CONFIG_NR_CPUS=4

CONFIG_HOTPLUG_CPU=y

对Gemstone2，CONFIG_NR_CPUS=2

CONFIG_HOTPLUG_CPU好像不应该enable?

kernel/cpu.c

kernel/smp.c

kernel/smpboot.c

arch/arm/kernel/smp.c

arch/arm/kernel/head.S

drivers/platform/pegmatite/smp/

in devicetree-ulmage-mv6270-toc.dtb

```
        cpus {
                #address-cells = <0x1>;
                #size-cells = <0x0>;

                cpu@0 {
                        device_type = "cpu";
                        compatible = "arm,cortex-a53";
                        reg = <0xffff00>;
                };

                cpu@1 {
                        device_type = "cpu";
                        compatible = "arm,cortex-a53";
                        reg = <0xffff01>;
                        enable-method = "marvell,pegmatite-apmu-boot";
                };

                cpu@2 {
                        device_type = "cpu";
                        compatible = "arm,cortex-a53";
                        reg = <0xffff02>;
                        enable-method = "marvell,pegmatite-apmu-boot";
                };

                cpu@3 {
                        device_type = "cpu";
                        compatible = "arm,cortex-a53";
                        reg = <0xffff03>;
                        enable-method = "marvell,pegmatite-apmu-boot";
                };
        };
```

in devicetree-uImage-mv6220-toc.dtb

```
        cpus {
                #address-cells = <0x1>;
                #size-cells = <0x0>;

                cpu@0 {
                        device_type = "cpu";
                        compatible = "arm,cortex-a53";
                        reg = <0xffff00>;
                };

                cpu@1 {
                        device_type = "cpu";
                        compatible = "arm,cortex-a53";
                        reg = <0xffff01>;
                        enable-method = "marvell,pegmatite-apmu-boot";
                };
        };


        squ@d1000000 {
                compatible = "mmio-sram";
                reg = <0x0 0xd1000000 0x0 0x18000>;
                clocks = <0x2>;
                #address-cells = <0x1>;
                #size-cells = <0x1>;
                ranges = <0x0 0x0 0xd1000000 0x18000>;
                linux,phandle = <0x4>;
                phandle = <0x4>;

                smpboot-sram@0 {
                        compatible = "marvell,pegmatite-smpboot-sram";
                        reg = <0x0 0x20>;
                };
        };
```

对gemstone2 / granite2而言，0xd1000000 to 0xd1000019存放如下code

```
c04423f8 <pegmatite_smp_jump>:
c04423f8:       e59f100c        ldr     r1, [pc, #12]   ; c044240c <pegmatite_smp
_jump_table>
c04423fc:       ee100fb0        mrc     15, 0, r0, cr0, cr0, {5}
c0442400:       e200000f        and     r0, r0, #15
c0442404:       e7911100        ldr     r1, [r1, r0, lsl #2]
c0442408:       e12fff31        blx     r1

c044240c <pegmatite_smp_jump_table>:
c044240c:       00000000        .word   0x00000000
```

boot core会修改CIU，使得secondary core reset以后从physical address的0xd1000000开始运行！

c044240c <pegmatite_smp_jump_table>:

c044240c:　　00000000　　.word　　0x00000000

会被boot core指向 function address array, array size是core number。

（*pegmatite_smp_jump_table）[0]是无用的，因为它对应的是boot core

（*pegmatite_smp_jump_table）[1] = pegmatite_secondary_startup()