

NutsBoard Pistachio SBC Panel-Kit Guide

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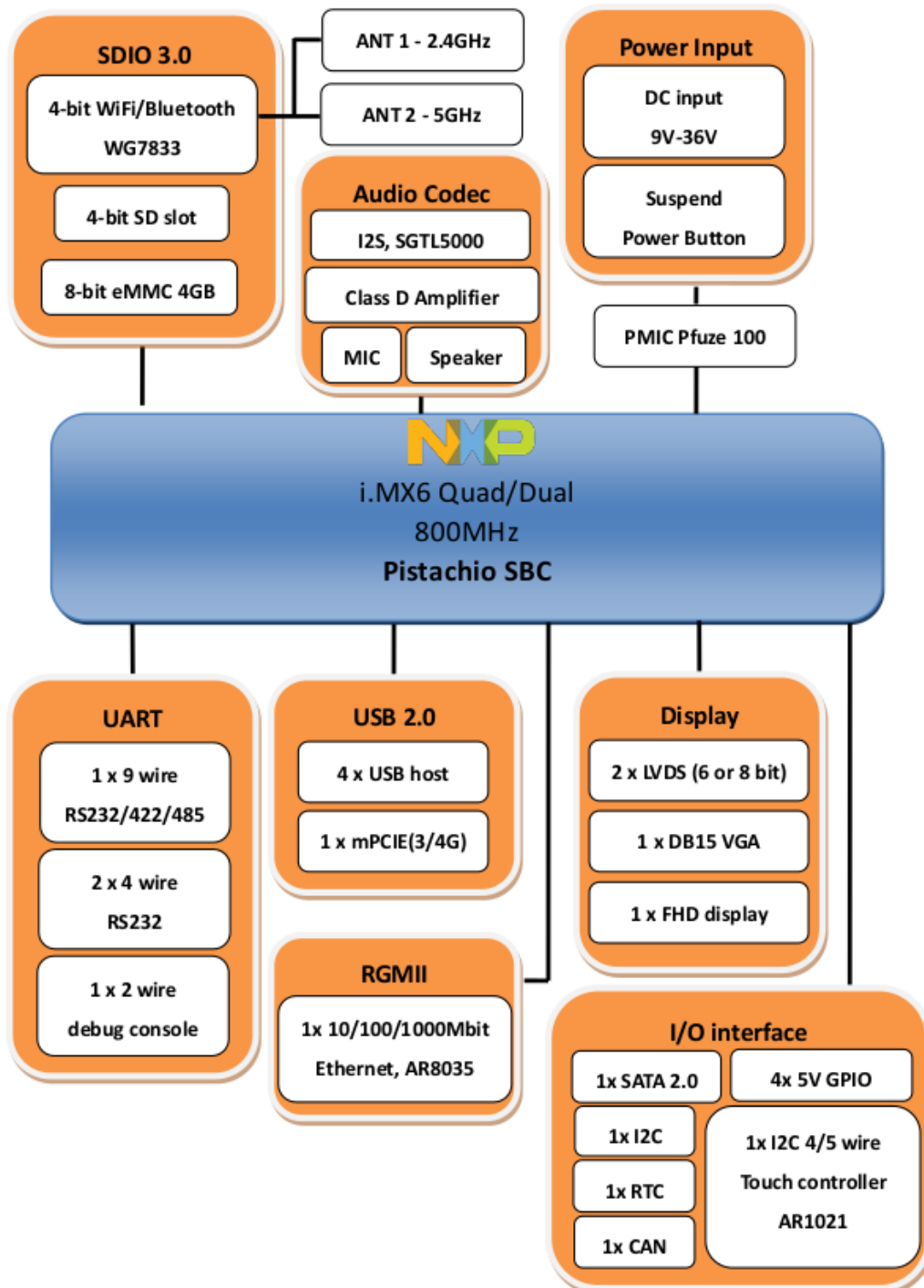
Revision History

Revision	Date	Author	Description
V1.0	09/13/2017	Wig	First Release

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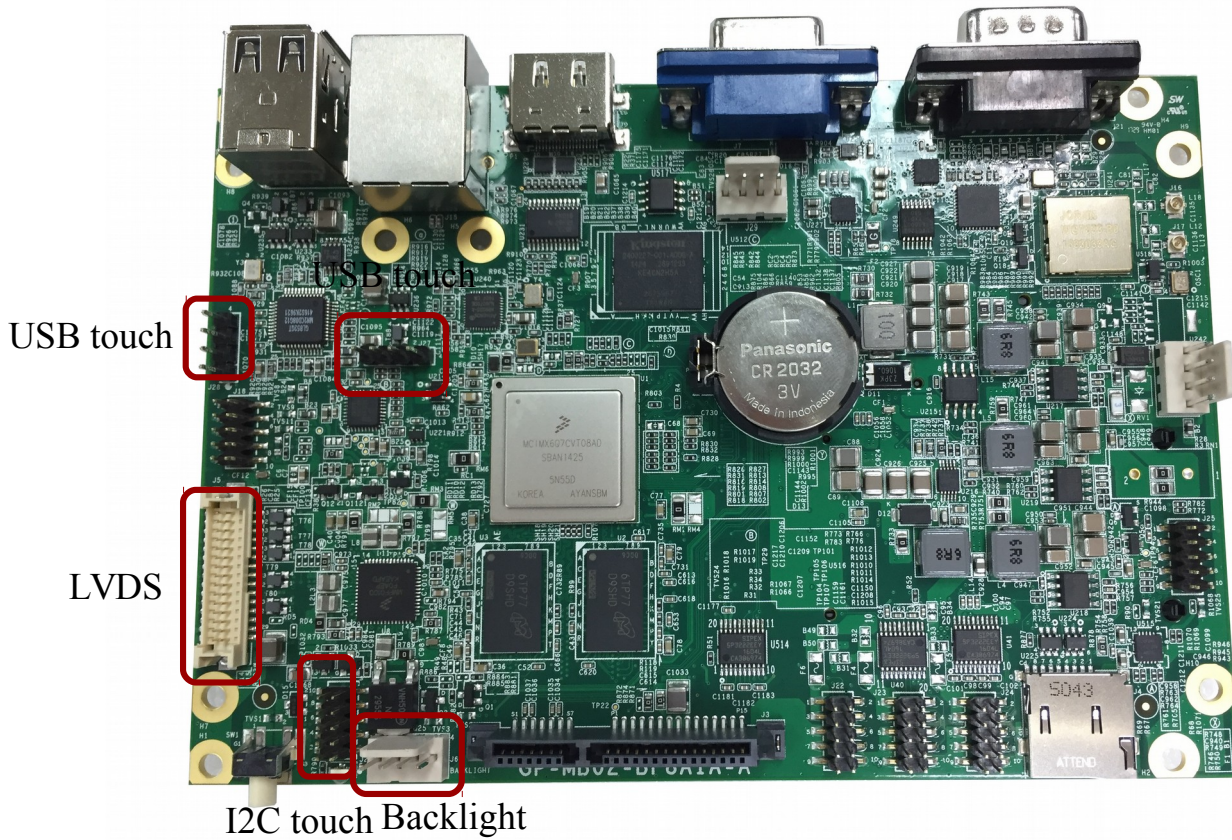
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1. Pistachio System Overview



2. Basic Structure

2-1. How to Boot up the Pistachio with panel into NutsBoard customize OS?



Booting key parts

3. Download and Flash an Operating System Demo Image

3-1. Supporting list

we have seven OS options to best fit your needs soon. **Red color** means not release yet.

Operating System	Revision	Applications
Android	7.1.1	HMI
BuildRoot	201611	IoT
Debian Stretch Lite	9.1	IoT
Debian Stretch Desktop	9.1	HMI
Yocto Krogoth QT4 Desktop	2.1	HMI
Ubuntu Core	16	IoT
Ubuntu Desktop	18.04	HMI

3-2. How to Download

Pistachio has 4GB of high-reliability MLC eMMC storage onboard for holding the core operating system and a limited amount of user and program data.

Because of this, it's a good idea to know how much storage software will take before flashing and installing. Where needed, additional high-speed storage can be added through Pistachio's SDIO bus of uSD slot.

Download link: http://nutsboard.org/pistachio_download

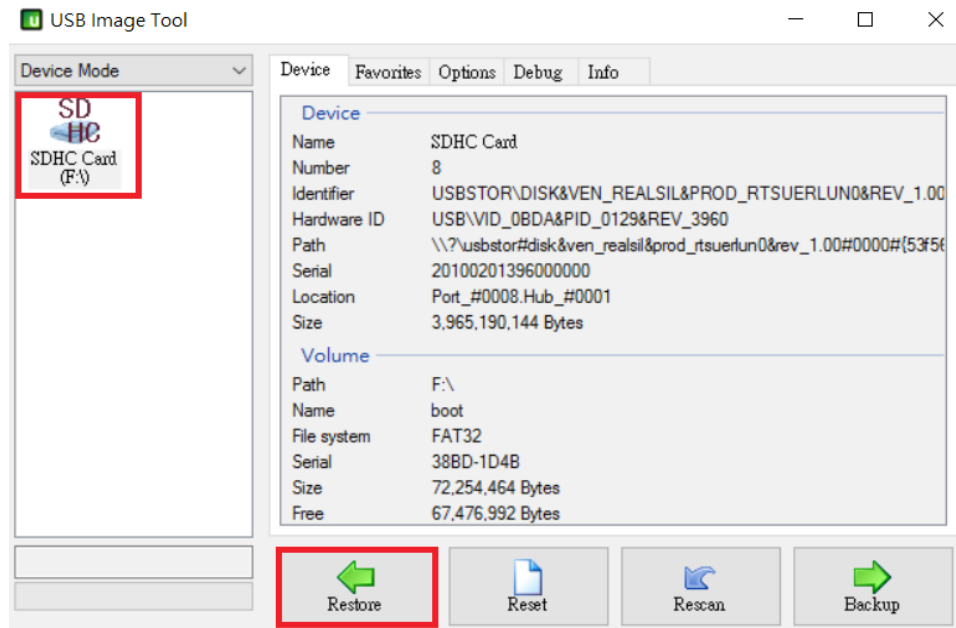
If you need eMMC boot image, please choose "installer image".
If you need uSD boot image, please choose "runtime image".

3-3. How to Flash – Windows User

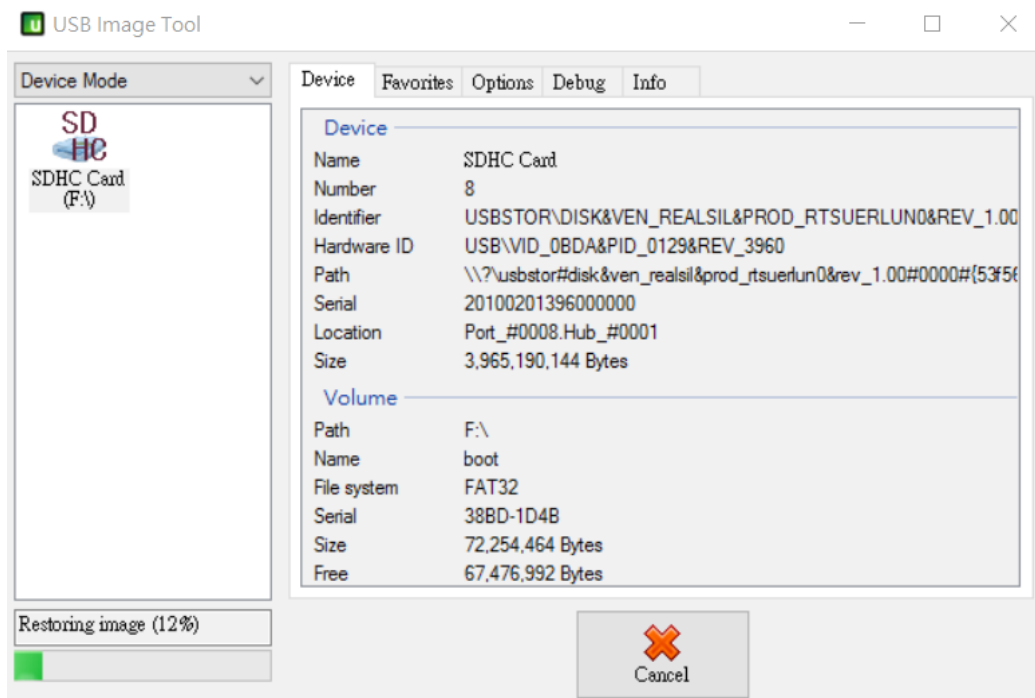
Head over to the web flasher software "usbit.zip" file at https://mega.nz/#!NsUkha4Q!NiyvA-bSPDTfGFNg8llhSAbv7t9lGexmQlFDV3qt_b8.

opening the application, you should be see your sdcard is mounted on left side. Then press the "Restore" button to write a sdcard image.

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Once pressed the “Open” button, the sdcard writing should start. You’ll see a progress bar on the left bottom side. Once it’s at 100% you’re ready to flashed:



3-4. How to Flash – Linux User

1. Prepare a uSD card and inserting the host PC.
2. After download the expected image, issue the command to flashing uSDcard
- `dd if=*.img of=/dev/sdx bs=1M;sync;`.

`*.img` means your expected download image.

`/dev/sdx` means the device node of sdcard what your mounted. (ex: /dev/sdb)

4. 7-inch Panel Build Steps



- Interface: LVDS
- Resolution: 1024x600
- Color depth: 6-bit
- Touch type: Capacitive touch
- Touch interface: USB 2.0
- Operating voltage: 3.3V
- Backlight voltage: 12V

4-1. Take NutsBoard 7-inch panel, LVDS connector and touch connector first

NOTE: The LVDS connector is also include a PWM connector.

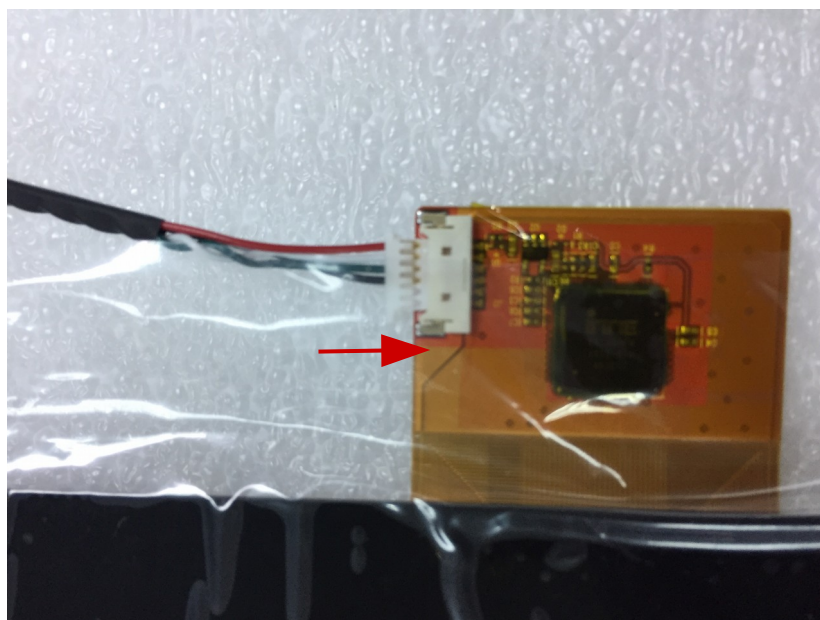


4-2. Insert the LVDS connector to back side of the panel

It's easy to insert but we recommend fixed it after you connected.



4-3. Insert the touch connector to touch controller pin header of the panel



4-4. Insert the connectors on to Pistachio

“1” means PWM backlight connector, “2” means LVDS connector, and the most important “3”, it is USB touch connector, but it also very dangerous if you connect wrong side, so please match the USB pin header on the board as below second picture.



“1” means 1st pin, you can see the red line as 1st pin, and black line as 4th pin.

4-5. Booting Pistachio, and you can see the content showing on the 7-inch panel.

