

RK3399 CPUINFO EXPLANATION

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文件密级：公开资料

前言

概述

产品版本

芯片名称	内核版本
RK3399	4.4

读者对象

本文档（本指南）主要适用于以下工程师：

技术支持工程师

软件开发工程师

硬件开发工程师

修订记录

日期	版本	作者	修改说明
2018-08-01	V1.0	许剑群	

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[RK3399 CPUINFO 说明](#)

RK3399 CPUINFO 说明

- [0.216592] rockchip-cpuinfo cpuinfo: Serial : 0000000000000000
- Rockchip芯片cpuinfo的serial信息输出，如果全0表示该颗芯片未烧写序列号

Rockchip芯片的cpuinfo有专门驱动，代码在内核的如下位置

```

1  static int rockchip_cpuinfo_probe(struct platform_device *pdev)
2  {
3      struct device *dev = &pdev->dev;
4      struct nvmem_cell *cell;
5      unsigned char *efuse_buf, buf[16];
6      size_t len;
7      int i;
8
9      cell = nvmem_cell_get(dev, "cpu-version");
10     if (!IS_ERR(cell)) {
11         efuse_buf = nvmem_cell_read(cell, &len);
12         nvmem_cell_put(cell);
13
14         if (len == 1)
15             rockchip_set_cpu_version(efuse_buf[0]);
16         kfree(efuse_buf);
17     }
18
19     cell = nvmem_cell_get(dev, "id");// 从dts查找id获取寄存器偏移地址
20     if (IS_ERR(cell)) {
21         dev_err(dev, "failed to get id cell: %ld\n", PTR_ERR(cell));
22         if (PTR_ERR(cell) == -EPROBE_DEFER)
23             return PTR_ERR(cell);
24         return PTR_ERR(cell);
25     }
26     efuse_buf = nvmem_cell_read(cell, &len);// 读取efuse
27     nvmem_cell_put(cell);
28
29     if (len != 16) {
30         kfree(efuse_buf);
31         dev_err(dev, "invalid id len: %zu\n", len);
32         return -EINVAL;
33     }
34
35     for (i = 0; i < 8; i++) {
36         buf[i] = efuse_buf[1 + (i << 1)];
37         buf[i + 8] = efuse_buf[i << 1];
38     }
39
40     kfree(efuse_buf);
41
42     system_serial_low = crc32(0, buf, 8);
43     system_serial_high = crc32(system_serial_low, buf + 8, 8);
44
45     dev_info(dev, "Serial\t\t: %08x%08x\n",
46             system_serial_high, system_serial_low);// 信息输出
47
48     return 0;
49 }

```

```

1  efuse0: efuse@fff690000 {
2      compatible = "rockchip,rk3399-efuse";
3      reg = <0x0 fff690000 0x0 0x80>;
4      #address-cells = <1>;
5      #size-cells = <1>;
6      clocks = <&cru PCLK_EFUSE1024NS>;
7      clock-names = "pclk_efuse";
8
9      /* Data cells */
10     cpu_id: cpu-id@7 {
11         reg = <0x07 0x10>;
12     };
13     cpub_leakage: cpu-leakage@17 {
14         reg = <0x17 0x1>;
15     };
16     gpu_leakage: gpu-leakage@18 {
17         reg = <0x18 0x1>;
18     };
19     center_leakage: center-leakage@19 {
20         reg = <0x19 0x1>;
21     };
22     cpu1_leakage: cpu-leakage@1a {
23         reg = <0x1a 0x1>;
24     };
25     logic_leakage: logic-leakage@1b {
26         reg = <0x1b 0x1>;
27     };
28     wafer_info: wafer-info@1c {
29         reg = <0x1c 0x1>;
30     };
31 };

```

kernel/arch/arm64/boot/dts/rockchip/rk3399-android.dtsi

```

1  cpuinfo {
2      compatible = "rockchip,cpuinfo";
3      nvmem-cells = <&cpu_id>;
4      nvmem-cell-names = "id";
5  };

```