

IGS-6325-51T Flash Partition Reallocation SOP

1. Description

The IGS-6325-51T firmware is upgraded from SDK 21.12 to SDK 24.12.

Since SDK 24.12 requires a larger capacity, the Flash partition must be reallocated before updating to the new firmware.

2. Notes

- a. Before reallocating the Flash partition, **record the MAC ID** to prevent the system from reverting to the default settings after partition changes, which may cause PSTI login issues.
 - b. **Do not power off** the device during the reallocation process.
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3. Flash Partition Reallocation Procedure

Step 1.

Enter **U-Boot mode** during startup.

(Press **Enter** immediately after powering on to enter U-Boot mode.)

```
U-Boot 2019.10 (Jul 13 2022 - 13:13:39 +0800)fireant
CPU:   ARM A53
Model: FireAnt PCB135/NAND Reference Board
DRAM:  2 GiB
Loading Environment from SPI Flash... SF: Detected mx66l1g45g with page size 256 Bytes, erase size 4 KiB, total 128 MiB
OK
In:    serial@600100000
Out:   serial@600100000
Err:   serial@600100000
Net:   Could not get PHY for miim-bus0: addr 28
eth0: switch00
Hit any key to stop autoboot:  0
=> ?
```

Step 2.

Enter the following commands **line by line**:

```
setenv active linux
```

```
setenv mtdparts 'mtdparts=spi0.0:1m(UBoot),256k(Env),256k(Env.bk),40m(linux),40m(linux.bk),32m(rootfs_data)'
```

```
setenv nor_parts 'spi0.0:1m(UBoot),256k(Env),256k(Env.bk),40m(linux),40m(linux.bk),32m(rootfs_data)'
```

```
setenv bootargs 'console=ttyS0,115200n8 mtdparts=spi0.0:1m(UBoot),256k(Env),256k(Env.bk),40m(linux),40m(linux.bk),32m(rootfs_data)
```

```
root=/dev/ram0 rw rootfstype=squashfs fis_act=linux.bk loglevel=4'
```

```
saveenv
```

```
saveenv
```

Note:

The **saveenv** command must be executed **twice**.

```
Environment size: 2012/8187 bytes
=> setenv active linux
=> setenv mtdparts 'mtdparts=spi0.0:1m(UBoot),256k(Env),256k(Env.bk),40m(linux),40m(linux.bk),32m(rootfs_data)'
```

```
=> setenv nor_parts 'spi0.0:1m(UBoot),256k(Env),256k(Env.bk),40m(linux),40m(linux.bk),32m(rootfs_data)'
```

```
=> setenv bootargs 'console=ttyS0,115200n8 mtdparts=spi0.0:1m(UBoot),256k(Env),256k(Env.bk),40m(linux),40m(linux.bk),32m(rootfs_data) root=/dev/ram0 rw rootfstype=squashfs fis_act=linux.bk loglevel=4'
```

```
=> saveenv
```

```
Saving Environment to SPI Flash... SF: Detected mx66l1g45g with page size 256 Bytes, erase size 4 KiB, total 128 MiB
```

```
Erasing SPI flash...Writing to SPI flash...done
```

```
Valid environment: 2
```

```
OK
```

```
=> saveenv
```

```
Saving Environment to SPI Flash... Erasing SPI flash...Writing to SPI flash...done
```

```
Valid environment: 1
```

```
OK
```

Step 3.

Run the following command to verify settings:

printenv

Check that the parameters **mtdparts**, **nor_parts**, **bootargs**, and **active** are correct (pay attention to symbols).

If the reallocation is successful, the value will show **40m**; if it failed, it will show **20m**.

```
=> printenv
BOARDID=280
OBTYP=0
SERIALNO=AH009424C00045
active=linux
baudrate=115200
bootargs=console=ttyS0,115200n8 mtdparts=spi0.0:1m(UBoot),256k(Env),256k(Env
.bk),40m(linux),40m(linux.bk),32m(rootfs_data) root=/dev/ram0 rw rootfstype=
squashfs tis_act=linux.bk loglevel=4
bootargs_extra=loglevel=4 ramdisk_size=0x120000
bootcmd=run nor_boot
bootdelay=3
console=ttyS0,115200n8
ethact=switch@0
ethaddr=A8:F7:E0:DE:C3:F5
```

Step 4.

Reboot the device:

Reset

```
Reserved memory region for spin-table: addr=777751be0 size=10
Starting kernel ...
00:00:00 Stage 1 booted, Starting stage2 boot @ 918 ms
*****
***** ERROR at line: 1128, errno: 19 error: No such device
***** MSG: Mount of ubi0:switch failed
*****
Note: The preceding error message suggests that the UBIFS /dev/mtd5 partition
in the Flash has not been formatted. If you have just flashed a new binary
firmware image file you need to perform the bootstrap procedure to resolve this.
00:00:01 Overall: 510 ms, ubifs = 474 ms
00:00:03 Starting application...
Using existing mount point for /switch/
W conf 10:55:12 87/conf_sec_read#940: Warning: illegal cookie[0] 0x00000000
W conf 10:55:12 87/conf_sec_read#940: Warning: illegal cookie[1] 0x00000000
conf_sec_open failed or size mismatch, creating defaultsW icfg 10:55:19 92/vtss_icfg_running_config_save#2874: Warning: Exceed
the maximum stored space for saving the configured file.
Press ENTER to get started
```

Step 5.

During startup, you may see an error message indicating the configuration was reset to default (“config reset to default”).
Run the following bootstrap commands:

pl de al

deb firmware bootstrap nor

```
TSN-6325-8T4S4X# pl de al
WARNING: The use of 'debug' commands may negatively impact system behavior.
Do not enable unless instructed to. (Use 'platform debug deny' to disable
debug commands.)
NOTE: 'debug' command syntax, semantics and behavior are subject to change
without notice.
TSN-6325-8T4S4X# deb firmware
bootstrap max-size <cr>
TSN-6325-8T4S4X# deb firmware bootstrap nor
size 1 <cr>
TSN-6325-8T4S4X# deb firmware bootstrap nor
Bootstrapping UBIFS with all available volume space...
ubiformat: mtd5 (nor), size 33554432 bytes (32.0 MiB), 512 eraseblocks of 65536 bytes (64.0 KiB), min. I/O size 1 bytes
libscan: scanning eraseblock 511 -- 100 % complete
ubiformat: 512 eraseblocks have valid erase counter, mean value is 1
ubiformat: formatting eraseblock 511 -- 100 % complete
Bootstrap ubi done ok.
TSN-6325-8T4S4X# █
```

Step 6.

Reboot again:
reload cold

Step 7.

After rebooting, the switch configuration needs to be reset:

reload defaults

copy running-config startup-config

```
00:00:00 Stage 1 booted. Starting stage2 boot @ 918 ms
00:00:01 Overall: 513 ms, ubifs = 475 ms
00:00:03 Starting application...
Using existing mount point for /switch/
W conf 10:55:12 88/conf_sec_read#940: Warning: illegal cookie[0] 0x00000000
W conf 10:55:12 88/conf_sec_read#940: Warning: illegal cookie[1] 0x00000000
conf_sec_open failed or size mismatch, creating defaults
Press ENTER to get started

Username: admin
Password:
TSN-6325-8T4S4X# reload defaults
% Reloading defaults. Please stand by.
TSN-6325-8T4S4X# copy running-config startup-config
Building configuration...
% Saving 4128 bytes to flash:startup-config
TSN-6325-8T4S4X#
```

Step 8.

You can now perform the normal firmware upgrade procedure to install the new firmware version:

v1.2412b251216

Note:

After the firmware upgrade, perform a **Factory Default Reset** by pressing and holding the **Reset button for 5 seconds**.