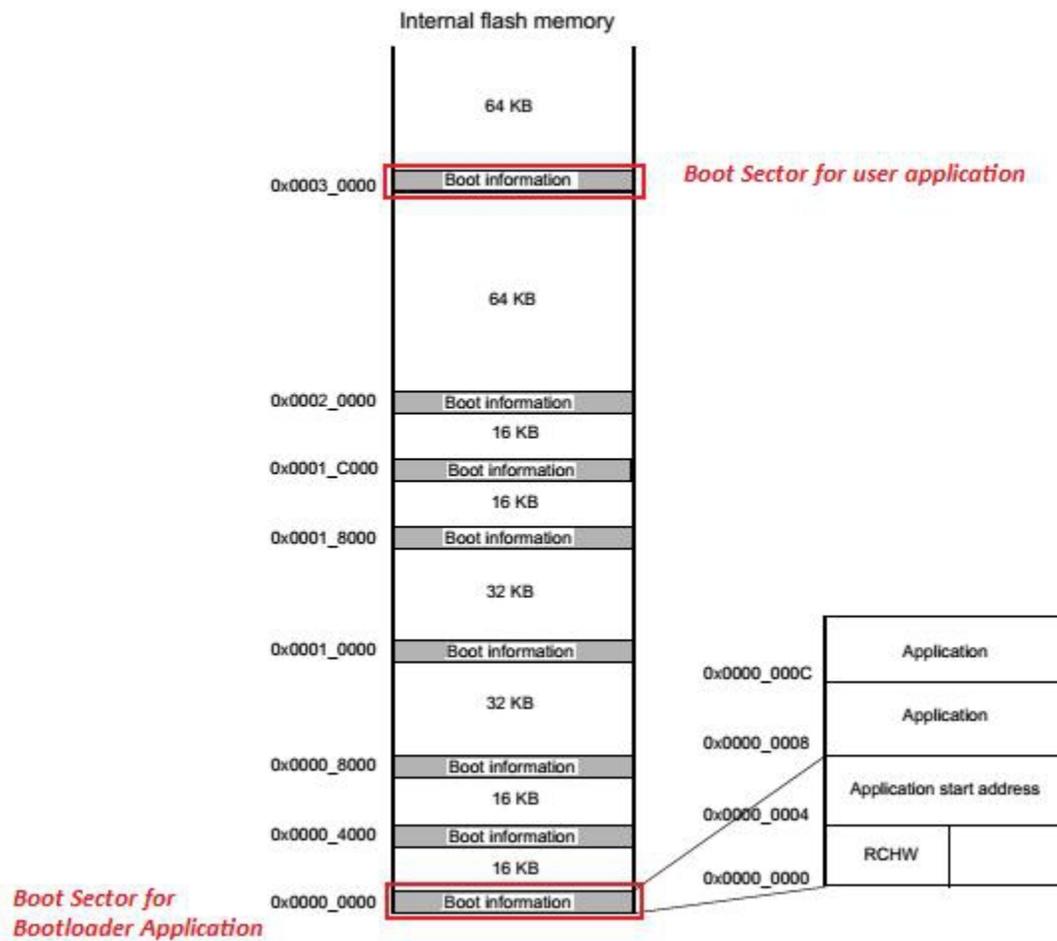


I am using MPC5675K(PXS3020) for my project.

I am trying to design a flash resident boot loader for my project. I started the design based on the document and example(Bootloader for MPC5634M) provided by freescale. When I come across the Boot sector and linker command file, I have the following queries.

The flash memory locations listed in [Table 5-2](#) are searched.



**Figure 5-1. Flash memory partitioning and RCHW search**

## 1.) LCF for Boot loader application

I want to allocate approximately 64K for bootloader. So I modified the as follows.

```
resetvector:      org = 0x00000000,   len = 0x00000010
init:             org = 0x00000010,   len = 0x00000FF0 /* ~4K */

/* Since exception handlers should be aligned with 64 K Boundary*/
exception_handlers_p0: org = 0x00010000,   len = 0x00010000 /* 64K core_0 */

/* Since exception handlers should be aligned with 64 K Boundary*/
exception_handlers_p1: org = 0x00020000,   len = 0x00010000 /* 64K core_1 */
```

```
/* Since I need one boot sector for my user application, I allocated memory
address 0x00001000 to 0x0000FFFF for Boot loader code.
```

**Please Confirm whether it is correct or not?**

Please note that, space allocated are below exception handler memory locations.\*/

```
internal_flash:   org = 0x00001000,   len = 0x0000F000 /* 60 KB */

/* Space allocated for initialization & application code code and variables
for both cores. The split will be made in the memory section below.*/
internal_ram_p0:  org = 0x40000000,   len = 0x00030000 /* 192K core_0 */
internal_ram_p1:  org = 0x50000000,   len = 0x00030000 /* 192K core_1 */

heap:             org = 0x40030000,   len = 0x00008000 /* 32K heap core_0 */
stack:           org = 0x40038000,   len = 0x00008000 /* 32K stack core_0 */

heap_p1:         org = 0x50030000,   len = 0x00008000 /* 32K heap core_1 */
stack_p1:       org = 0x50038000,   len = 0x00008000 /* 32K stack core_1 */
```

**I am not using core\_1(DPM,but core\_1 is in sleep mode), so is it possible to allocate more RAM area to core\_0 compared to core\_1?**

## 2.) LCF for user application

```
resetvector:      org = 0x00300000,   len = 0x00000010
init:             org = 0x00300010,   len = 0x00000FF0 /* ~4K */

/* Since exception handlers should be aligned with 64 K Boundary*/
exception_handlers_p0: org = 0x00040000,   len = 0x00010000 /* 64K core_0 */

/* Since exception handlers should be aligned with 64 K Boundary*/
exception_handlers_p1: org = 0x00050000,   len = 0x00010000 /* 64K core_1 */

/* Since I need one boot sector for my user application, I allocated memory
address 0x00001000 to 0x0000FFFF for Boot loader.
internal_flash:   org = 0x00060000,   len = 0x001A0000 /* 1664 KB */
```

```
/* Space allocated for initialization & application code code and variables
for both cores. The split will be made in the memory section below.*/
internal_ram_p0:    org = 0x40000000,      len = 0x00030000 /* 192K core_0 */
internal_ram_p1:    org = 0x50000000,      len = 0x00030000 /* 192K core_1 */

heap:              org = 0x40030000,      len = 0x00008000 /* 32K heap core_0 */
stack:            org = 0x40038000,      len = 0x00008000 /* 32K stack core_0 */

heap_p1:          org = 0x50030000,      len = 0x00008000 /* 32K heap core_1 */
stack_p1:         org = 0x50038000,      len = 0x00008000 /* 32K stack core_1 */
```

My Queries are highlighted in Red Bold Letters. I have one more query, that I have given below.

- 1.) In IDE generated code, **exception\_handlers\_p1** is given with more memory(128 KB). Is it fine if I allocate only 64 KB?