

user's guide to

# MINI-32

The whole PIC32 development board fitted on DIP40 containing powerful PIC32MX534F064H microcontroller. It's the first ever PIC32 chip on DIP40 socket, pin compatible with PIC16F887 and PIC18(L)F45K20 microcontrollers!



BOOTLOADER

# TO OUR VALUED CUSTOMERS

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The primary aim of our company is to design and produce high quality electronic products and to constantly improve the performance thereof in order to better suit your needs.

A handwritten signature in white ink, appearing to read 'NM', is positioned above the name and title of the General Manager.

Nebojsa Matic  
General Manager

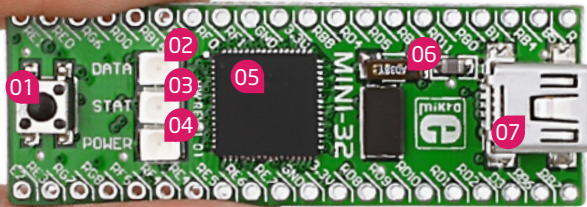
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# Introduction to MINI-32



## Key features

- 01 Reset button
- 02 DATA LED (connected on RD6)
- 03 STAT LED (connected on RG6)
- 04 POWER supply LED
- 05 Microcontroller PIC32MX534F064H
- 06 Quartz-crystal oscillator
- 07 USB MINIB connector

Miniature and powerful development tool designed to work as stand alone device or as MCU in DIP40 socket. MINI-32 comes with preinstalled bootloader so it is not necessary to have external programmer. If there is need for external programmer (mikroProg) attach it to MINI-32 via pads marked with RB6 (PGC), RB7 (PGD) and MCLR.



## System Specification



### power supply

3.3V via pads or 5V via USB



### power consumption

depends on MCU state (max current into 3.3V pad is 300mA)



### board dimensions

50.80 x 17.78mm (2 x 0.70")



### weight

~9g (0.02 lbs)

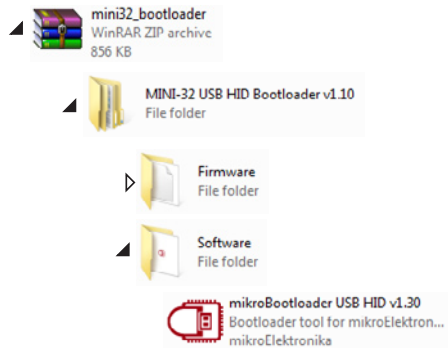
# 1. Programming with bootloader

For programming, microcontroller use bootloader program which is preinstaled in to MCU memory. To transfer .hex file from a PC to MCU you need bootloader software (**mikroBootloader USB HID**) which can be downloaded from:



<http://www.mikroe.com/eng/products/view/711/mini-32-board/>

After software is downloaded unzip it to desired location and start mikroBootloader USB HID software.



## step 1 - Connecting MINI-32



Figure 1-1: mikroBootloader USB HID

- 01 Connect MINI-32 board with a PC via USB cable and USB icon will turn red
- 02 Within 5s click on Connect button

## step 2 - Browsing for .hex file



Figure 1-2: Browse for HEX

- 01 Click on Browse for HEX button

## step 3 - Select .hex file

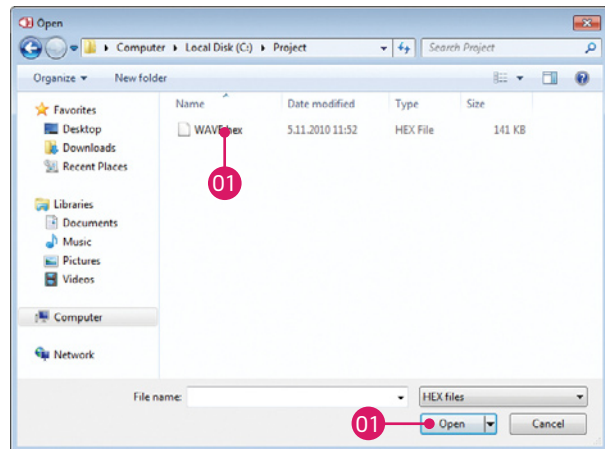


Figure 1-3: Selecting HEX

- 01 Select .hex file via open window
- 02 Click on Open button

## step 4 - .hex file uploading



Figure 1-4: Begin uploading

01 To start .hex file uploading click on Begin uploading button



Figure 1-5: Progress bar

01 You can monitor .hex file uploading via progress bar



## step 5 - Finish upload

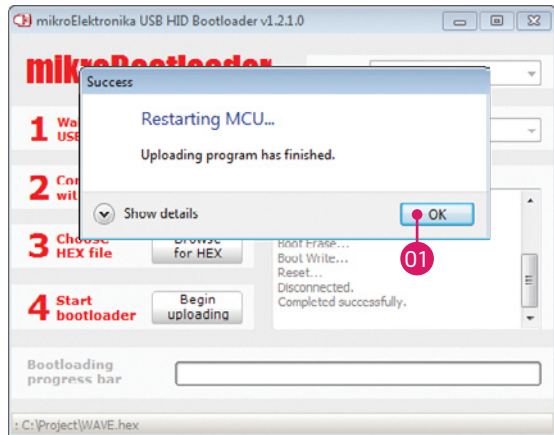


Figure 1-6: Restarting MCU

01 To finish uploading click on OK button



Figure 1-7: mikroBootloader ready for next job

# 2. Schematic

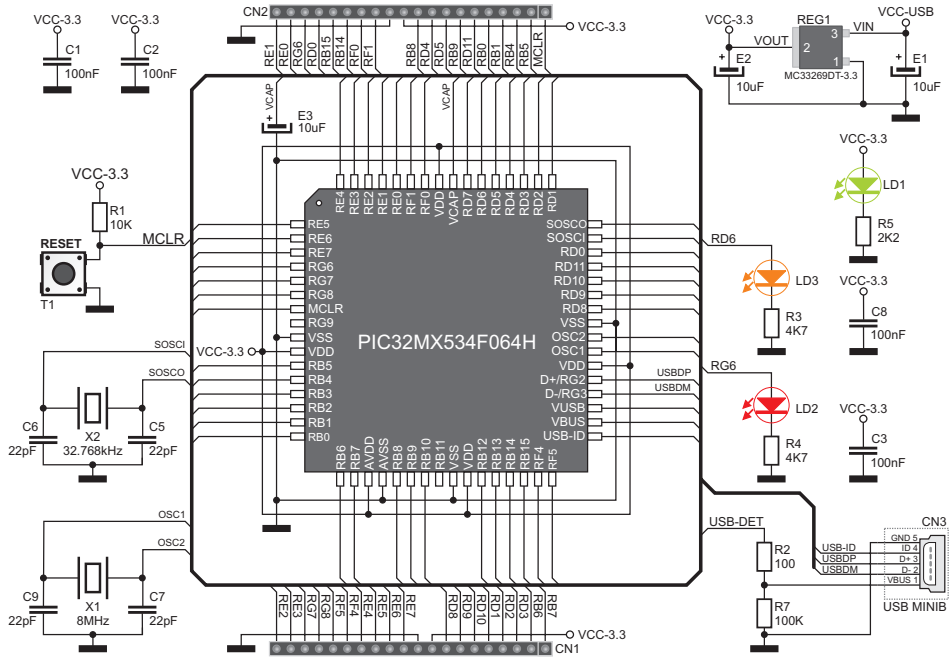


Figure 2-1: Connection schematic

### 3. Dimensions

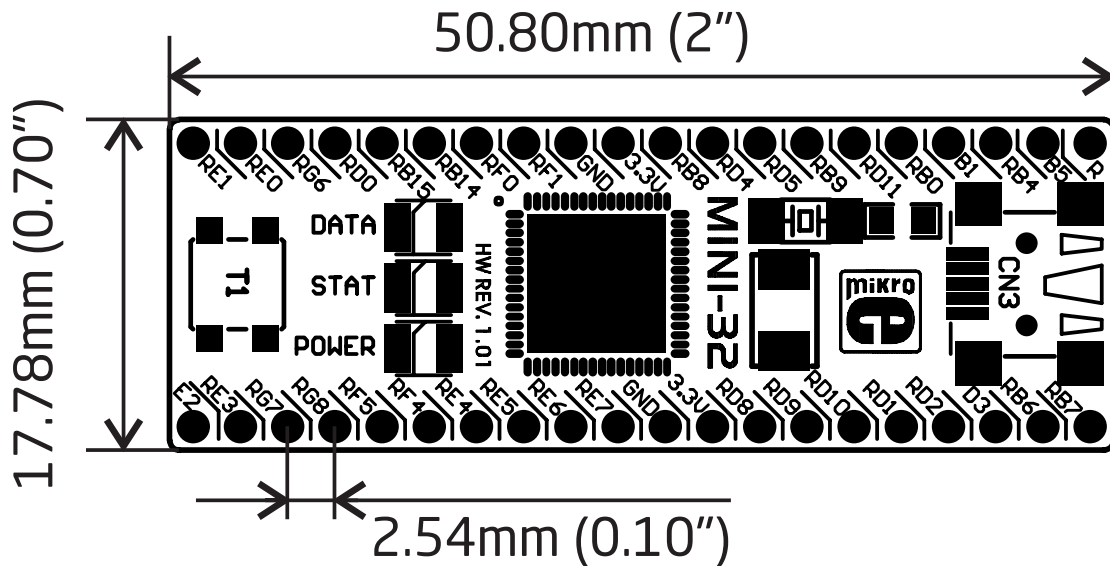
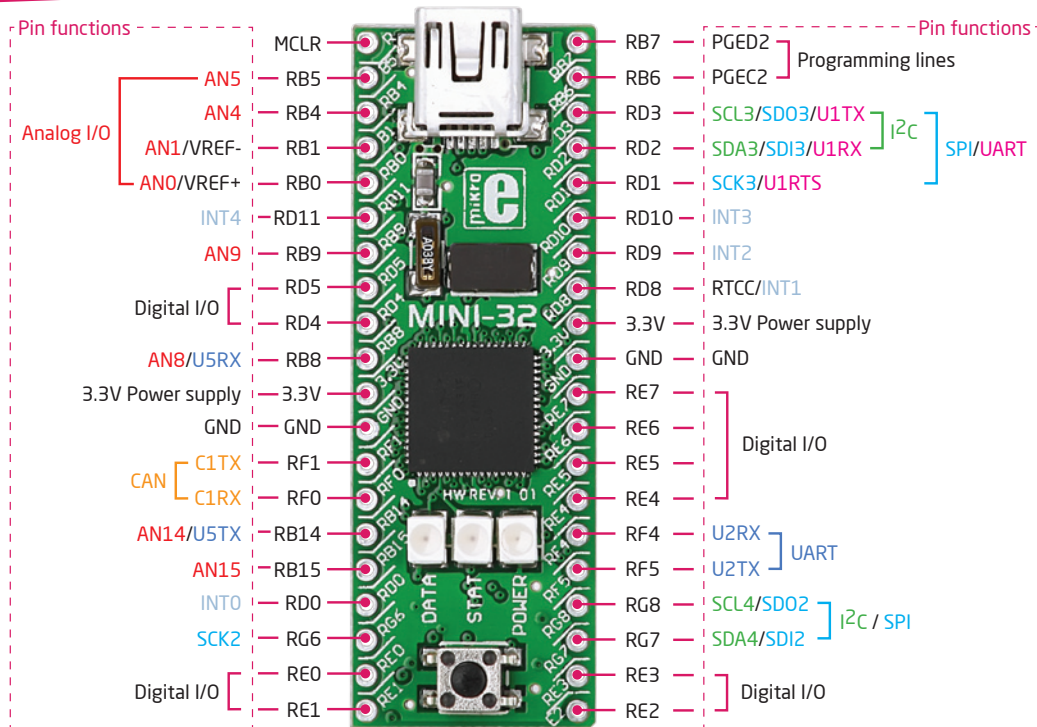


Figure 3-1: Board dimensions

# 4. Pinout



■ Analog Lines 
 ■ Interrupt Lines 
 ■ SPI Lines 
 ■ I2C Lines 
 ■ UART lines 
 ■ CAN lines

Notes:

Notes:

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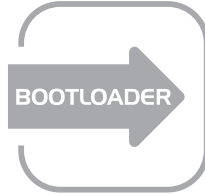
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