache
 - cel direktorij v C:\Users\Uporabnik\AppData\Roaming\arduino-ide
 - Pri portable instalaciji samo ponovno zaženem Arduino IDE

• Dodana Linker skripta

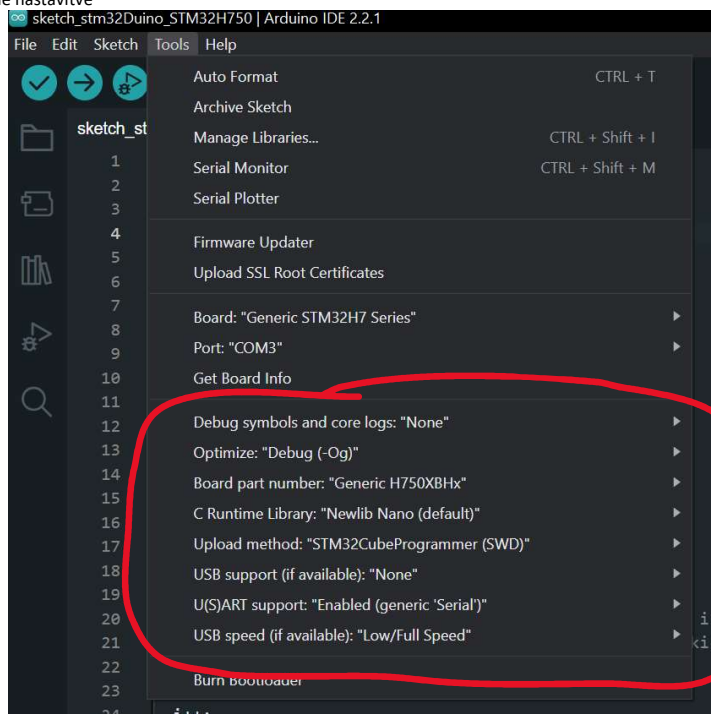
- o V direktorij
 - C:\Users\Uporabnik\AppData\Local\Arduino15\packages\STMicroelectronics\hardware\stm32\2.6.0\variants\STM32H7xx\H742X(G-I)H_H743X(G-I)H_H745X(G-I)H_H747X(G-I)H_H750XBH_H753XIH_H755XIH_H757XIH
 - Oziroma pri portable instalaciji :
 - D:\RA_VIN_OR_Rozman_2023\RAVINOR\Apps\arduino-1.8.19\portable\packages\STMicroelectronics\hardware\stm32\2.6.0\variants\STM32H7xx\H742X(G-I)H_H743X(G-I)H_H745X(G-I)H_H747X(G-I)H_H750XBH_H753XIH_H755XIH_H757XIH
- o Se doda linker skripta iz CubeIDE (prezkušena je FLASH skripta)
 - Datoteka v CubeIDE
 - STM32H750XBHX_FLASH.ld
 - Se kopira kot "ldscript.ld" datoteka

• Nastavitve v Arduino IDE - Generic 750XBH - dela !!!

- o Board -> Generic STM32H7 series

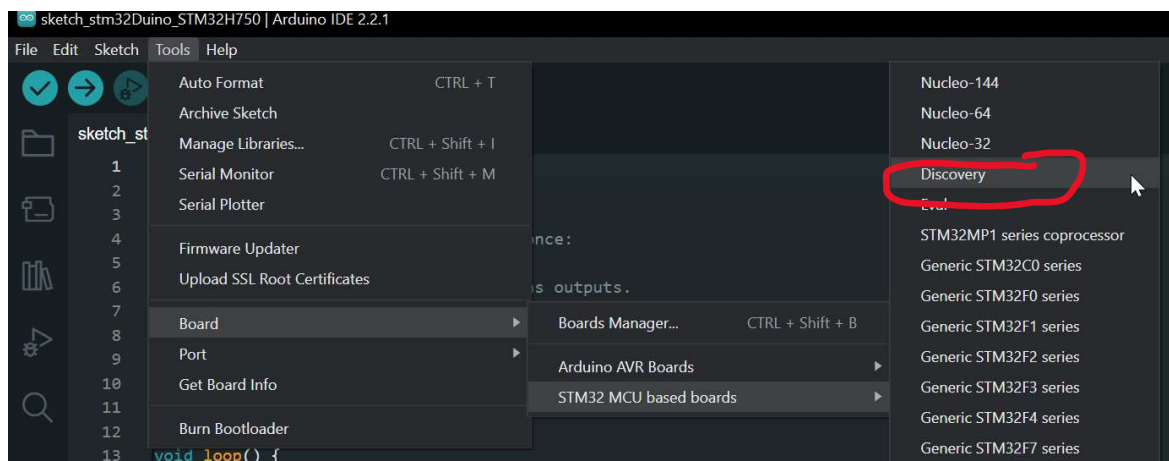


○ Ostale nastavitve

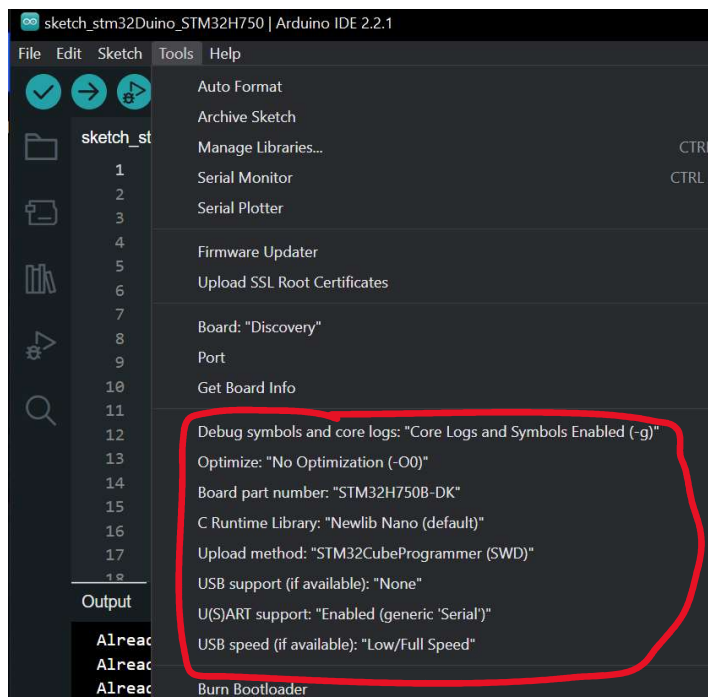


• Nastavitve v Arduino IDE - Discovery board - ne dela še !!!

○ Board -> Discovery



○ Ostale nastavitve



- Dopolnitev datoteke "boards.txt" - STM32H753 (imamo več Flash pomnilnika na voljo - 2MB)

- V datoteko:

- C:\Users\Uporabnik\AppData\Local\Arduino15\packages\STMicroelectronics\hardware\stm32\2.6.0\boards.txt
 - Ali pri portable instalaciji :
 - D:\RA_VIN_OR_Rozman_2023\RAVINOR\Apps\arduino-1.8.19\portable\packages\STMicroelectronics\hardware\stm32\2.6.\boards.txt
 -

- Dodam

```
#####
# Generic H7
....

# Generic H753XIHx
GenH7.menu.pnum.GENERIC_H753XIHx=Generic H753XIHx
GenH7.menu.pnum.GENERIC_H753XIHx.upload.maximum_size=2097152
GenH7.menu.pnum.GENERIC_H753XIHx.upload.maximum_data_size=884736
GenH7.menu.pnum.GENERIC_H753XIHx.build.board=GENERIC_H753XIHx
GenH7.menu.pnum.GENERIC_H753XIHx.build.product_line=STM32H753xx
GenH7.menu.pnum.GENERIC_H753XIHx.build.variant=STM32H7xx/H742X(G-I)H_H743X(G-I)H_H745X(G-I)H_H747X(G-I)H_H750X8H_H753XIH_H755XIH_H757XIH
```

- Zbrišem user data cache (v novi verziji, v 1.8.19 samo restart)

- cel direktorij v C:\Users\Uporabnik\AppData\Roaming\arduino-ide
 - Pri portable instalaciji samo ponovno zaženem Arduino IDE

- Preizkus programa

- Nov program ("sketch") :

```
int i;
//                               RX    TX
HardwareSerial Serial3(PB11, PB10);
void setup() {
    // put your setup code here, to run once:
    // initialize digital pins PI13,PJ2 as outputs.
    pinMode(PI_13, OUTPUT);
    pinMode(PJ_2, OUTPUT);
    Serial3.begin(115200);
}

void loop() {
    // put your main code here, to run repeatedly:
    digitalWrite(PI_13, HIGH);    // turn the LED on (HIGH is the voltage level)
    digitalWrite(PJ_2, LOW);      // turn the LED off by making the voltage LOW

    delay(1000);                  // wait for a second

    i++;
    digitalWrite(PI_13, LOW);      // turn the LED off by making the voltage LOW
    digitalWrite(PJ_2, HIGH);      // turn the LED on (HIGH is the voltage level)
    delay(1000);                  // wait for a second

    Serial3.print("Hello World: ");
    Serial3.println(i);
}
```

- Arduino IDE -> Verify in potem še -> Upload

- Blinkata 2 LED diodi in v serial monitorju se izpisuje Hello World s zaporedno številko