

N3290X

SD Loader

Reference Guide

V1.1

Publication Release Date: Feb. 2017

Support Chips:
W55FA Series

Support Platforms:
Non-OS

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Table of Contents

1. General Description..... 4

2. SD Loader Overview 5

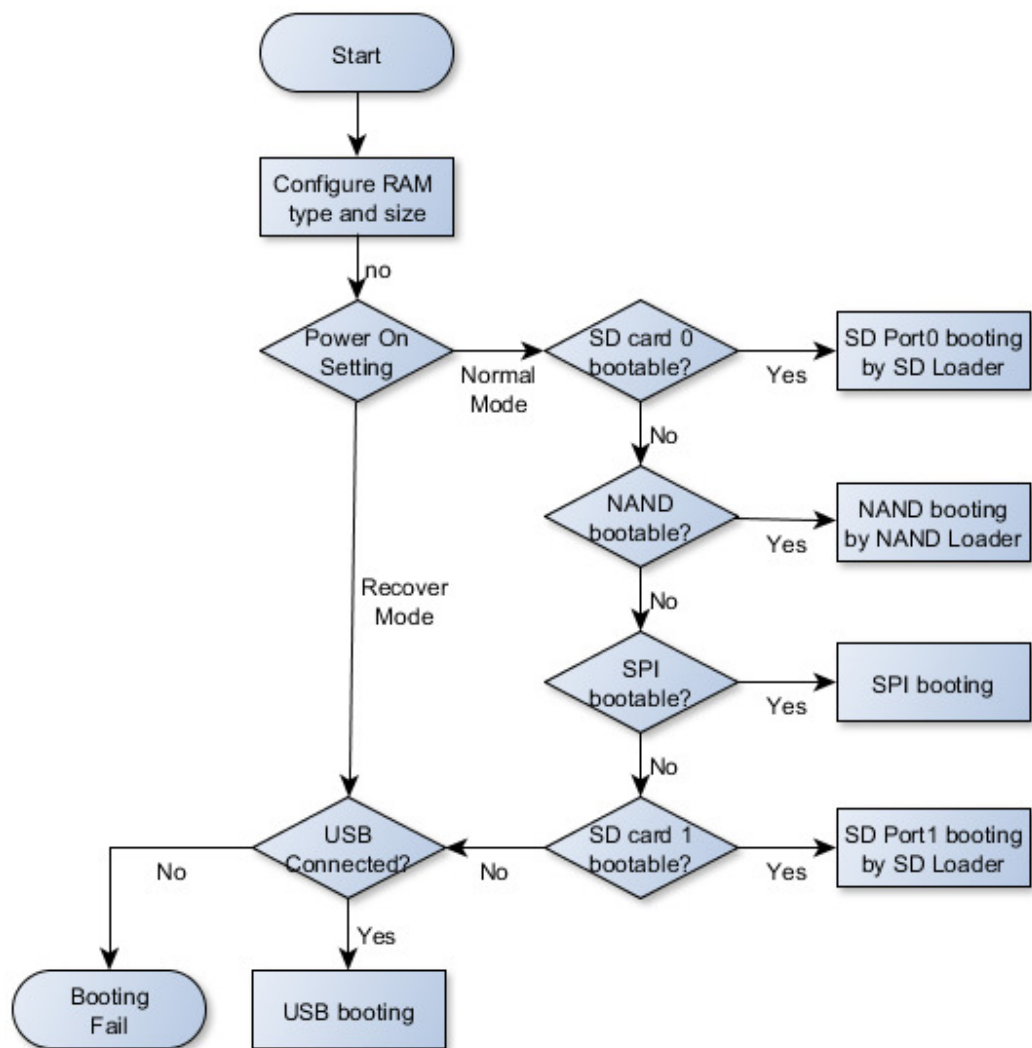
3. Revision History 9

1. General Description

N3290X Non-OS library consists of a sets of libraries. These libraries are built to access those on-chip functions such as VPOST, APU, SIC, USBH, USBD, GPIO, I2C, SPI and UART, as well as File System (NVT FAT), USB MassStorage devices (UMAS) and NAND Flash devices (GNAND). This document describes the basic function of SD Loader. With this introduction, user can quickly understand the SD Loader on N3290X micro processor.

2. SD Loader Overview

N3290X built-in 16K bytes IBR (Internal Booting ROM) where stored the boot loader to initial chip basically when power on, and then try to find out the next stage boot loader from different type of storage. It could be SD card, NAND flash, SPI flash, or USB storage. The search sequence by IBR as below



The boot loader in IBR will hand over the chip controlling to SD Loader on SD port 0 or port 1. SD Loader is a firmware stored at SD card.

The SD Loader has the following features:

- Initial more modules such as VPOST and so on.
- Check and load the Logo image if it existed at SD card.
- Check and load next firmware if it existed at SD card.
- Hand over chip controlling to next firmware. Normally, it should be NVT Loader.

All image files have to located at top of SD card with correct parameters. You can add or modify them by TurboWrite utility. Please follow the configuration below to make sure the SD Loader work fine.

For N32905

	SD Loader	Logo Image	Next Firmware
Image No.	0	1	2
Image Name	File name for SD Loader on host	File name for Logo image on host	File name for next firmware on host
Image Type	System Image	Logo	Execute
Image execute address	0x900000 and cannot be modified	0x500000	Depend on firmware (0x800000 for NVTLoader)
Image start sector	Sector 1 and cannot be modified	Behind SD Loader and MUST > 0x21	Behind Logo Image

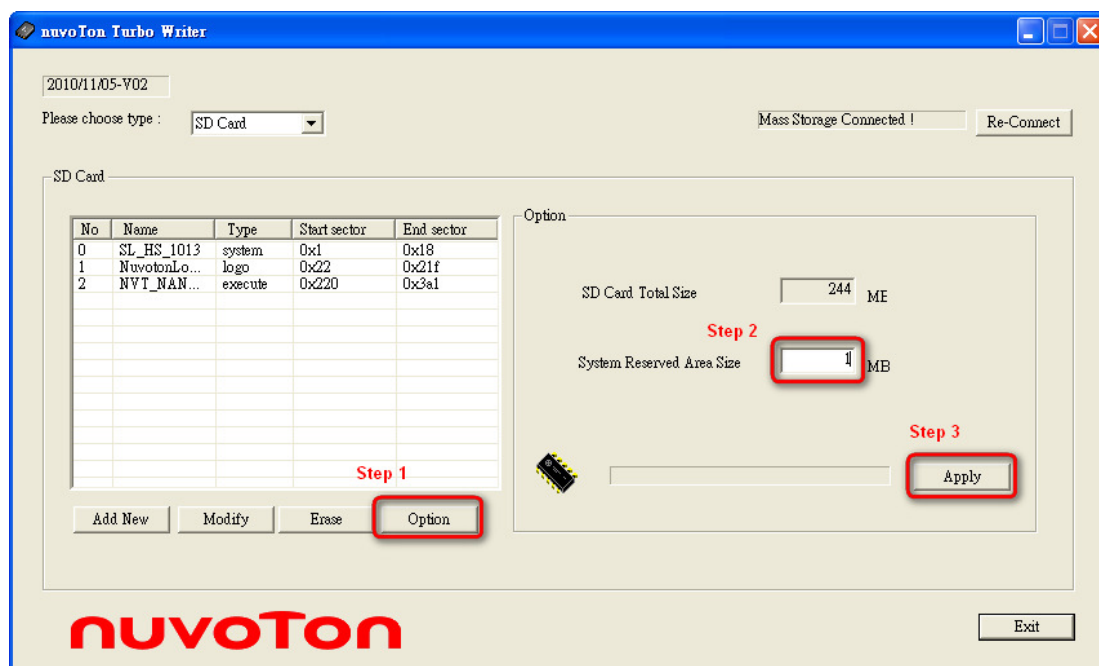
For N32903

	SD Loader	Logo Image	Next Firmware
Image No.	0	1	2
Image Name	File name for SD Loader on host	File name for Logo image on host	File name for next firmware on host
Image Type	System Image	Logo	Execute
Image execute address	0x700000 and cannot be modified	0x500000	Depend on firmware (0x600000 for NVTLoader)
Image start sector	Sector 1 and cannot be modified	Behind SD Loader and MUST > 0x21	Behind Logo Image

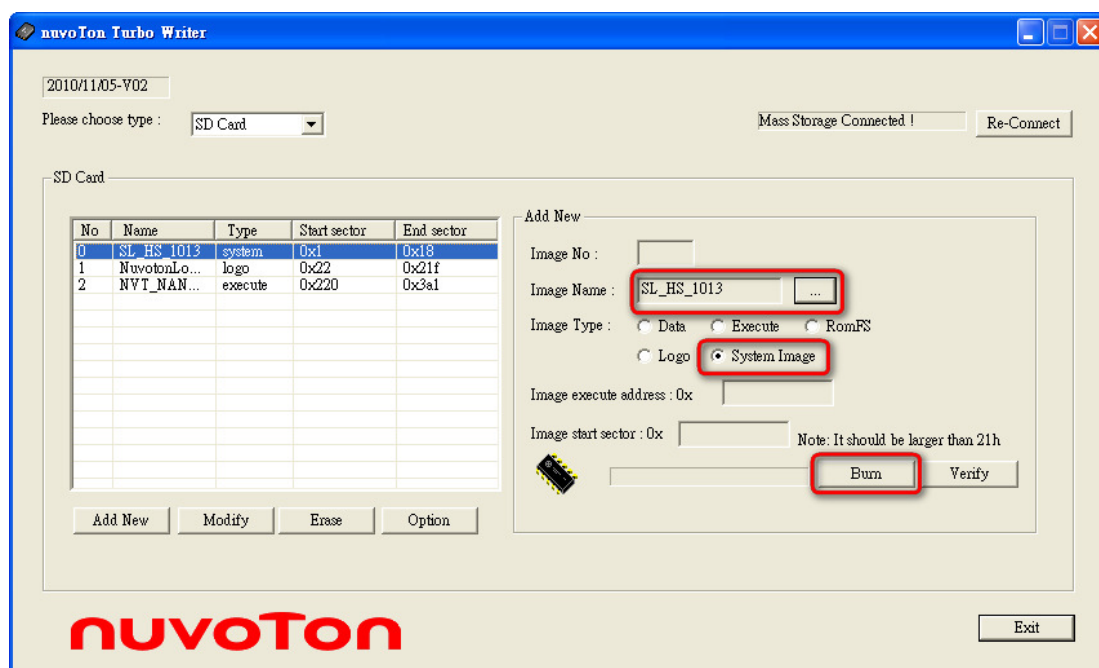
For N32901

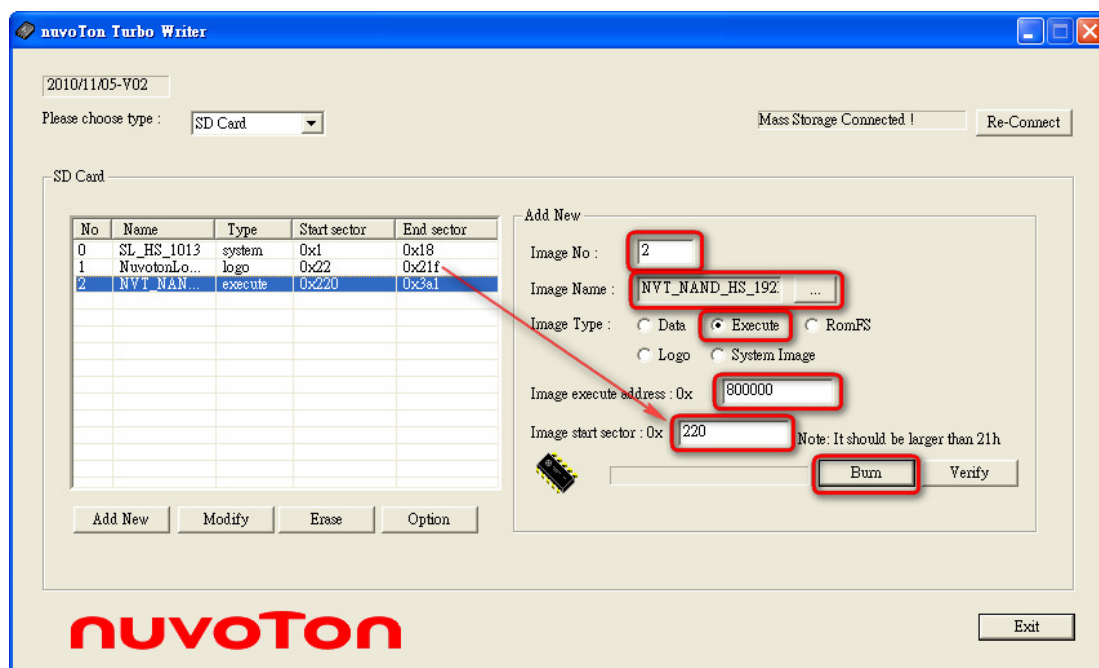
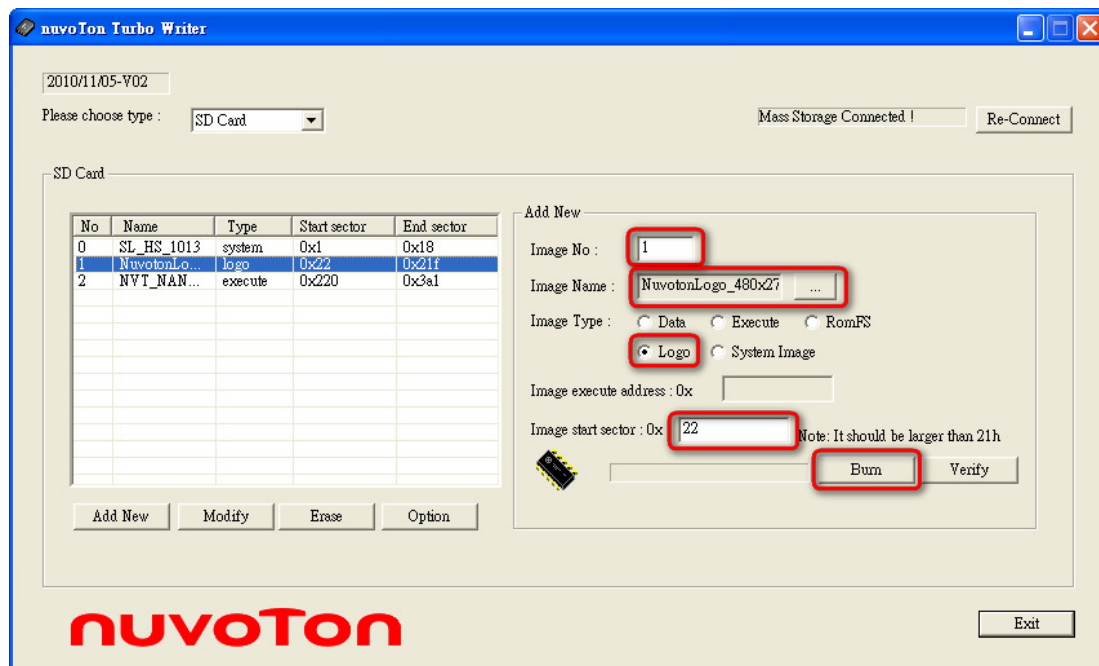
	SD Loader	Logo Image	Next Firmware
Image No.	0	Don't support	1
Image Name	File name for SD Loader on host	Don't support	File name for next firmware on host
Image Type	System Image	Don't support	Execute
Image execute address	0x180000 and cannot be modified	Don't support	Depend on firmware
Image start sector	Sector 1 and cannot be modified	Don't support	Behind SD Loader and MUST > 0x21

If your SD card is first time to use on N3290X system, maybe you need a extra step to reserve some sectors for SD Loader used as below.



And then, you can upload SD Loader and other image files to SD card.





3. Revision History

Version	Date	Description
V1.0	Feb. 24, 2011	<ul style="list-style-type: none"> Created
V1.1	Feb. 21, 2017	<ul style="list-style-type: none"> Add the TurboWriter parameters for N32905 / N32903 / N32901.

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