MKS SBase

Overview

MKS-SBase is a latest version of 3D Printer main board by Makserbase. It is based on ARM platform and using 32bit 100M Cortex-MS MCU-LPC1768.

Features

1. Using 32bit 100M Cortex-M3 MCU-LPC 1768, and highly improve its performance.

2.Support highly modular open source firmware Smoothieware, easy for secondary development.

3. Support network function, you can connect it to the network directory and then realize remote control with IE Explorer.

4. Using DRV8825 stepper driver, support 1/32-step, better than A4988 stepper driver. DRV8825 is SOP packing and it has better cooling effect.

5. Directory setting the Currents of the stepper motor, avoid the damage when setting.

6. Using high quality FR-4 4 layers PCB and special design for cooling.

7. Using professional power chip, support 12V-24V DC input

8. Can connect to 12864LCD display.

9. Can connect to MKS TFT28 touch screen Display.

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MakerBase

MKS SBace prototype photo

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SmartController

MKS SBase Board and 12864LCD

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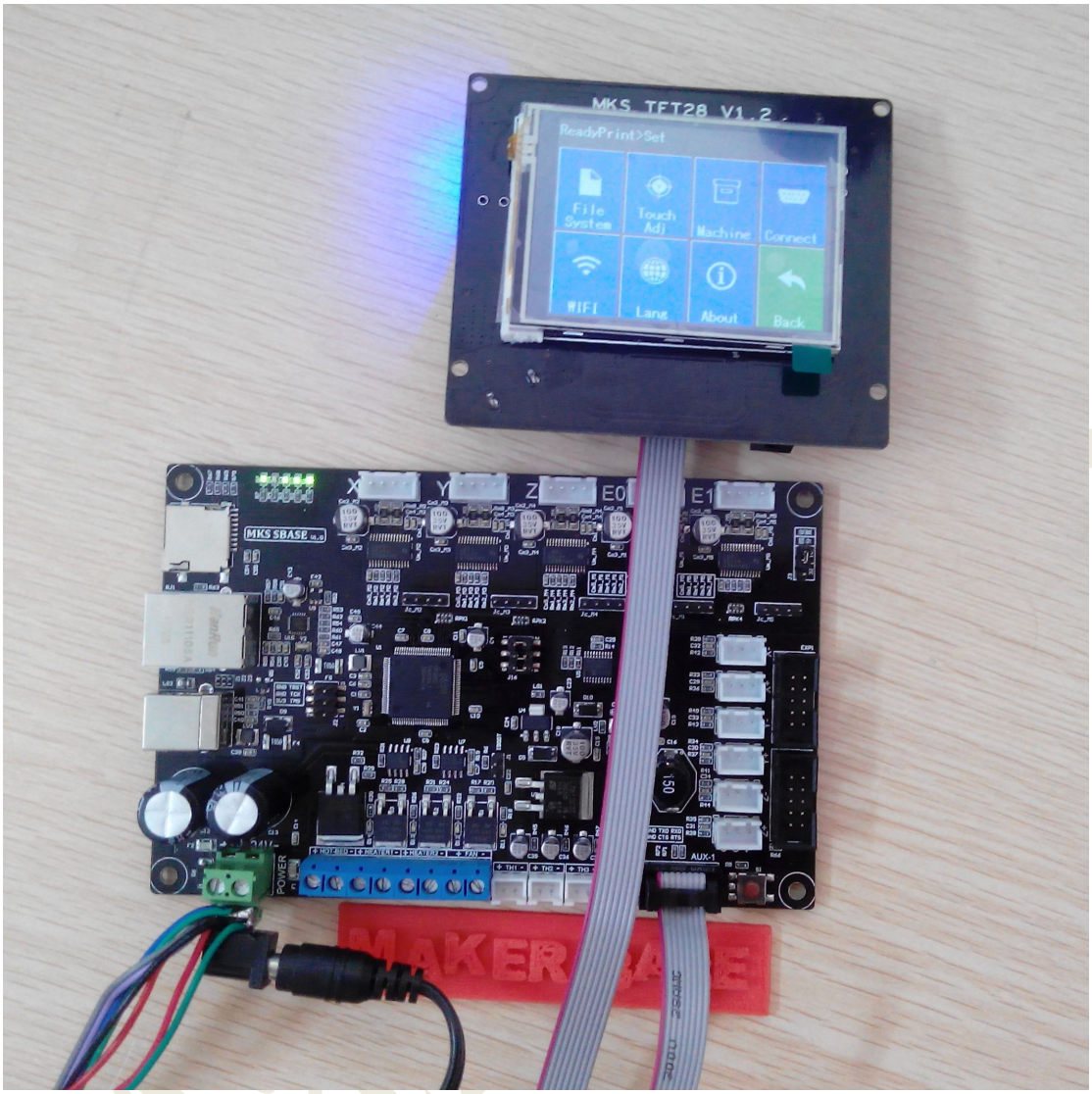

MKS SBase Board and MKS TFT28

Wiring

Wiring plan based on available information.

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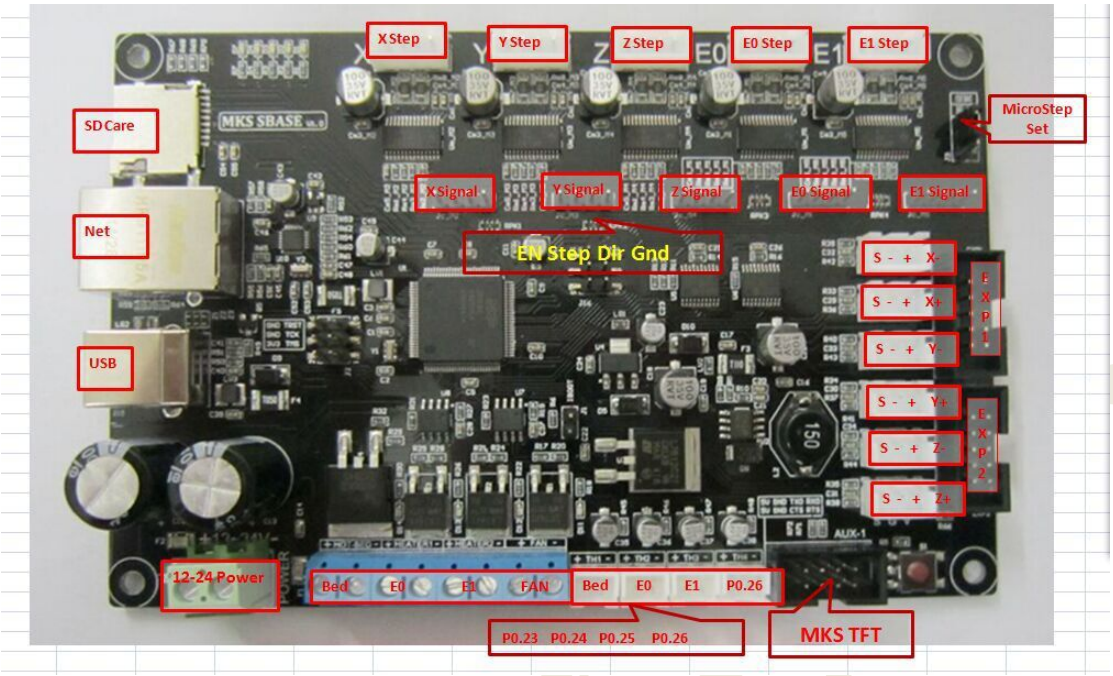
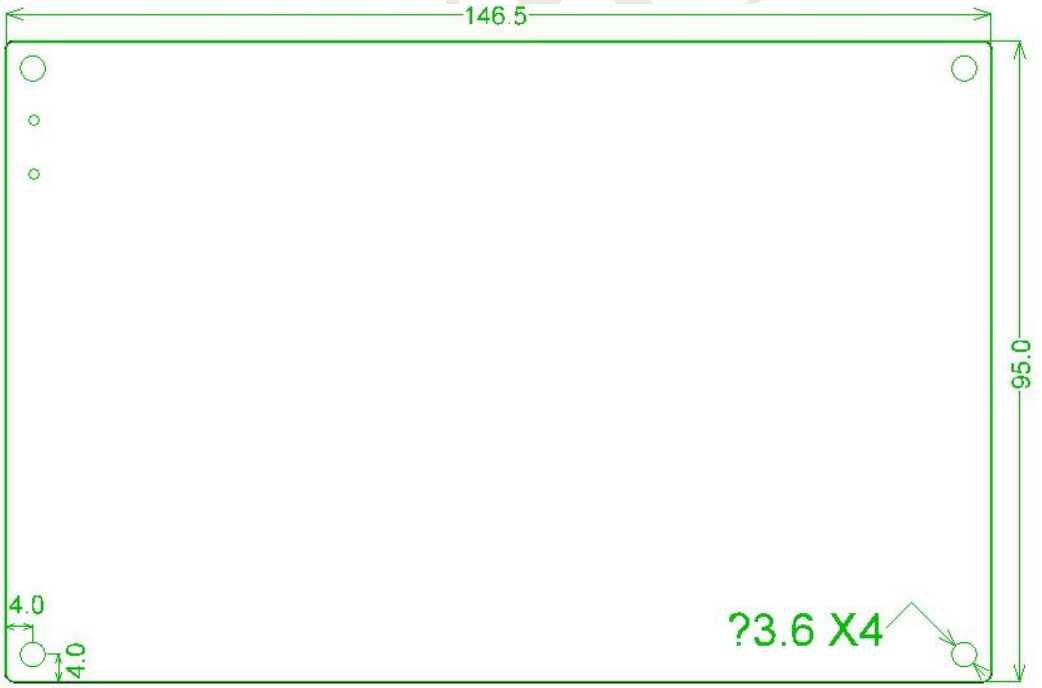
MKS SBase Connectors



MKS SBase Size



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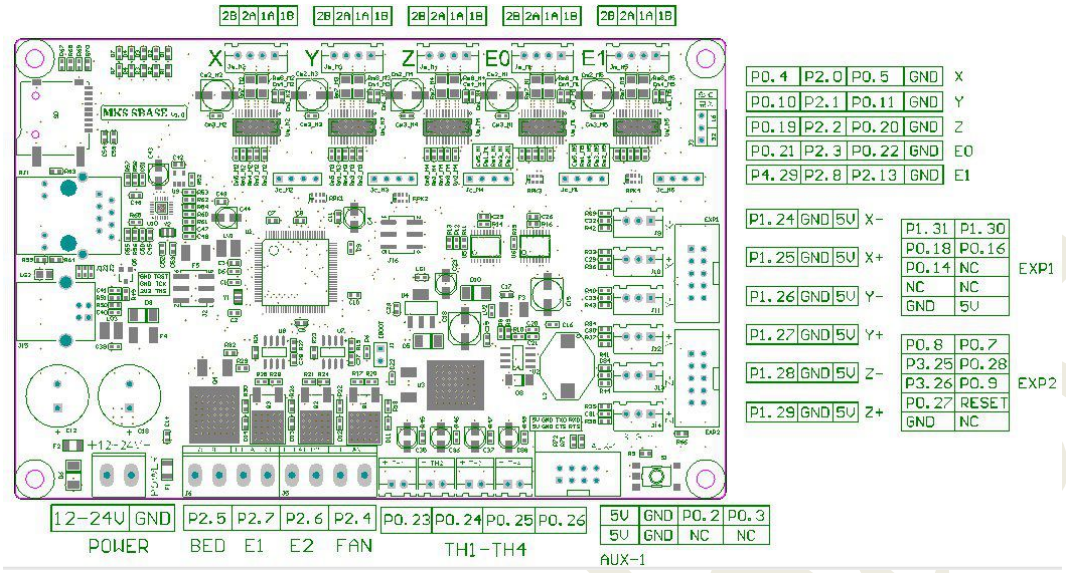
MKS SBase PIN



How to use

1、Download these files firmware.bin& config.txt from http://pan.baidu.com/s/1qWJo4pu, and because do not change the name of these files.

2、Change the file config.txt according to the configuration of your 3D printer

3、Connect the stepper motor and other parts to MKS-SBase, and make sure the connecting is correct.

4、Plug the SD card to slot, after power on, system will automatic update the new configuration.

5、Complete.

6、If you want to connect your computer with USB, you need to install the driver(Refer to the specification of below).

Install the driver

First, you should upload the firmware smoothieware-windows-signeddriver-v1.0 from the web disc http://pan.baidu.com/s/1bnk2X2n.

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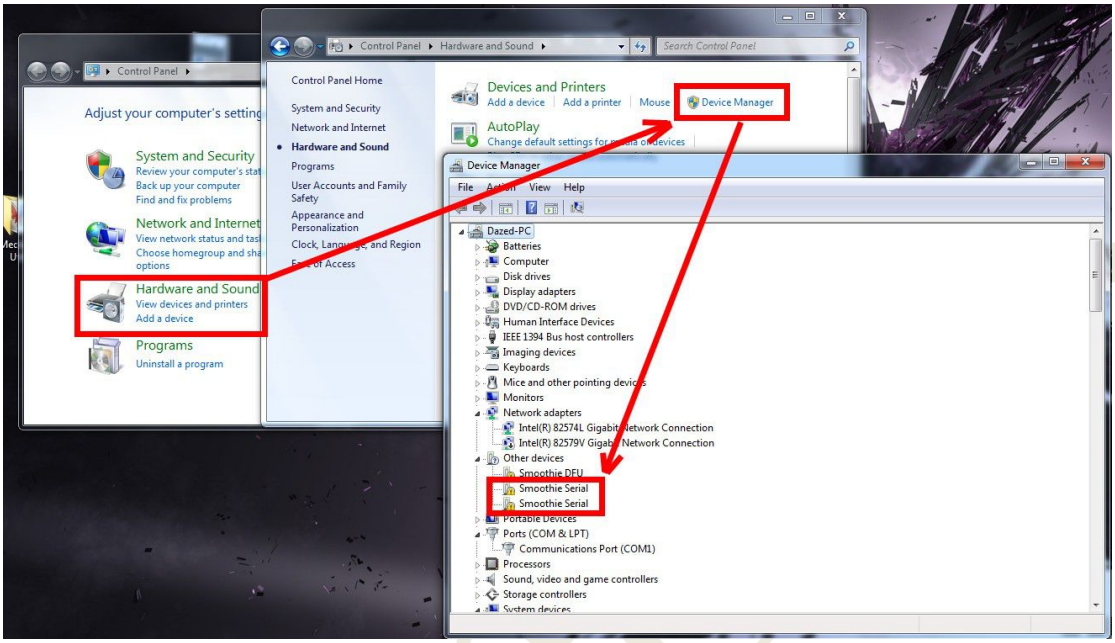
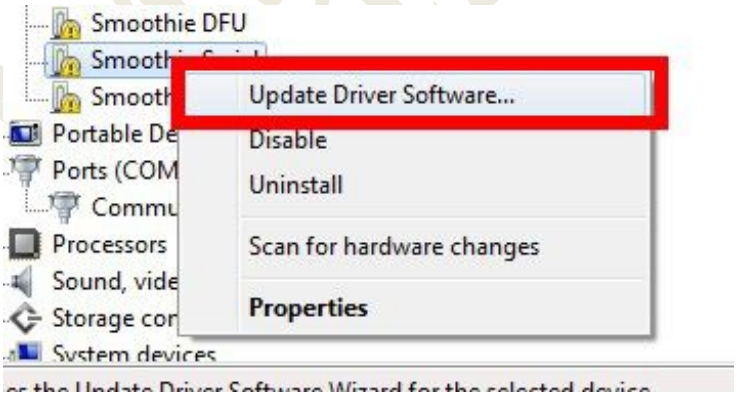
Then, plug the USB line to slot. Next, go to the device manger as the photo.



Update the Driver Software.



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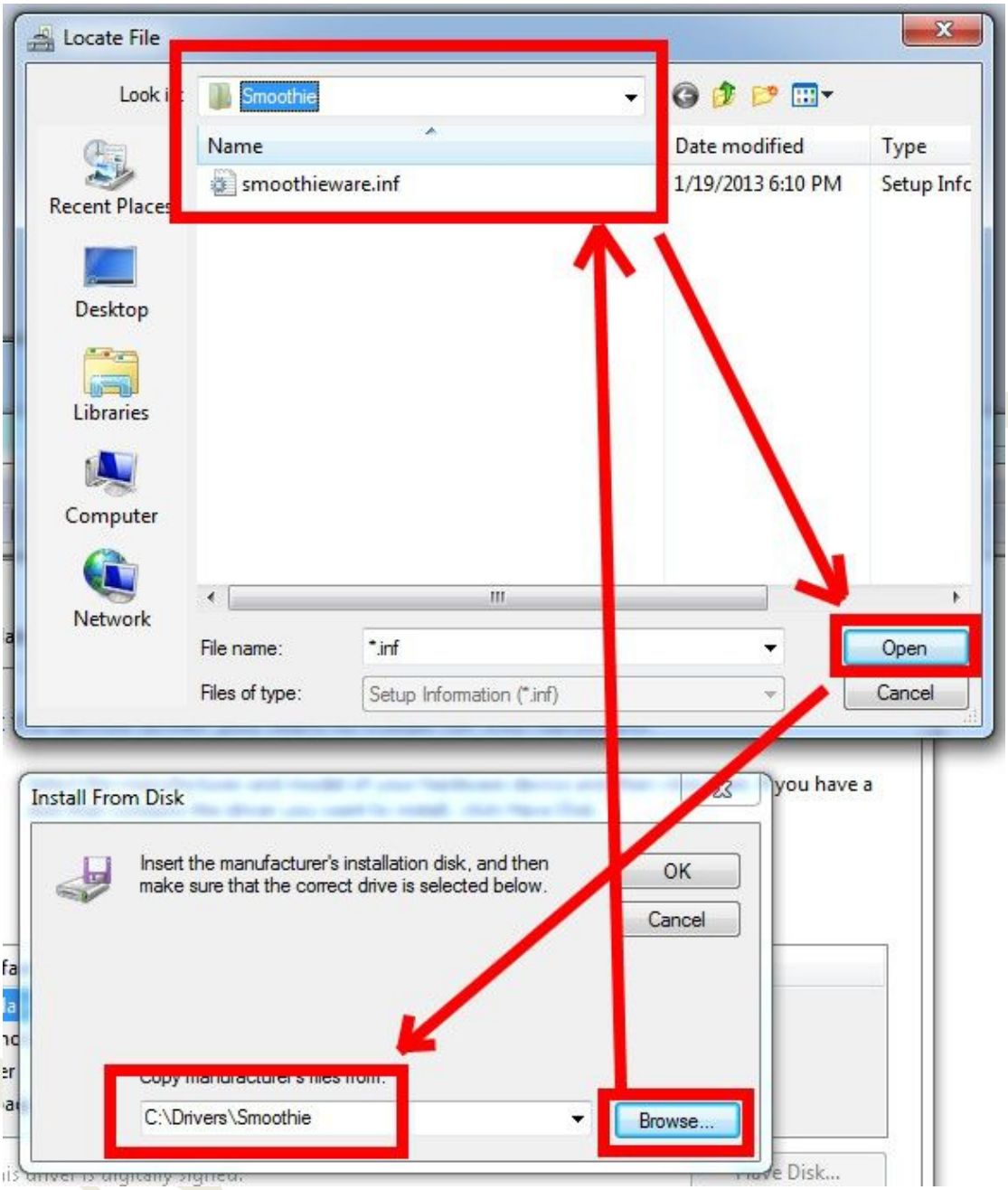

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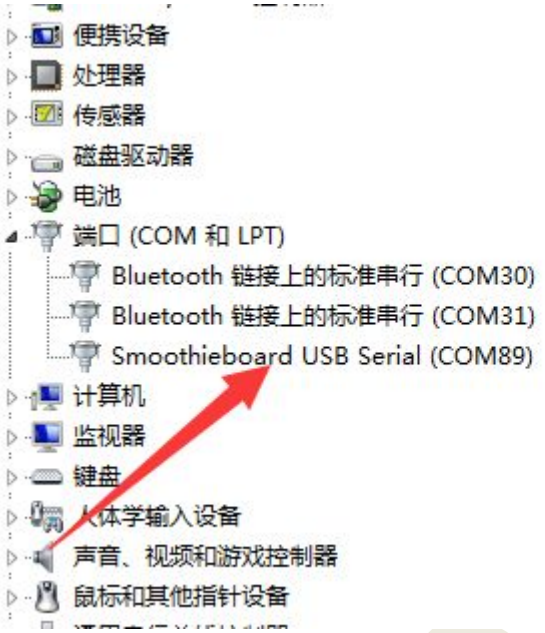
Information after successful install.



Download new firmware and update

Please upload firmware from the route http://pan.baidu.com/s/1kTxdUt MKS ARM 系列> and make sure the name is firmware.bin.

Copy the file to SD card, plug the SD card to slot and power on, system will automatic update new firmware. After successful updated, the name of the file will be changed to firmware.cur

Others

1.Support Gcode

The Gcode can be support are list on the file of G-Codes.htm

2.Main parameter setting

It is very easy to set the parameter for your 3D printer. First, open the file config.txt in SD card, then change the parameter and save this file. Next,

re-open you 3D printer. It is done!

Detail of the parameter, please refer to Configuration_Options.

(1)、Here below are the parameters you should set according to your 3D printer.

alpha_steps_per_mm 80
#steps per mm for X axis stepper
beta_steps_per_mm 80
#steps per mm for Y axis stepper
gamma_steps_per_mm 1600
steps per mm for Z axis stepper
alpha_current 1.0
#Setting the Currents of X axis stepper, best not bigger than 2
beta_current 1.0
#Setting the Currents of Y axis stepper motor, best not bigger than 2
gamma_current 1.0
#Setting the Currents of Z axis stepper motor, best not bigger than 2
extruder.hotend.steps_per_mm 90
#steps per mm for E0 extruder motor
delta_current 1.5
Setting the Currents of E0 extruder stepper motor, best not bigger than 2

(2)、Here below are the parameters you can choose to set.

acceleration 600
#Acceleration for the stepper motor, unit is mm/s2

z_acceleration 60 #Acceleration for the Z axis stepper, unit is mm/s2, DELTA Printer do not need to set it

alpha_dir_pin 0.5

Pin for the dir signal of X axis motor, do not change parameter and add ! symbol, motor will change the direction of turning.

beta_dir_pin 0.11!

Pin for the dir signal of Y axis motor, do not change parameter and add ! symbol, motor will change the direction of turning.

gamma_dir_pin 0.20!

Pin for the dir signal of Z axis motor, do not change parameter and add ! symbol, motor will change the direction of turning.

extruder.hotend.dir_pin 0.22

Pin for the dir signal of E0 extruder motor, do not change parameter and add ! symbol, motor will change the direction of turning.

temperature_control.bed.enable true

#Using true for able the headed bed and false for enable.

switch.fan.enable true

#Using true for able the Fan and false for enable.

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