## **RK3399 LOG EXPLANATION**

发布版本: 1.0

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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
2017-12-26	V1.0	许剑群	

RK3399 LOG EXPLANATION RK3399开机LOG说明

## **RK3399**开机**LOG**说明

- 1 DDR Version 1.00 return(-1)
- DDR Version 1.00 return(-1)
- 3 DDR Version 1.00 return(-1)
- 4 DDR Version 1.00 return(-1)

```
DDR Version 1.08 20170320 //DDR Loader 版本日期
 6
                                    //DDR Loader 开始标志
 7
     Channel 0: LPDDR3, 800MHz
 8
     CS = 0
                                    //DDR片选信息
9
     MR0=0\times0
10
     MR1=0\times0
11
     MR2=0x0
12
     MR3=0x0
     MR4=0x0
13
14
     MR5 = 0x0
15
     MR6=0x0
16
     MR7=0x0
17
     MR8=0x0
18
     MR9=0x0
19
     MR10=0x0
20
     MR11=0x0
21
     MR12=0x0
22
     MR13=0x0
23
     MR14=0x0
24
     MR15=0x0
25
     MR16=0x0
26
     CS = 1
                                    //DDR片选信息
27
     MR0=0x0
28
     MR1=0\times0
29
     MR2=0x0
30
     MR3=0x0
     MR4 = 0x0
31
32
     MR5=0x0
33
     MR6=0x0
34
     MR7=0x0
35
     MR8=0x0
36
     MR9=0x0
37
     MR10=0x0
38
     MR11=0x0
39
     MR12=0x0
40
     MR13=0x0
41
     MR14=0x0
42
     MR15=0x0
43
     MR16=0x0
44
     Bus Width=32 Col=10 Bank=8 Row=15/15 CS=2 Die Bus-Width=32 Size=2048MB
     Channel 1: LPDDR3, 800MHz
45
                                   //DDR通道信息
     CS = 0
46
                                     //DDR片选信息
47
     MR0 = 0 \times 58
48
     MR1=0x58
49
     MR2 = 0 \times 58
50
     MR3 = 0x58
51
     MR4=0x2
52
     MR5=0x1
53
     MR6=0x5
54
     MR7=0x0
55
     MR8=0x1F
56
     MR9=0x1F
57
     MR10=0x1F
```

```
58
      MR11=0x1F
 59
      MR12=0x1F
 60
      MR13=0x1F
 61
      MR14=0x1F
 62
      MR15=0x1F
63
      MR16=0x1F
 64
     CS = 1
                                    //DDR片选信息
 65
      MR0 = 0 \times 58
      MR1 = 0 \times 58
 66
 67
      MR2 = 0x58
 68
      MR3 = 0 \times 58
 69
      MR4=0x2
 70
      MR5=0x1
 71
      MR6=0x5
 72
      MR7=0x0
 73
      MR8=0x1F
74
      MR9=0x1F
 75
      MR10=0x1F
 76
      MR11=0x1F
 77
      MR12=0x1F
 78
      MR13=0x1F
79
      MR14=0x1F
 80
      MR15=0x1F
 81
      MR16=0x1F
      Bus Width=32 Col=10 Bank=8 Row=15/15 CS=2 Die Bus-Width=32 Size=2048MB //总线带宽
 82
     信息
83
      256B stride
                                      //交织信息
      ch 0 ddrconfig = 0x101, ddrsize = 0x2020
 84
 85
      ch 1 ddrconfig = 0x101, ddrsize = 0x2020
      pmugrf_os_reg[2] = 0x3AA0DAA0, stride = 0xD //PMUGRF信息
 86
 87
      OUT
                                       //DDR Loader 结束标志"OUT"
      Boot1: 2017-06-09, version: 1.09 //MINILOADER开始
 88
 89
      CPUId = 0x0
 90
      ChipType = 0x10, 1828
 91
      SdmmcInit=2 0
92
      BootCapSize=100000
93
      UserCapSize=14910MB
 94
      FwPartOffset=2000 , 100000
 95
      SdmmcInit=0 20
 96
      StorageInit ok = 69117
97
      LoadTrustBL
98
      No find bl30.bin
99
      Load uboot, ReadLba = 2000
100
      Load OK, addr=0x200000, size=0x72b94 //MINILOADER结束
101
      RunBL31 0x10000
                                           //BL31的COMMIT号
102
      NOTICE: BL31: v1.3(debug):9f93abc
      NOTICE: BL31: Built : 10:18:20, Jul 27 2017
103
104
      NOTICE: BL31: Rockchip release version: v1.1
      INFO: GICv3 with legacy support detected. ARM GICv3 driver initialized in EL3
105
      INFO:
106
               plat_rockchip_pmu_init(1089): pd status 3e
107
      INFO: BL31: Initializing runtime services
108
      INFO:
             BL31: Initializing BL32
```

```
INF [0x0] TEE-CORE:init_primary_helper:337: Initializing (1.1.0-106-g2d5da6a #1
     Fri Oct 20 01:35:40 UTC 2017 aarch64)
110
     INF [0x0] TEE-CORE:init_primary_helper:338: Release version: 1.1
111
112
     INF [0x0] TEE-CORE:init_teecore:83: teecore inits done
113
114
     INFO: BL31: Preparing for EL3 exit to normal world
115
     INFO:
             Entry point address = 0x200000 //UB00T地址
     INFO: SPSR = 0x3c9
116
                                               //BL31结束标志
117
118
     U-Boot 2014.10-RK3399-06-02526-g45a462c (Oct 25 2017 - 09:05:48) //UBOOT开始标志
119
120
121
     CPU: rk3399
122
     cpu version = 0
123
     CPU's clock information:
124
     aplll = 816000000HZ
125
     ap11b = 24000000HZ
126
     gp11 = 800000000HZ
127
     aclk_periph_h = 133333333Hz, hclk_periph_h = 66666666Hz, pclk_periph_h =
     3333333HZ
128
     aclk_periph_10 = 100000000Hz, hclk_periph_10 = 100000000Hz, pclk_periph_10 =
     50000000HZ
129
     hclk_periph_l1 = 100000000Hz, pclk_periph_l1 = 50000000HZ
130
     cp11 = 800000000HZ
131
     dp11 = 800000000HZ
132
     vp11 = 24000000HZ
133
     np11 = 24000000HZ
134
     pp11 = 676000000HZ
135
     Board: Rockchip platform Board
136
     Uboot as second level loader
137
     DRAM: Found dram banks: 1
138
     Adding bank:0000000000200000(00000000ffe00000)
139
     Reserve memory for trust os.
140
      dram reserve bank: base = 0x08400000, size = 0x01200000
141
     128 MiB
     SdmmcInit = 0 20
142
143
     storage init OK!
144
     Using default environment
145
146
     GetParam
147
     Load FDT from resource image.
148
     power key: bank-0 pin-5
149
     can't find dts node for fixed
     usb bc: can find node by path: /dwc-control-usb/usb_bc
150
151
     dwc_otg_check_dpdm: usb bc disconnected
152
      pmic:rk808
153
     can't find dts node for pwm1
154
     set pwm voltage ok,pwm_id =2 vol=900000,pwm_value=16
155
     CPU's clock information:
156
     ap111 = 816000000Hz
     ap11b = 24000000HZ
157
158
      gp11 = 800000000HZ
```

```
aclk_periph_h = 133333333Hz, hclk_periph_h = 66666666Hz, pclk_periph_h =
     3333333HZ
160
      aclk_periph_10 = 100000000Hz, hclk_periph_10 = 100000000Hz, pclk_periph_10 =
     50000000HZ
161
      hclk_periph_l1 = 100000000Hz, pclk_periph_l1 = 50000000HZ
162
      cp11 = 800000000HZ
163
      dp11 = 800000000HZ
164
      vp11 = 24000000HZ
165
      np11 = 24000000HZ
      pp11 = 676000000HZ
166
      Can't find dts node for fuel guage cw201x
167
168
     can't find dts node for ec-battery
169
      Can't find dts node for charger bg25700
170
      SecureBootEn = 0, SecureBootLock = 0
171
      #Boot ver: 2017-10-25#1.09
172
173
      empty serial no.
174
      normal boot.
175
      checkKey
176
      vbus = 0
      no fuel gauge found
177
178
      no fuel gauge found
179
      read logo on state from dts [1]
180
      no fuel gauge found
181
      Using display timing dts
      Detailed mode clock 160000 kHz, flags[a]
182
183
     H: 1200 1320 1340 1361
184
      v: 1920 1941 1944 1962
      bus_format: 100e
185
      rk lcdc - 0 dclk set: dclk = 1600000000HZ, pll select = 1, div = 1
186
187
      final DSI-Link bandwidth: 1064 Mbps x 4
188
      failed to wait for phy lock state
189
      Hit any key to stop autoboot: 0
190
      load fdt from resouce.
191
      Secure Boot state: 0
192
      kernel
              @ 0x00280000 (0x01238008)
      ramdisk @ 0x05bf0000 (0x001e65b8)
193
      bootrk: do_bootm_linux...
194
195
      Loading Device Tree to 0000000005600000, end 0000000056160c3 ... OK
196
      Add bank:0000000000200000, 0000000008200000
      Add bank:0000000009600000, 00000000eea000000
197
198
      WARNING: could not set reg FDT_ERR_BADOFFSET.
199
200
      Starting kernel ...
                                        //UBOOT结束标志
201
202
           0.000000] Booting Linux on physical CPU 0x0
                                                        //内核启动
      203
           0.000000] Initializing cgroup subsys cpuset
204
     [
           0.000000] Initializing cgroup subsys cpu
205
           0.000000] Initializing cgroup subsys cpuacct
      [
206
           0.000000] Initializing cgroup subsys schedtune
207
           0.000000] Linux version 4.4.103 (wmc@ubuntu) (gcc version 4.9 20140514
     (prerelease) (GCC) ) #1185 SMP PREEMPT Tue Dec 12 14:38:48 CST 2017 //内核固件编译者和
     时间信息
```

```
0.000000] Boot CPU: AArch64 Processor [410fd034]
208
209
           0.000000] earlycon: Early serial console at MMIO32 0xff1a0000 (options '')
210
      0.000000] bootconsole [uart0] enabled
           0.000000] Reserved memory: failed to reserve memory for node 'stb-
211
      Γ
     devinfo@00000000': base 0x0000000000000, size 0 MiB
           0.000000] cma: Reserved 16 MiB at 0x00000000f7000000
212
213
           0.000000] psci: probing for conduit method from DT.
214
      0.000000] psci: PSCIv1.0 detected in firmware.
           0.000000] psci: Using standard PSCI v0.2 function IDs
215
           0.000000] psci: Trusted OS migration not required
216
           0.000000] PERCPU: Embedded 21 pages/cpu @ffffffc0f6ef0000 s45504 r8192 d32320
217
      Γ
     u86016
218
           0.000000] Detected VIPT I-cache on CPU0
219
           0.000000] CPU features: enabling workaround for ARM erratum 845719
           0.000000] Built 1 zonelists in Zone order, mobility grouping on. Total
220
      Γ
     pages: 994824
221
     Γ
           0.000000] Kernel command line: earlycon=uart8250,mmio32,0xff1a0000 swiotlb=1
     androidboot.baseband=N/A androidboot.selinux=permissive
     androidboot.hardware=rk30board0
           0.000000] PID hash table entries: 4096 (order: 3, 32768 bytes)
222
           0.000000] Dentry cache hash table entries: 524288 (order: 10, 4194304 bytes)
223
224
           0.000000] Inode-cache hash table entries: 262144 (order: 9, 2097152 bytes)
225
      Γ
           0.000000] software IO TLB [mem 0xf6ea7000-0xf6ee7000] (0MB) mapped at
     [ffffffc0f6ea7000-ffffffc0f6ee6fff]
           0.000000] Memory: 3930820K/4042752K available (10878K kernel code, 1632K
226
     rwdata, 5268K rodata, 832K init, 1069K bss, 95548K reserved, 16384K cma-reserved)
           0.000000] Virtual kernel memory layout:
227
                        modules : 0xffffff800000000 - 0xffffff8008000000
228
      0.0000001
                                                                             (
                                                                                128 MB)
229
           0.0000001
                         vmalloc : 0xffffff8008000000 - 0xffffffbdbfff0000 (
                                                                                 246 GB)
      Γ
                           .init : 0xffffff8009050000 - 0xffffff8009120000
230
      Γ
           0.0000001
                                                                             (
                                                                                 832 KB)
231
      [
          0.000000]
                           .text : 0xffffff8008080000 - 0xffffff8008b20000 ( 10880 KB)
                        .rodata : 0xffffff8008b20000 - 0xffffff8009050000
232
           0.000000]
                                                                             ( 5312 KB)
      Γ
                                                                             ( 1633 KB)
233
     Γ
           0.0000001
                           .data : 0xffffff8009120000 - 0xffffff80092b8008
234
     Γ
           0.0000001
                        vmemmap: 0xffffffbdc0000000 - 0xffffffbfc0000000
                                                                             (
                                                                                   8 GB
     maximum)
                                   0xffffffbdc0008000 - 0xffffffbdc3e00000
235
     [
           0.000000]
                                                                                 61 MB
     actual)
236
     Γ
           0.0000001
                        fixed
                                 : 0xffffffbffe7fd000 - 0xffffffbffec00000
                                                                             ( 4108 KB)
237
     Γ
           0.0000007
                         PCI I/O : 0xffffffbffee00000 - 0xffffffbfffe00000
                                                                             (
                                                                                  16 MB)
           0.000000]
                         memory : 0xffffffc000200000 - 0xffffffc0f8000000
                                                                             ( 3966 MB)
238
      239
           0.000000] SLUB: HWalign=64, Order=0-3, MinObjects=0, CPUs=6, Nodes=1
           0.000000] Preemptible hierarchical RCU implementation.
240
      241
      0.000000] Build-time adjustment of leaf fanout to 64.
242
           0.000000] RCU restricting CPUs from NR_CPUS=8 to nr_cpu_ids=6.
      0.000000] RCU: Adjusting geometry for rcu_fanout_leaf=64, nr_cpu_ids=6
243
      Γ
244
           0.000000] NR_IRQS:64 nr_irqs:64 0 //GIC初始化
245
      0.000000] GIC: Using split EOI/Deactivate mode
246
      0.000000] ITS: /interrupt-controller@fee00000/interrupt-controller@fee20000
           0.000000] ITS: allocated 65536 Devices @9600000 (psz 64K, shr 0)
247
      248
      Γ
           0.000000] ITS: using cache flushing for cmd queue
249
      0.000000] GIC: using LPI property table @0x0000000009680000
           0.000000] ITS: Allocated 1792 chunks for LPIs
250
      Γ
251
      0.000000] CPUO: found redistributor 0 region 0:0x00000000fef00000
```

```
252 [ 0.000000] CPUO: using LPI pending table @0x0000000009690000
253
           0.000000] GIC: using cache flushing for LPI property table
254
           0.000000] GIC: PPI partition interrupt-partition-0[0] { /cpus/cpu@0[0]
     /cpus/cpu@1[1] /cpus/cpu@2[2] /cpus/cpu@3[3] }
255
     Γ
           0.000000] GIC: PPI partition interrupt-partition-1[1] { /cpus/cpu@100[4]
     /cpus/cpu@101[5] }
256
           0.000000] rockchip_clk_register_frac_branch: could not find dclk_vop0_frac as
     parent of dclk_vop0, rate changes may not work
                                                        //CLK初始化
           0.000000] rockchip_clk_register_frac_branch: could not find dclk_vop1_frac as
257
     parent of dclk_vop1, rate changes may not work
           0.000000] rockchip_cpuclk_pre_rate_change: limiting alt-divider 33 to 31
258
     Γ
259
           0.000000] Architected cp15 timer(s) running at 24.00MHz (phys).
     TIMER初始化
260
     Γ
           0.000000] clocksource: arch_sys_counter: mask: 0xffffffffffffff max_cycles:
     0x588fe9dc0, max_idle_ns: 440795202592 ns
           0.000006] sched_clock: 56 bits at 24MHz, resolution 41ns, wraps every
     [
261
     4398046511097ns
                        //EAS初始化
262
      Γ
           0.001921] Calibrating delay loop (skipped), value calculated using timer
     frequency.. 48.00 BogoMIPS (1pj=80000)
           0.002907] pid_max: default: 32768 minimum: 301
263
          0.003438] Security Framework initialized
264
265
      [ 0.003838] SELinux: Initializing.
266
     [
          0.004261] Mount-cache hash table entries: 8192 (order: 4, 65536 bytes)
          0.004906] Mountpoint-cache hash table entries: 8192 (order: 4, 65536 bytes)
267
           0.006432] Initializing cgroup subsys freezer
268
269
          0.006871] Initializing cgroup subsys debug
      0.008196] sched-energy: Sched-energy-costs installed from DT
270
271
     0.008759] CPUO: update cpu_capacity 401
           0.009218] ASID allocator initialised with 65536 entries
272
      Γ
273
      0.026042] PCI/MSI: /interrupt-controller@fee00000/interrupt-
     controller@fee20000 domain created
           0.027297] Platform MSI: /interrupt-controller@fee00000/interrupt-
274
     controller@fee20000 domain created
           0.039452] Detected VIPT I-cache on CPU1
275
      Γ
276
      Γ
           0.039484] CPU1: found redistributor 1 region 0:0x00000000fef20000
          0.039524] CPU1: using LPI pending table @0x0000000f1c00000
277
278
          0.039566] CPU1: update cpu_capacity 401
      279
      [
          0.039569] CPU1: Booted secondary processor [410fd034]
280
      [
           0.049447] Detected VIPT I-cache on CPU2
           0.049467] CPU2: found redistributor 2 region 0:0x00000000fef40000
281
      282
           0.049499] CPU2: using LPI pending table @0x00000000f1c30000
           0.049527] CPU2: update cpu_capacity 401
283
      284
      0.049530] CPU2: Booted secondary processor [410fd034]
           0.059486] Detected VIPT I-cache on CPU3
285
      0.059505] CPU3: found redistributor 3 region 0:0x00000000fef60000
286
      Γ
287
           0.059537] CPU3: using LPI pending table @0x00000000f1c70000
288
      0.059563] CPU3: update cpu_capacity 401
289
      [
           0.059566] CPU3: Booted secondary processor [410fd034]
           0.069534] Detected PIPT I-cache on CPU4
290
      [
      [
          0.069562] CPU4: found redistributor 100 region 0:0x00000000fef80000
291
292
          0.069601] CPU4: using LPI pending table @0x00000000f1cb0000
293
      Γ
           0.069643] CPU4: update cpu_capacity 1024
294
      [
           0.069646] CPU4: Booted secondary processor [410fd082]
```

```
0.079556] Detected PIPT I-cache on CPU5
295
296
           0.079574] CPU5: found redistributor 101 region 0:0x00000000fefa0000
297
      0.079610] CPU5: using LPI pending table @0x00000000f1cf0000
298
           0.079637] CPU5: update cpu_capacity 1024
      299
      Γ
           0.079639] CPU5: Booted secondary processor [410fd082]
300
      Γ
           0.079726] Brought up 6 CPUs
                                                 //多核启动结束,已成功启动6核
301
           0.092124] SMP: Total of 6 processors activated.
302
      Γ
           0.092578] CPU features: detected feature: GIC system register CPU interface
           0.093264] CPU: All CPU(s) started at EL2
303
      Γ
           0.093695] alternatives: patching kernel code
304
      305
           0.095819] devtmpfs: initialized
      Γ
           0.115570] clocksource: jiffies: mask: 0xffffffff max_cycles: 0xffffffff,
306
      Γ
     max_idle_ns: 6370867519511994 ns
           0.116548] futex hash table entries: 2048 (order: 5, 131072 bytes)
307
           0.117868] pinctrl core: initialized pinctrl subsystem
308
      0.119931] Failed to find legacy iommu devices
309
310
           0.120748] NET: Registered protocol family 16
      Γ
311
      Γ
           0.121502] schedtune: init normalization constants...
312
      0.122008] schedtune: CLUSTER[0-3]
                                                  min_pwr:
                                                              56 max_pwr:
                                                                            222
           0.122643] schedtune: CPU[0]
313
      min_pwr:
                                                              0 max_pwr:
                                                                            222
          0.123289] schedtune: CPU[1]
314
      Γ
                                                  min_pwr:
                                                               0 max_pwr:
                                                                            222
          0.123925] schedtune: CPU[2]
315
      [
                                                  min_pwr:
                                                               0 max_pwr: 222
316
      0.124560] schedtune: CPU[3]
                                                  min_pwr:
                                                               0 max_pwr:
                                                                            222
           0.125196] schedtune: CLUSTER[4-5]
                                                              65 max_pwr: 1108
317
      [
                                                  min_pwr:
           0.125830] schedtune: CPU[4]
318
      Γ
                                                  min_pwr:
                                                               0 max_pwr: 1108
319
      Γ
           0.126465] schedtune: CPU[5]
                                                  min_pwr:
                                                               0 max_pwr: 1108
           0.127129] schedtune: SYSTEM
320
      Γ
                                                  min_pwr: 121 max_pwr: 4434
321
      Γ
           0.127765] schedtune: using normalization constants mul: 3862781856 sh1: 1
     sh2: 12
322
           0.128507] schedtune: verify normalization constants...
323
           0.129023] schedtune: max_pwr/2^0: 4313 => norm_pwr: 1024
324
           0.129565] schedtune: max_pwr/2^1: 2156 => norm_pwr:
      511
325
      Γ
           0.130107] schedtune: max_pwr/2^2: 1078 => norm_pwr:
                                                                 255
           0.130656] schedtune: max_pwr/2^3: 539 => norm_pwr:
326
      Γ
                                                                 127
327
      Γ
           0.131198] schedtune: max_pwr/2^4: 269 => norm_pwr:
                                                                  63
           0.131740] schedtune: max_pwr/2^5: 134 => norm_pwr:
328
           0.132282] schedtune: configured to support 5 boost groups
329
      Ε
330
      [
           0.140691] cpuidle: using governor ladder
                                                        //CPUIDLE初始化
331
      Γ
           0.150696] cpuidle: using governor menu
           0.151091] Registered FIQ tty driver
332
      //FIQ注册
           0.151731] vdso: 2 pages (1 code @ ffffff8008b26000, 1 data @
333
     ffffff8009124000)
334
           0.152470] hw-breakpoint: found 6 breakpoint and 4 watchpoint registers.
335
           0.153858] DMA: preallocated 256 KiB pool for atomic allocations
      0.175168] console [pstore0] enabled
336
      Γ
                                                         //PSTORE用于存储LASTLOG
337
           0.175768] pstore: Registered ramoops as persistent store backend
338
      Γ
           0.176374] ramoops: attached 0xf0000@0x110000, ecc: 0/0
339
      Γ
           0.177559] sip_fiq_debugger_uart_irq_tf_init error: -2
340
           0.178089] fiq debugger bind fiq to trustzone failed: -2
      Γ
341
      <hit enter to activate fiq debugger>
                                                        //FIQ CONSOLE
342
      0.178937] console [ttyFIQ0] enabled
           0.178937] console [ttyFIQ0] enabled
343
      Γ
344
      0.179799] bootconsole [uart0] disabled
```

```
0.1797991 bootconsole [uart0] disabled
345
346
          0.180707] Registered fig debugger ttyFIQ0
347
      0.209178] Rockchip hdmi driver version 2.0
348
349
      Γ
          0.210895] iommu: Adding device ff650000.vpu_service to group 0
          0.210978] iommu: Adding device ff660000.rkvdec to group 1
350
      Γ
          0.211045] iommu: Adding device ff670000.iep to group 2
351
352
     0.211142] iommu: Adding device ff8f0000.vop to group 3
          0.211219] iommu: Adding device ff900000.vop to group 4
353
     Γ
          0.211935] rk_iommu ff670800.iommu: can't get aclk
354
      [
          0.211955] rk_iommu ff670800.iommu: can't get hclk
355
356
          0.212531] SCSI subsystem initialized
      Γ
357
     Γ
          0.212706] usbcore: registered new interface driver usbfs
358
     Γ
          0.212754] usbcore: registered new interface driver hub
359
      0.212826] usbcore: registered new device driver usb
          0.213164] media: Linux media interface: v0.10
360
      361
          0.213209] Linux video capture interface: v2.00
      Γ
362
     Γ
          0.213367] pps_core: LinuxPPS API ver. 1 registered
363
     0.213378] pps_core: Software ver. 5.3.6 - Copyright 2005-2007 Rodolfo
     Giometti < giometti@linux.it>
          0.213404] PTP clock support registered
364
          0.214836] Advanced Linux Sound Architecture Driver Initialized.
365
      Γ
366
     0.215365] Bluetooth: Core ver 2.21
          0.215400] NET: Registered protocol family 31
367
      [
368
          0.215412] Bluetooth: HCI device and connection manager initialized
          0.215430] Bluetooth: HCI socket layer initialized
369
      Γ
370
      0.215445] Bluetooth: L2CAP socket layer initialized
371
     0.215489] Bluetooth: SCO socket layer initialized
                                                             : 0000000000000000
          0.216592] rockchip-cpuinfo cpuinfo: Serial
372
      Γ
373
          0.217016] clocksource: Switched to clocksource arch_sys_counter
374
      Γ
          0.259836] thermal thermal_zone1: power_allocator: sustainable_power will be
     estimated
375
      Γ
          0.260090] NET: Registered protocol family 2
          0.260552] TCP established hash table entries: 32768 (order: 6, 262144 bytes)
376
     Γ
377
      Γ
          0.260734] TCP bind hash table entries: 32768 (order: 7, 524288 bytes)
          0.260971] TCP: Hash tables configured (established 32768 bind 32768)
378
          0.261054] UDP hash table entries: 2048 (order: 4, 65536 bytes)
379
      380
     Γ
          0.261102] UDP-Lite hash table entries: 2048 (order: 4, 65536 bytes)
381
     [
          0.261280] NET: Registered protocol family 1
          0.261782] Trying to unpack rootfs image as initramfs...
382
      383
          0.359789] Freeing initrd memory: 1944K
           0.360263] hw perfevents: enabled with armv8_cortex_a53 PMU driver, 7 counters
384
      available
     Γ
           0.360437] hw perfevents: enabled with armv8_cortex_a72 PMU driver, 7 counters
385
     available
386
          0.363044] audit: initializing netlink subsys (disabled)
387
          0.363110] audit: type=2000 audit(0.356:1): initialized
388
          0.368384] VFS: Disk quotas dquot_6.6.0
      0.368523] VFS: Dquot-cache hash table entries: 512 (order 0, 4096 bytes)
389
      Γ
390
      Γ
          0.369928] fuse init (API version 7.23)
391
      [
          0.371118]
392
      Γ
          0.371118] TEE Core Framework initialization (ver 1:0.1)
393
      [
          0.371155] TEE armv7 Driver initialization
```

```
0.371483] tz_tee_probe: name="armv7sec", id=0, pdev_name="armv7sec.0"
394
395
           0.371498] TEE core: Alloc the misc device "opteearmtz00" (id=0)
396
      0.371700] TEE Core: Register the misc device "opteearmtz00" (id=0,minor=62)
397
          0.375815] Block layer SCSI generic (bsg) driver version 0.4 loaded (major
      [
     246)
398
      Γ
          0.375842] io scheduler noop registered
399
          0.376010] io scheduler cfg registered (default)
400
     [
          0.379828] backlight supply power not found, using dummy regulator
          0.380478] iep: failed to find iep power down clock source.
401
          0.380842] IEP Power ON
402
      Γ
      [
          0.381000] IEP Power OFF
403
404
          0.381079] IEP Driver loaded successfully
      Γ
405
      Γ
          0.381183] Module initialized.
          0.381587] rk-vcodec ff650000.vpu_service: probe device
406
                                                                      //RKVDEC初始化
407
          0.381634] rk-vcodec ff650000.vpu_service: vpu mmu dec ffffffc0f1f01810
          0.381768] rk-vcodec ff650000.vpu_service: allocator is drm
408
409
          0.381820] rk-vcodec ff650000.vpu_service: checking hw id 0
      Γ
410
      0.382263] rk-vcodec ff650000.vpu_service: init success
411
          0.382816] rk-vcodec ff660000.rkvdec: probe device
          0.382855] rk-vcodec ff660000.rkvdec: vpu mmu dec ffffffc0f1f02010
412
          0.382986] rk-vcodec ff660000.rkvdec: allocator is drm
413
          0.383041] rk-vcodec ff660000.rkvdec: checking hw id 6876
414
      Γ
415
     Γ
          0.383360] rk-vcodec ff660000.rkvdec: init success
          0.384733] dma-pl330 ff6d0000.dma-controller: Loaded driver for PL330 DMAC-
416
     [
     241330
                                //DMA PL330初始化
417
     Ε
          0.384752] dma-p1330 ff6d0000.dma-controller:
                                                           DBUFF-32x8bytes Num_Chans-
     6 Num_Peri-12 Num_Events-12
418
     Γ
          0.386095] dma-pl330 ff6e0000.dma-controller: Loaded driver for PL330 DMAC-
     241330
419
          0.386113] dma-pl330 ff6e0000.dma-controller:
                                                             DBUFF-128x8bytes
     Γ
     Num_Chans-8 Num_Peri�� Z��_Events-16 //console切换 可能显示乱码。
420
          0.387768] Serial: 8250/16550 driver, 5 ports, IRQ sharing disabled
421
     Γ
          0.389354] console [ttyS0] disabled
          0.389403] ff180000.serial: ttyS0 at MMIO 0xff180000 (irq = 36, base_baud =
422
      Γ
     1500000) is a 16550A
          0.389971] ff1a0000.serial: ttyS2 at MMIO 0xff1a0000 (irq = 37, base_baud =
423
     1500000) is a 16550A
424
          0.390400] [drm:drm_core_init] Initialized drm 1.1.0 20060810
425
      0.394776] ff960000.dsi.0 supply power not found, using dummy regulator
          0.395401] mali ff9a0000.gpu: Failed to get regulator
426
                                                                        //GPU初始化
427
          0.395423] mali ff9a0000.gpu: Power control initialization failed
          0.395709] Unable to detect cache hierarchy from DT for CPU 0
428
      429
      0.403629] brd: module loaded
          0.408410] loop: module loaded
430
      0.408957] zram: Added device: zram0
431
      Γ
432
          0.409523] SCSI Media Changer driver v0.25
433
          0.410130] tun: Universal TUN/TAP device driver, 1.6
434
          0.410148] tun: (C) 1999-2004 Max Krasnyansky <maxk@qualcomm.com>
          0.411221] rk_gmac-dwmac fe300000.ethernet: clock input or output? (input).
435
      //GMAC初始化
436
          0.411251] rk_gmac-dwmac fe300000.ethernet: TX delay(0x28).
437
      Γ
          0.411266] rk_gmac-dwmac fe300000.ethernet: RX delay(0x11).
438
          0.411294] rk_gmac-dwmac fe300000.ethernet: integrated PHY? (no).
```

```
0.4114611 rk gmac-dwmac fe300000.ethernet: clock input from PHY
439
440
           0.416480] rk_gmac-dwmac fe300000.ethernet: init for RGMII
441
      0.416607] stmmac - user ID: 0x10, Synopsys ID: 0x35
           0.416617] Ring mode enabled
442
      443
      Γ
           0.416627] DMA HW capability register supported
           0.416635] Normal descriptors
444
      Γ
445
           0.416647] RX Checksum Offload Engine supported (type 2)
      0.416656] TX Checksum insertion supported
446
      [
           0.416664] Wake-Up On Lan supported
447
      Γ
           0.416705] Enable RX Mitigation via HW Watchdog Timer
448
      Γ
449
      [
           0.483193] libphy: stmmac: probed
           0.483230] eth%d: PHY ID 001cc915 at 0 IRQ POLL (stmmac-0:00) active
450
      [
451
      Γ
           0.483244] eth%d: PHY ID 001cc915 at 1 IRQ POLL (stmmac-0:01)
           0.484036] PPP generic driver version 2.4.2
452
      Γ
453
      Γ
           0.484236] PPP BSD Compression module registered
           0.484252] PPP Deflate Compression module registered
454
      455
           0.484283] PPP MPPE Compression module registered
      Γ
456
      Γ
           0.484307] NET: Registered protocol family 24
457
      Γ
           0.484349] SLIP: version 0.8.4-NET3.019-NEWTTY (dynamic channels, max=256) (6
     bit encapsulation enabled).
           0.484361] CSLIP: code copyright 1989 Regents of the University of California.
458
459
           0.484386] Rockchip WiFi SYS interface (V1.00) ...
460
      Γ
           0.484471] usbcore: registered new interface driver catc
461
           0.484515] usbcore: registered new interface driver kaweth
           0.484532] pegasus: v0.9.3 (2013/04/25), Pegasus/Pegasus II USB Ethernet
462
      Γ
     driver
      Γ
           0.484573] usbcore: registered new interface driver pegasus
463
464
      Γ
           0.484620] usbcore: registered new interface driver rt18150
           0.484663] usbcore: registered new interface driver r8152
465
           0.484678] hso: drivers/net/usb/hso.c: Option Wireless
466
      Γ
467
           0.484739] usbcore: registered new interface driver hso
           0.484791] usbcore: registered new interface driver asix
468
      Γ
469
      0.484835] usbcore: registered new interface driver ax88179_178a
           0.484878] usbcore: registered new interface driver cdc_ether
470
      Γ
471
      Γ
           0.484920] usbcore: registered new interface driver cdc_eem
           0.484963] usbcore: registered new interface driver dm9601
472
           0.485014] usbcore: registered new interface driver smsc75xx
473
      Ε
474
      0.485068] usbcore: registered new interface driver smsc95xx
475
      Γ
           0.485110] usbcore: registered new interface driver gl620a
           0.485154] usbcore: registered new interface driver net1080
476
      Γ
477
           0.485197] usbcore: registered new interface driver plusb
           0.485240] usbcore: registered new interface driver rndis_host
478
      479
      0.485286] usbcore: registered new interface driver cdc_subset
480
           0.485329] usbcore: registered new interface driver zaurus
      0.485373] usbcore: registered new interface driver MOSCHIP usb-ethernet
481
      Γ
     driver
482
      0.485432] usbcore: registered new interface driver int51x1
483
           0.485475] usbcore: registered new interface driver kalmia
           0.485521] usbcore: registered new interface driver ipheth
484
      0.485569] usbcore: registered new interface driver sierra_net
485
      Γ
486
           0.485613] usbcore: registered new interface driver cx82310_eth
           0.485666] usbcore: registered new interface driver cdc_ncm
487
      Γ
488
      Γ
           0.485709] usbcore: registered new interface driver qmi_wwan
```

```
0.4857561 usbcore: registered new interface driver cdc mbim
489
490
           0.486891] rockchip-dwc3 usb@fe800000: failed to get drvdata dwc3
491
      0.487734] rockchip-dwc3 usb@fe900000: failed to get drvdata dwc3
492
           0.488412] ehci_hcd: USB 2.0 'Enhanced' Host Controller (EHCI) Driver
      493
      Γ
           0.488430] ehci-pci: EHCI PCI platform driver
494
      Γ
           0.488486] ehci-platform: EHCI generic platform driver
495
           0.489042] ohci_hcd: USB 1.1 'Open' Host Controller (OHCI) Driver
496
      0.489078] ohci-platform: OHCI generic platform driver
           0.489898] usbcore: registered new interface driver cdc_acm
497
           0.489910] cdc_acm: USB Abstract Control Model driver for USB modems and ISDN
498
      adapters
           0.489968] usbcore: registered new interface driver usblp
499
      Γ
500
      Γ
           0.490016] usbcore: registered new interface driver cdc_wdm
           0.490067] usbcore: registered new interface driver uas
501
           0.490122] usbcore: registered new interface driver usb-storage
502
      0.490163] usbcore: registered new interface driver ums-alauda
503
      504
           0.490204] usbcore: registered new interface driver ums-cypress
      Γ
505
      Γ
           0.490246] usbcore: registered new interface driver ums-datafab
506
      Γ
           0.490287] usbcore: registered new interface driver ums_eneub6250
           0.490328] usbcore: registered new interface driver ums-freecom
507
      0.490395] usbcore: registered new interface driver ums-isd200
508
      Γ
509
           0.490439] usbcore: registered new interface driver ums-jumpshot
      Γ
510
      0.490480] usbcore: registered new interface driver ums-karma
           0.490521] usbcore: registered new interface driver ums-onetouch
511
      Γ
           0.490562] usbcore: registered new interface driver ums-sddr09
512
      Γ
           0.490603] usbcore: registered new interface driver ums-sddr55
513
           0.490645] usbcore: registered new interface driver ums-usbat
514
      515
      Γ
           0.490735] usbcore: registered new interface driver usbserial
           0.490773] usbcore: registered new interface driver usbserial_generic
516
      Γ
517
      Γ
           0.490804] usbserial: USB Serial support registered for generic
518
           0.490846] usbcore: registered new interface driver option
           0.490875] usbserial: USB Serial support registered for GSM modem (1-port)
519
      520
      Γ
           0.490924] usbcore: registered new interface driver trancevibrator
           0.490942] usb20_otg: version 3.10a 21-DEC-2012
521
      Γ
522
      0.491104] usb20_host: version 3.10a 21-DEC-2012
           0.491571] usbcore: registered new interface driver xpad
523
           0.491622] usbcore: registered new interface driver usb_acecad
524
      525
      Γ
           0.491669] usbcore: registered new interface driver aiptek
526
      Γ
           0.491719] usbcore: registered new interface driver gtco
           0.491766] usbcore: registered new interface driver hanwang
527
      Γ
528
           0.491811] usbcore: registered new interface driver kbtab
529
           0.492208] sensor_register_slave:mma8452,id=17
      530
      0.492227] sensor_register_slave:lis3dh,id=7
           0.492243] sensor_register_slave:mma7660,id=18
531
      0.492260] sensor_register_slave:lsm303d,id=22
532
      Γ
533
           0.492275] sensor_register_slave:gs_mc3230,id=23
534
      Γ
           0.492285] [Gsensor]
                                 gsensor_init
535
      Γ
           0.492301] sensor_register_slave:mpu6880_acc,id=24
           0.492317] sensor_register_slave:mpu6500_acc,id=25
536
      Γ
537
      Γ
           0.492334] sensor_register_slave:lsm330_acc,id=26
538
      Γ
           0.492350] sensor_register_slave:bma2xx_acc,id=27
539
      Γ
           0.492367] sensor_register_slave:akm8975,id=29
540
      Γ
           0.492383] sensor_register_slave:akm8963,id=30
```

```
0.4923991 sensor register slave:13g4200d.id=44
541
542
          0.492416] sensor_register_slave:13g20d,id=45
543
      0.492432] sensor_register_slave:ewtsa,id=46
          0.492449] sensor_register_slave:1sm330_gyro,id=50
544
     [
545
      Γ
          0.492466] sensor_register_slave:cm3217,id=52
546
      Γ
          0.492482] sensor_register_slave:cm3218,id=53
          0.492498] sensor_register_slave:ls_stk3410,id=61
547
      548
     0.492515] sensor_register_slave:ps_stk3410,id=66
          0.493197] i2c /dev entries driver
549
     Γ
          0.518694] fusb302 0-0022: port 0 probe success
550
      Ε
          0.520308] fan53555-regulator 0-0040: FAN53555 Option[8] Rev[1] Detected!
551
      Γ
     //SYR827初始化
552
     Γ
          0.5204461 fan53555-reg: supplied by vcc5v0_sys
          0.524987] fan53555-regulator 0-0041: FAN53555 Option[8] Rev[1] Detected!
553
          0.525055] fan53555-reg: supplied by vcc5v0_sys
554
      0.529535] rk808 0-001b: Pmic Chip id: 0x0 //RK808 PMIC初始化
555
      Γ
556
          0.538833] rk808-regulator rk808-regulator: there is no dvs0 gpio
      Γ
557
      Γ
          0.538919] rk808-regulator rk808-regulator: there is no dvs1 gpio
558
      0.539037] DCDC_REG1: supplied by vcc3v3_sys
          0.540706] DCDC_REG2: supplied by vcc3v3_sys
559
      Γ
          0.541840] DCDC_REG3: supplied by vcc3v3_sys
560
      Γ
          0.542134] DCDC_REG4: supplied by vcc3v3_sys
561
      562
     0.542912] LDO_REG1: supplied by vcc3v3_sys
          0.544707] LDO_REG2: supplied by vcc3v3_sys
563
     Γ
          0.546055] LDO_REG3: supplied by vcc3v3_sys
564
      Γ
565
      0.547384] LDO_REG4: supplied by vcc3v3_sys
          0.548712] LDO_REG5: supplied by vcc3v3_sys
566
      567
     [
          0.550060] LDO_REG6: supplied by vcc3v3_sys
          0.551392] LDO_REG7: supplied by vcc3v3_sys
568
      Γ
569
      Γ
          0.552717] LDO_REG8: supplied by vcc3v3_sys
570
      [
          0.554044] SWITCH_REG1: supplied by vcc3v3_sys
571
          0.554374] SWITCH_REG2: supplied by vcc3v3_sys
      Γ
572
      Γ
          0.564394] rk808-rtc rk808-rtc: rtc core: registered rk808-rtc as rtc0
573
      Γ
           0.565609] rk3x-i2c ff3c0000.i2c: Initialized RK3xxx I2C bus at
     ffffff800952e000
                                    //FF3C0000是I2C0
           0.566445] rk3x-i2c ff110000.i2c: Initialized RK3xxx I2C bus at
574
     ffffff800953a000
                                   //FF110000是I2C1
575
     Γ
          1.567057] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1 //FF120000是
     I2C2
          2.567080] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1 //FF3D0000是
576
     I2C4
     Γ
577
          3.567046] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1 //FF130000是
     I2C3
578
     Ε
           4.567044] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1 //FF140000是
     I2C5
579
     [
           5.567048] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1 //FF150000是
     I2C6
580
     [
          6.567049] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1 //FF160000是
     12C7
          7.567043] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
581
     Γ
582
      Γ
           8.567043] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1 //RK3399 EVB3
     I2C6上有FUSB0
583
          9.567044] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
      Γ
```

```
584 [ 10.567044] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
585
     [ 11.567041] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
586
         12.567042] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
     [ 13.567045] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
587
588
     [ 14.567041] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
         15.567039] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
589
590
     [ 16.567043] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
591
         17.567041] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
     [ 18.567040] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
592
       19.567043] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
593
     [ 20.567039] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
594
595
     [ 21.567040] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
596
     Γ
         22.567045] rk3x-i2c ff150000.i2c: timeout, ipd: 0x00, state: 1
597
     [ 22.567368] fusb302 6-0022: port 1 probe success
     [ 22.567403] rk3x-i2c ff150000.i2c: Initialized RK3xxx I2C bus at
598
    ffffff800953c000
     [ 22.568238] goodix_ts_probe() start
599
                                                 //GOODIX是触摸屏,由于机器没有插屏 故触摸
    屏初始化I2C通讯失败
600
     [ 22.697884] <<-GTP-ERROR->> I2C Read: 0x8000, 10 bytes failed, errcode: -6!
     Process reset.
     [ 22.781209] <<-GTP-ERROR->> I2C Read: 0x8000, 10 bytes failed, errcode: -6!
601
    Process reset.
602
     [ 22.864541] <<-GTP-ERROR->> I2C Read: 0x8000, 10 bytes failed, errcode: -6!
    Process reset.
     [ 22.947873] <<-GTP-ERROR->> I2C Read: 0x8000, 10 bytes failed, errcode: -6!
    Process reset.
     [ 23.031209] <<-GTP-ERROR->> I2C Read: 0x8000, 10 bytes failed, errcode: -6!
604
    Process reset.
     [ 23.114539] <<-GTP-ERROR->> I2C Read: 0x8000, 10 bytes failed, errcode: -6!
605
     Process reset.
606
     [ 23.197047] <<-GTP-ERROR->> I2C read 0x8000, 10 bytes, double check failed!
607
        23.197068] <<-GTP-ERROR->> Failed to get chip-type, set chip type default:
    GOODIX_GT9
     [ 23.197842] <<-GTP-ERROR->> I2C Read: 0x8047, 1 bytes failed, errcode: -6!
608
     Process reset.
609
     [ 23.280380] <<-GTP-ERROR->> GTP i2c test failed time 1.
        23.294533] <<-GTP-ERROR->> I2C Read: 0x8047, 1 bytes failed, errcode: -6!
610
    Process reset.
611
     Γ
         23.377047] <<-GTP-ERROR->> GTP i2c test failed time 2.
         23.391199] <<-GTP-ERROR->> I2C Read: 0x8047, 1 bytes failed, errcode: -6!
612
     Ε
        23.473712] <<-GTP-ERROR->> GTP i2c test failed time 3.
613
614
     23.487866] <<-GTP-ERROR->> I2C Read: 0x8047, 1 bytes failed, errcode: -6!
    Process reset.
        23.570380] <<-GTP-ERROR->> GTP i2c test failed time 4.
615
616
     23.584533] <<-GTP-ERROR->> I2C Read: 0x8047, 1 bytes failed, errcode: -6!
    Process reset.
     [ 23.667045] <<-GTP-ERROR->> GTP i2c test failed time 5.
617
618
     Γ
         619
     [
         23.6803947
                      <goodix_ts_probe>_2817 prob error !!!!!!!!!!!! //GT911初始化
    失败
620
     [
         23.681138] input: gsl3673 as /devices/platform/ff3d0000.i2c/i2c-4/4-
    0040/input/input0 // GSL3673是另一款触摸屏
```

```
621 [ 23.740544] qs]3673 4-0040; GSL3673 test i2c error!
622
      [ 23.740593] qs13673 4-0040: qs1_probe: init_chip failed
623
      23.753842] qsl3673: probe of 4-0040 failed with error -1 //GSL3673也初始化失败
         23.753920] rk3x-i2c ff3d0000.i2c: Initialized RK3xxx I2C bus at
624
      ffffff800953e000
625
         23.754991] IR NEC protocol handler initialized
     [ 23.755008] IR RC5(x/sz) protocol handler initialized
626
627
     [ 23.755060] IR RC6 protocol handler initialized
     [ 23.755079] IR JVC protocol handler initialized
628
      [ 23.755096] IR Sony protocol handler initialized
629
      [ 23.755112] IR SANYO protocol handler initialized
630
631
      [ 23.755127] IR Sharp protocol handler initialized
     [ 23.755143] IR MCE Keyboard/mouse protocol handler initialized
632
633
     [ 23.755158] IR XMP protocol handler initialized
     [ 23.755468] usbcore: registered new interface driver uvcvideo
634
     [ 23.755480] USB Video Class driver (1.1.1)
635
636
      [ 23.755499] CamSys driver version: v0.34.7, CamSys head file version: v0.14.0
637
     [
         23.756126] __power_supply_register: Expected proper parent device for
     'test_ac'
638
     [ 23.756299] __power_supply_register: Expected proper parent device for
     'test_battery'
        23.756615] thermal thermal_zone2: power_allocator: sustainable_power will be
639
     estimated
640
     [ 23.756749] __power_supply_register: Expected proper parent device for
     'test_usb'
641
     [ 23.759868] rk_tsadcv2_temp_to_code: Invalid conversion table: code=1023,
     temperature=2147483647
642
         23.760770] device-mapper: uevent: version 1.0.3
         23.761226] device-mapper: ioctl: 4.34.0-ioctl (2015-10-28) initialised: dm-
643
     Γ
     devel@redhat.com
644
     [ 23.761475] Bluetooth: HCI UART driver ver 2.3
        23.761489] Bluetooth: HCI UART protocol H4 registered
645
646
     [ 23.761501] Bluetooth: HCI UART protocol LL registered
      [ 23.761517] rtk_btusb: RTKBT_RELEASE_NAME: 20170109_TV_ANDROID_6.x
647
648
      [ 23.761527] rtk_btusb: Realtek Bluetooth USB driver module init, version 4.1.2
     [ 23.761537] rtk_btusb: Register usb char device interface for BT driver
649
      [ 23.761813] usbcore: registered new interface driver rtk_btusb
650
                                              //CPU LEAKAGE信息
651
     [ 23.762416] cpu cpu0: leakage=0
652
      [ 23.780434] cpu cpu0: temp=24444, pvtm=144616 (146571 + -1955)
      [ 23.781122] cpu cpu0: pvtm-sel=1
653
654
     [ 23.781571] cpu cpu4: leakage=0
        23.794198] cpu cpu4: temp=24444, pvtm=151939 (153146 + -1207)
655
      656
     [ 23.794359] cpu cpu4: pvtm-sel=1
      [ 23.801361] sdhci: Secure Digital Host Controller Interface driver
657
      [ 23.801422] sdhci: Copyright(c) Pierre Ossman
658
659
     [ 23.801443] Synopsys Designware Multimedia Card Interface Driver //EMMC初始化
660
        23.802660] dwmmc_rockchip fe310000.dwmmc: IDMAC supports 32-bit address mode.
661
     [ 23.802820] dwmmc_rockchip fe310000.dwmmc: Using internal DMA controller.
        23.802842] dwmmc_rockchip fe310000.dwmmc: Version ID is 270a
662
      Γ
         23.802898] dwmmc_rockchip fe310000.dwmmc: DW MMC controller at irq 25,32 bit
663
      host data width,256 deep fifo
664
          23.802933] dwmmc_rockchip fe310000.dwmmc: 'clock-freq-min-max' property was
     deprecated.
```

```
[ 23.802985] dwmmc_rockchip fe310000.dwmmc: No vmmc regulator found
665
666
      [ 23.802998] dwmmc_rockchip fe310000.dwmmc: No vgmmc regulator found
667
        23.804134] dwmmc_rockchip fe320000.dwmmc: IDMAC supports 32-bit address mode.
     [ 23.804243] dwmmc_rockchip fe320000.dwmmc: Using internal DMA controller.
668
669
       23.804263] dwmmc_rockchip fe320000.dwmmc: Version ID is 270a
         23.804312] dwmmc_rockchip fe320000.dwmmc: DW MMC controller at irq 26,32 bit
670
      host data width,256 deep fifo
671
      Γ
         23.804337] dwmmc_rockchip fe320000.dwmmc: 'clock-freq-min-max' property was
     deprecated.
     [ 23.804461] dwmmc_rockchip fe320000.dwmmc: No vmmc regulator found
672
       23.804774] vcc_sd: unsupportable voltage range: 3300000-3000000uV
673
         23.804803] rockchip-iodomain ff770000.syscon:io-domains: Setting to 3000000
674
     [
     done
675
     [
         23.804821] rockchip-iodomain ff770000.syscon:io-domains: Setting to 3000000
     done
     [ 23.817159] mmc_host mmc0: Bus speed (slot 0) = 400000Hz (slot req 400000Hz,
676
     actual 400000HZ div = 0)
677
         23.831508] dwmmc_rockchip fe320000.dwmmc: 1 slots initialized
678
     [ 23.831961] sdhci-pltfm: SDHCI platform and OF driver helper
        23.833982] sdhci-arasan fe330000.sdhci: No vmmc regulator found
679
       23.834038] sdhci-arasan fe330000.sdhci: No vqmmc regulator found
680
      [ 23.860500] mmc1: SDHCI controller on fe330000.sdhci [fe330000.sdhci] using
681
     ADMA
     [ 23.861497] hidraw: raw HID events driver (C) Jiri Kosina
682
       23.866060] usbcore: registered new interface driver usbhid
683
     [ 23.866085] usbhid: USB HID core driver
684
      [ 23.866274] inv_mpu_iio: inv_mpu_init:746
685
686
      23.867235] ashmem: initialized
     [ 23.869035] rockchip-dmc dmc: unable to get devfreq-event device : dfi //DDR变
687
     频初始化失败
688
     [ 23.872213] ff100000.saradc supply vref not found, using dummy regulator
        23.873494] rknandbase v1.1 2016-11-08
689
690
     [ 23.874014] usbcore: registered new interface driver snd-usb-audio
691
      [ 23.878213] u32 classifier
692
      23.879016]
                        Actions configured
      [ 23.879360] Netfilter messages via NETLINK v0.30.
693
        23.879840] nf_conntrack version 0.5.0 (16384 buckets, 65536 max)
694
695
      [ 23.880758] ctnetlink v0.93: registering with nfnetlink.
696
      [ 23.881841] xt_time: kernel timezone is -0000
         23.883313] ip_tables: (C) 2000-2006 Netfilter Core Team
697
      Γ
698
      [ 23.883978] arp_tables: (C) 2002 David S. Miller
        23.885031] Initializing XFRM netlink socket
699
700
      [ 23.885865] NET: Registered protocol family 10
701
      [ 23.887306] mip6: Mobile IPv6
         23.887618] ip6_tables: (C) 2000-2006 Netfilter Core Team
702
      Γ
703
      [ 23.889689] sit: IPv6 over IPv4 tunneling driver
704
        23.890600] NET: Registered protocol family 17
705
         23.891039] NET: Registered protocol family 15
      Ε
         23.891484] bridge: automatic filtering via arp/ip/ip6tables has been
706
      deprecated. Update your scripts to load br_netfilter if you need this.
707
      [ 23.893543] Bridge firewalling registered
         23.893921] Ebtables v2.0 registered
708
      Γ
709
         23.894547] Bluetooth: RFCOMM TTY layer initialized
```

```
[ 23.894597] Bluetooth: RFCOMM socket layer initialized
710
711
      [ 23.894639] Bluetooth: RFCOMM ver 1.11
712
        23.894674] Bluetooth: BNEP (Ethernet Emulation) ver 1.3
      [ 23.894686] Bluetooth: BNEP filters: protocol multicast
713
714
      [ 23.894704] Bluetooth: BNEP socket layer initialized
      [ 23.894724] Bluetooth: HIDP (Human Interface Emulation) ver 1.2
715
     [ 23.894739] Bluetooth: HIDP socket layer initialized
716
717
     [ 23.894793] 12tp_core: L2TP core driver, V2.0
     [ 23.894818] 12tp_ppp: PPPoL2TP kernel driver, V2.0
718
       23.894838] [WLAN_RFKILL]: Enter rfkill_wlan_init
719
                                                               //WIFI初始化
     [ 23.895296] [WLAN_RFKILL]: Enter rfkill_wlan_probe
720
721
     [ 23.895388] [WLAN_RFKILL]: wlan_platdata_parse_dt: wifi_chip_type = ap6354
722
     Γ
         23.895400] [WLAN_RFKILL]: wlan_platdata_parse_dt: enable wifi power control.
         23.895412] [WLAN_RFKILL]: wlan_platdata_parse_dt: wifi power controled by
723
     [
     gpio.
724
     [ 23.895519] [WLAN_RFKILL]: wlan_platdata_parse_dt: get property:
     WIFI, host_wake_irq = 1003, flags = 0.
725
     [ 23.895530] [WLAN_RFKILL]: rfkill_wlan_probe: init gpio
726
     [ 23.895545] [WLAN_RFKILL]: Exit rfkill_wlan_probe
727
        23.895640] [BT_RFKILL]: Enter rfkill_rk_init
     [ 23.896165] [BT_RFKILL]: bluetooth_platdata_parse_dt: get property:
728
     uart_rts_gpios = 1083.
729
     [ 23.896221] [BT_RFKILL]: bluetooth_platdata_parse_dt: get property:
     BT, reset\_gpio = 1009.
730
     [
         23.896262] [BT_RFKILL]: bluetooth_platdata_parse_dt: get property:
     BT, wake_gpio = 1090.
731
     [ 23.896303] [BT_RFKILL]: bluetooth_platdata_parse_dt: get property:
     BT,wake_host_irq = 1004.
732
     [ 23.897687] [BT_RFKILL]: Request irq for bt wakeup host
     [ 23.897753] [BT_RFKILL]: ** disable irq
733
734
     [ 23.897915] [BT_RFKILL]: bt_default device registered.
735
      [ 23.898195] sensor_register_slave:mpu6500_gyro,id=48
736
     [ 23.898217] sensor_register_slave:mpu6880_gyro,id=49
     [ 23.899908] Registered cp15_barrier emulation handler
737
738
     [ 23.899985] Registered setend emulation handler
     [ 23.901466] mmc1: MAN_BKOPS_EN bit is not set
739
     [ 23.910523] registered taskstats version 1
740
741
     [ 23.911297] rockchip ion idev is NULL
742
     [ 23.911318] rga2 ff680000.rga: rga ion client create success!
743
         23.911509] rga: Driver loaded successfully ver:3.02
744
     [
         23.912418] rockchip-usb2phy ff770000.syscon:usb2-phy@e450: vbus_drv is not
     assigned
745
     [ 23.913596] rockchip-usb2phy ff770000.syscon:usb2-phy@e460: vbus_drv is not
     assigned
         23.915565] rockchip-drm display-subsystem: bound ff900000.vop (ops
746
     Γ
     vop_component_ops) //DRM显示系统启动
747
     [ 23.915764] rockchip-drm display-subsystem: bound ff8f0000.vop (ops
     vop_component_ops)
     [ 23.915833] rockchip-drm display-subsystem: bound ff960000.dsi (ops
748
     dw_mipi_dsi_ops)
749
     [ 23.916198] i2c i2c-9: of_i2c: modalias failure on /hdmi@ff940000/ports
         23.916232] dwhdmi-rockchip ff940000.hdmi: registered DesignWare HDMI I2C bus
750
     driver
                  //HDMI注册
```

```
751 [ 23.916300] dwhdmi-rockchip ff940000.hdmi: Detected HDMI TX controller v2.11a
     with HDCP (DWC HDMI 2.0 TX PHY)
752
         23.917159] rockchip-drm display-subsystem: bound ff940000.hdmi (ops
     dw_hdmi_rockchip_ops)
     [ 23.917791] cdn-dp fec00000.dp: [drm:cdn_dp_pd_event_work] Not connected.
753
     Disabling cdn
                      //DP注册
         23.917833] rockchip-drm display-subsystem: bound fec00000.dp (ops
754
     cdn_dp_component_ops)
     [ 23.917850] [drm:drm_vblank_init] Supports vblank timestamp caching Rev 2
755
     (21.10.2013).
     [ 23.917864] [drm:drm_vblank_init] No driver support for vblank timestamp query.
756
757
       23.917880] mmc1: new HS400 MMC card at address 0001 //eMMC注册成功
758
     Γ
         23.918463] mmcblk1: mmc1:0001 AWPD3R 14.6 GiB
     [ 23.918712] mmcblk1boot0: mmc1:0001 AWPD3R partition 1 4.00 MiB
759
        23.918946] mmcblk1boot1: mmc1:0001 AWPD3R partition 2 4.00 MiB
760
      [ 23.919189] mmcblk1rpmb: mmc1:0001 AWPD3R partition 3 4.00 MiB
761
762
      [ 23.919645] rkpart: partition size too small (5)
763
     23.9196637
                         uboot: 0x000400000 -- 0x000800000 (4 MB)
764
     [ 23.919676]
                         trust: 0x000800000 -- 0x000c00000 (4 MB)
        23.919687]
                          misc: 0x000c00000 -- 0x001000000 (4 MB)
765
      Γ
      [ 23.919699] resource: 0x001000000 -- 0x002000000 (16 MB)
766
                        kernel: 0x002000000 -- 0x003800000 (24 MB)
767
      [ 23.919711]
768
     [ 23.919722]
                          boot: 0x003800000 -- 0x005800000 (32 MB)
769
     [ 23.919734] recovery: 0x005800000 -- 0x007800000 (32 MB)
                        backup: 0x007800000 -- 0x00e800000 (112 MB)
770
      Γ
        23.919745]
                         cache: 0x00e800000 -- 0x016800000 (128 MB)
771
      [ 23.919757]
                        system: 0x016800000 -- 0x076800000 (1536 MB)
772
      [ 23.919769]
773
     [ 23.919781]
                      metadata: 0x076800000 -- 0x077800000 (16 MB)
      [ 23.919792] verity_mode: 0x077800000 -- 0x077808000 (0 MB)
774
        23.919804] baseparamer: 0x077808000 -- 0x077c08000 (4 MB)
775
      776
      [ 23.919816]
                           frp: 0x077c08000 -- 0x077c88000 (0 MB)
        23.919827] userdata: 0x077c88000 -- 0x3a3a00000 (12989 MB)
777
      778
     23.919900] mmcblk1: p1 p2 p3 p4 p5 p6 p7 p8 p9 p10 p11 p12 p13 p14 p15 //分区
     挂载成功
779
     [ 23.960872] rockchip-drm display-subsystem: fb0: frame buffer device
     [ 23.973531] mali ff9a0000.gpu: leakage=0 //GPU LEAKAGE信息
780
        23.999245] mali ff9a0000.gpu: temp=25000, pvtm=121768 (122504 + -736)
781
782
     [ 24.001483] mali ff9a0000.gpu: pvtm-sel=1
783
     24.002828] mali ff9a0000.gpu: GPU identified as 0x0860 r2p0 status 0
         24.004313] I : [File] :
784
      Γ
     drivers/gpu/arm/midgard/backend/gpu/mali_kbase_devfreq.c; [Line] : 284; [Func] :
     kbase_devfreq_init(); success initing power_model_simple.
785
         24.005638] mali ff9a0000.gpu: Probed as mali0
786
         24.012954] xhci-hcd xhci-hcd.8.auto: xHCI Host Controller
     Ε
         24.013918] xhci-hcd xhci-hcd.8.auto: new USB bus registered, assigned bus
787
      Γ
     number 1
788
     24.014948] xhci-hcd xhci-hcd.8.auto: hcc params 0x0220fe64 hci version 0x110
     quirks 0x02030010
     [ 24.015836] xhci-hcd xhci-hcd.8.auto: irq 223, io mem 0xfe800000
789
790
     Γ
       24.016617] usb usb1: New USB device found, idVendor=1d6b, idProduct=0002
791
     [ 24.017260] usb usb1: New USB device strings: Mfr=3, Product=2, Seria Number=1
792
      Γ
        24.017936] usb usb1: Product: xHCI Host Controller
793
         24.018406] usb usb1: Manufacturer: Linux 4.4.103 xhci-hcd
```

```
24.0189261 usb usb1: SerialNumber: xhci-hcd.8.auto
794
795
      [ 24.020251] hub 1-0:1.0: USB hub found
796
         24.020672] hub 1-0:1.0: 1 port detected
797
         24.021534] xhci-hcd xhci-hcd.8.auto: xHCI Host Controller
798
      24.022081] xhci-hcd xhci-hcd.8.auto: new USB bus registered, assigned bus
    number 2
799
         24.022887] usb usb2: We don't know the algorithms for LPM for this host,
     Γ
    disabling LPM.
         24.023831] usb usb2: New USB device found, idVendor=1d6b, idProduct=0003
800
        24.023871] usb usb2: New USB device strings: Mfr=3, Product=2, SerialNumber=1
801
      [ 24.023896] usb usb2: Product: xHCI Host Controller
802
803
      [ 24.023918] usb usb2: Manufacturer: Linux 4.4.103 xhci-hcd
804
         24.023942] usb usb2: SerialNumber: xhci-hcd.8.auto
805
     [ 24.027441] hub 2-0:1.0: USB hub found
806
        24.027854] hub 2-0:1.0: 1 port detected
      [ 24.030758] xhci-hcd xhci-hcd.8.auto: remove, state 1
807
808
      [ 24.030827] usb usb2: USB disconnect, device number 1
809
         24.055990] xhci-hcd xhci-hcd.8.auto: Host not halted after 16000 microseconds.
810
     [
         24.056015] xhci-hcd xhci-hcd.8.auto: Host controller not halted, aborting
     reset.
     [ 24.057469] xhci-hcd xhci-hcd.8.auto: USB bus 2 deregistered
811
       24.057994] xhci-hcd xhci-hcd.8.auto: remove, state 1
812
813
     Γ
         24.058470] usb usb1: USB disconnect, device number 1
     [ 24.059406] xhci-hcd xhci-hcd.8.auto: USB bus 1 deregistered
814
         24.065438] xhci-hcd xhci-hcd.9.auto: xHCI Host Controller
815
816
      24.065523] xhci-hcd xhci-hcd.9.auto: new USB bus registered, assigned bus
    number 1
817
     [
         24.065818] xhci-hcd xhci-hcd.9.auto: hcc params 0x0220fe64 hci version 0x110
    quirks 0x02030010
818
         24.065881] xhci-hcd xhci-hcd.9.auto: irg 224, io mem 0xfe900000
819
     [ 24.066070] usb usb1: New USB device found, idvendor=1d6b, idProduct=0002
820
      [ 24.066086] usb usb1: New USB device strings: Mfr=3, Product=2, SerialNumber=1
821
     [ 24.066100] usb usb1: Product: xHCI Host Controller
822
     [ 24.066114] usb usb1: Manufacturer: Linux 4.4.103 xhci-hcd
823
      [ 24.066126] usb usb1: SerialNumber: xhci-hcd.9.auto
     [ 24.066757] hub 1-0:1.0: USB hub found
824
        24.066800] hub 1-0:1.0: 1 port detected
825
826
         24.067204] xhci-hcd xhci-hcd.9.auto: xHCI Host Controller
827
     24.067228] xhci-hcd xhci-hcd.9.auto: new USB bus registered, assigned bus
     number 2
828
     Γ
         24.067311] usb usb2: We don't know the algorithms for LPM for this host,
    disabling LPM.
829
     [ 24.067437] usb usb2: New USB device found, idVendor=1d6b, idProduct=0003
       24.067454] usb usb2: New USB device strings: Mfr=3, Product=2, Seria Number=1
830
     24.067468] usb usb2: Product: xHCI Host Controller
831
832
      [ 24.067481] usb usb2: Manufacturer: Linux 4.4.103 xhci-hcd
833
        24.067493] usb usb2: SerialNumber: xhci-hcd.9.auto
834
      [ 24.068121] hub 2-0:1.0: USB hub found
      [ 24.068160] hub 2-0:1.0: 1 port detected
835
836
      Γ
         24.068692] xhci-hcd xhci-hcd.9.auto: remove, state 1
837
      [ 24.068719] usb usb2: USB disconnect, device number 1
838
      Γ
         24.069377] xhci-hcd xhci-hcd.9.auto: USB bus 2 deregistered
839
         24.069396] xhci-hcd xhci-hcd.9.auto: remove, state 1
```

```
24.069416] usb usb1: USB disconnect, device number 1
840
841
         24.070047] xhci-hcd xhci-hcd.9.auto: USB bus 1 deregistered
842
          24.074245] ehci-platform fe380000.usb: EHCI Host Controller
         24.074279] ehci-platform fe380000.usb: new USB bus registered, assigned bus
843
      [
     number 1
844
      Γ
         24.074543] ehci-platform fe380000.usb: irg 28, io mem 0xfe380000
      [ 24.083919] ehci-platform fe380000.usb: USB 2.0 started, EHCI 1.00
845
846
         24.084192] usb usb1: New USB device found, idvendor=1d6b, idProduct=0002
      [ 24.084209] usb usb1: New USB device strings: Mfr=3, Product=2, SerialNumber=1
847
        24.084223] usb usb1: Product: EHCI Host Controller
848
      [ 24.084235] usb usb1: Manufacturer: Linux 4.4.103 ehci_hcd
849
850
      [ 24.084247] usb usb1: SerialNumber: fe380000.usb
851
         24.085166] hub 1-0:1.0: USB hub found
852
     [ 24.085259] hub 1-0:1.0: 1 port detected
853
        24.089706] ehci-platform fe3c0000.usb: EHCI Host Controller
         24.089763] ehci-platform fe3c0000.usb: new USB bus registered, assigned bus
854
      number 2
855
      Γ
         24.089996] ehci-platform fe3c0000.usb: irg 30, io mem 0xfe3c0000
856
     [ 24.097235] ehci-platform fe3c0000.usb: USB 2.0 started, EHCI 1.00
        24.097515] usb usb2: New USB device found, idVendor=1d6b, idProduct=0002
857
      [ 24.097532] usb usb2: New USB device strings: Mfr=3, Product=2, SerialNumber=1
858
      [ 24.097546] usb usb2: Product: EHCI Host Controller
859
860
      24.097559] usb usb2: Manufacturer: Linux 4.4.103 ehci_hcd
      [ 24.097571] usb usb2: SerialNumber: fe3c0000.usb
861
862
        24.098625] hub 2-0:1.0: USB hub found
      [ 24.098721] hub 2-0:1.0: 1 port detected
863
        24.099832] ohci-platform fe3a0000.usb: Generic Platform OHCI controller
864
865
      Γ
          24.099865] ohci-platform fe3a0000.usb: new USB bus registered, assigned bus
866
         24.100107] ohci-platform fe3a0000.usb: irg 29, io mem 0xfe3a0000
867
       24.154853] usb usb3: New USB device found, idvendor=1d6b, idProduct=0001
        24.154918] usb usb3: New USB device strings: Mfr=3, Product=2, Seria Number=1
868
869
         24.154933] usb usb3: Product: Generic Platform OHCI controller
      870
      [ 24.154946] usb usb3: Manufacturer: Linux 4.4.103 ohci_hcd
871
         24.154959] usb usb3: SerialNumber: fe3a0000.usb
      [ 24.155994] hub 3-0:1.0: USB hub found
872
        24.156037] hub 3-0:1.0: 1 port detected
873
874
         24.157125] ohci-platform fe3e0000.usb: Generic Platform OHCI controller
875
      24.157161] ohci-platform fe3e0000.usb: new USB bus registered, assigned bus
     number 4
876
      [ 24.157398] ohci-platform fe3e0000.usb: irq 31, io mem 0xfe3e0000
         24.214981] usb usb4: New USB device found, idVendor=1d6b, idProduct=0001
877
878
      24.215084] usb usb4: New USB device strings: Mfr=3, Product=2, SerialNumber=1
879
        24.215114] usb usb4: Product: Generic Platform OHCI controller
      Γ
         24.215139] usb usb4: Manufacturer: Linux 4.4.103 ohci_hcd
880
881
      [ 24.215163] usb usb4: SerialNumber: fe3e0000.usb
882
        24.216704] hub 4-0:1.0: USB hub found
      [ 24.216787] hub 4-0:1.0: 1 port detected
883
        24.219659] dwmmc_rockchip fe310000.dwmmc: IDMAC supports 32-bit address mode.
884
      885
      Γ
         24.219915] dwmmc_rockchip fe310000.dwmmc: Using internal DMA controller.
886
         24.219954] dwmmc_rockchip fe310000.dwmmc: Version ID is 270a
887
      Γ
          24.220019] dwmmc_rockchip fe310000.dwmmc: DW MMC controller at irq 25,32 bit
     host data width, 256 deep fifo
```

```
[ 24.220069] dwmmc_rockchip fe310000.dwmmc: 'clock-freq-min-max' property was
     deprecated.
889
      24.220159] dwmmc_rockchip fe310000.dwmmc: No vmmc regulator found
         24.220185] dwmmc_rockchip fe310000.dwmmc: No vqmmc regulator found
890
891
         24.220927] dwmmc_rockchip fe310000.dwmmc: allocated mmc-pwrseq
          24.234136] mmc_host mmc2: Bus speed (slot 0) = 400000Hz (slot req 400000Hz,
892
      Γ
     actual 400000HZ div = 0)
893
          24.247461] dwmmc_rockchip fe310000.dwmmc: 1 slots initialized
        24.263666] rockchip-dmc dmc: fail to register notify to vop.
894
        24.298732] mmc2: queuing unknown CIS tuple 0x80 (2 bytes)
895
      [ 24.301020] mmc2: queuing unknown CIS tuple 0x80 (3 bytes)
896
897
      [ 24.303206] mmc2: queuing unknown CIS tuple 0x80 (3 bytes)
898
         24.306738] mmc2: queuing unknown CIS tuple 0x80 (7 bytes)
899
         24.366859] mmc_host mmc2: Bus speed (slot 0) = 1500000000Hz (slot req
     150000000Hz, actual 150000000HZ div = 0)
     Ε
          24.410437] asoc-simple-card es8316-sound: ES8316 HiFi <-> ff880000.i2s mapping
900
     ok
                         //声卡初始化
901
     Γ
         24.410560] asoc-simple-card es8316-sound: ASoC: no source widget found for
     MICBIAS1
902
      Γ
          24.410592] asoc-simple-card es8316-sound: ASoC: Failed to add route MICBIAS1 -
     > direct -> Mic Jack
         24.410627] asoc-simple-card es8316-sound: ASoC: no sink widget found for IN1P
903
904
          24.410657] asoc-simple-card es8316-sound: ASoC: Failed to add route Mic Jack -
     > direct -> IN1P
        24.411211] es8316 1-0011: ASoC: Failed to create Left Hp mixer debugfs file
905
      [ 24.411251] es8316 1-0011: ASoC: Failed to create Right Hp mixer debugfs file
906
      [ 24.411315] es8316 1-0011: ASOC: Failed to create HPCP L debugfs file
907
908
     [ 24.411350] es8316 1-0011: ASOC: Failed to create HPCP R debugfs file
      [ 24.411405] es8316 1-0011: ASOC: Failed to create HPVOL L debugfs file
909
910
        24.411439] es8316 1-0011: ASoC: Failed to create HPVOL R debugfs file
911
      [ 24.416886] otg_wakelock_init: No USB transceiver found
        24.419733] rk808-rtc rk808-rtc: setting system clock to 2013-01-18 08:50:37
912
      Γ
     UTC (1358499037)
     [ 24.423036] It doesn't contain Rogue gpu
913
914
         24.444988] vendor storage:20160801 ret = 0
915
         24.462371] I : [File] :
     drivers/gpu/arm/mali400/mali/linux/mali_kernel_linux.c; [Line] : 414; [Func] :
     mali_module_init(); svn_rev_string_from_arm of this mali_ko i.
916
     24.464906] Mali: Mali device driver loaded
         24.466091] input: rk29-keypad as /devices/platform/rockchip-key/input/input1
917
      918
      [ 24.468279] ALSA device list:
919
        24.468565]
                      #0: rockchip,es8316-codec
                                                        //声卡初始化成功
920
      [ 24.469767] Freeing unused kernel memory: 832K
921
        24.473279] init: init first stage started!
         24.497729] dwmmc_rockchip fe310000.dwmmc: Successfully tuned phase to 203
922
      Γ
     //ANDROID启动标志
923
         24.499117] mmc2: queuing unknown CIS tuple 0x91 (3 bytes)
924
          24.499150] mmc2: new ultra high speed SDR104 SDIO card at address 0001
         24.556542] audit: type=1403 audit(1358499037.633:2): policy loaded
925
      auid=4294967295 ses=4294967295
926
      [ 24.558434] init: (Initializing SELinux non-enforcing took 0.08s.)
927
         24.563661] init: init second stage started!
928
         24.569053] init: Setting ro.rk.soc=rk3399
```

```
24.569575] init: OK.EMMC DRIVERS INIT OK
929
       24.569968] init: property_set("ro.boot.mode", "emmc") failed
930
        24.570542] init: property_set("ro.hardware", "rk30board") failed
931
      [ 24.573464] init: Running restorecon...
932
933
       24.664426] init: waitpid failed: No child processes
934
       24.664911] init: (Loading properties from /default.prop took 0.00s.)
935
      [ 24.667572] init: (Parsing /init.environ.rc took 0.00s.)
936
     [ 24.668067] init: (Parsing /init.usb.rc took 0.00s.)
     [ 24.669185] init: (Parsing init.rk30board.bootmode.emmc.rc took 0.00s.)
937
       24.669837] init: (Parsing init.rk30board.usb.rc took 0.00s.)
938
      [ 24.669891] init: (Parsing init.rk30board.environment.rc took 0.00s.)
939
940
      [ 24.669971] init: could not import file '/init.stt_trace.rc' from
     '/init.debug.rc': No such file or directory
941
     [ 24.670155] init: (Parsing /init.logs.rc took 0.00s.)
        24.670230] init: (Parsing /init.crashlogd.rc took 0.00s.)
942
943
      [ 24.670311] init: (Parsing /init.coredump.rc took 0.00s.)
944
      [ 24.670518] init: (Parsing /init.log-watch.rc took 0.00s.)
945
     [ 24.670576] init: (Parsing /init.kernel.rc took 0.00s.)
946
     [ 24.670679] init: (Parsing /init.debug-charging.rc took 0.00s.)
        24.670697] init: (Parsing /init.debug.rc took 0.00s.)
947
      [ 24.670715] init: (Parsing init.rockchip.rc took 0.00s.)
948
      [ 24.671121] init: (Parsing init.connectivity.rc took 0.00s.)
949
950
      Γ
         24.671162] init: could not import file 'init.box.samba.rc' from
     '/init.rk30board.rc': No such file or directory
        24.671258] init: (Parsing init.rk3399.rc took 0.00s.)
951
952
       24.671362] init: (Parsing init.tablet.rc took 0.00s.)
        24.671396] init: could not import file 'init.car.rc' from
953
      Γ
     '/init.rk30board.rc': No such file or directory
         24.671429] init: could not import file 'init.optee.rc' from
954
     '/init.rk30board.rc': No such file or directory
955
     [ 24.671447] init: (Parsing /init.rk30board.rc took 0.00s.)
956
       24.672041] init: (Parsing /init.usb.configfs.rc took 0.00s.)
957
     [ 24.672131] init: (Parsing /init.zygote64_32.rc took 0.00s.)
     [ 24.672149] init: (Parsing /init.rc took 0.01s.)
958
959
        24.672755] init: Starting service 'ueventd'...
      [ 24.677083] audit: type=1400 audit(1358499037.756:3): avc: denied { getattr }
960
     for pid=1 comm="init" path="/sys/kernel/debug/tracing/trace_marker" dev="tracefs"
     in1
961
     [ 24.686012] ueventd: ueventd started!
      [ 24.686786] ueventd: invalid gid 'trace'
962
963
     [ 24.895750] ueventd: Coldboot took 0.20s.
        24.919369] init: write_file: Unable to open '/proc/self/coredump_filter': No
964
      such file or directory
      [ 24.919464] init: write_file: Unable to open
965
     '/proc/sys/kernel/panic_on_stackoverflow': No such file or directory
966
     [ 24.919512] init: Waiting for /dev/.coldboot_done...
967
        24.919608] init: Waiting for /dev/.coldboot_done took 0.00s.
968
       24.919646] init: /dev/hw_random not found
      24.920278] keychord: using input dev rk29-keypad for fevent
969
970
         24.926933] init: write_file: Unable to open '/proc/cpu/alignment': No such
      Γ
     file or directory
971
         24.937454] Registered swp emulation handler
```

```
[ 24.937724] init: write file: Unable to open
      '/sys/module/rockchip_pm/parameters/policy': No such file or directory
 973
          24.938588] fs_mgr: Warning: unknown flag resize
974
         25.284975] init: /dev/hw_random not found
975
       [ 25.285156] init: write_file: Unable to open
      '/sys/block/mmcblk0/bdi/read_ahead_kb': No such file or directory
976
      [ 25.286711] fs_mgr: Warning: unknown flag resize
 977
          25.939503] fs_mgr: Enabling dm-verity for system (mode 2)
978
          25.940195] fs_mgr: loading verity table: '1
      Γ
      /dev/block/platform/fe330000.sdhci/by-name/system
      /dev/block/platform/fe330000.sdhci/by-name/system 4096 4096 387072 387'
      [ 25.969515] EXT4-fs (dm-0): mounted filesystem with ordered data mode. Opts:
979
      noauto_da_alloc
 980
          25.970723] fs_mgr: __mount(source=/dev/block/dm-0,target=/system,type=ext4)=0
 981
      Ε
          25.972692] fs_mgr: check_fs(): mount(/dev/block/platform/fe330000.sdhci/by-
      name/cache,/cache,ext4)=-1: No such file or directory
982
      [ 25.979705] fs_mgr: Running /system/bin/e2fsck on
      /dev/block/platform/fe330000.sdhci/by-name/cache
 983
      [ 25.995641] random: e2fsck: uninitialized urandom read (40 bytes read, 75 bits
      of entropy available)
      [ 26.113420] e2fsck: e2fsck 1.42.9 (28-Dec-2013) //文件系统布置
984
985
       Γ
         26.1134207
 986
      [
          26.113626] e2fsck: /dev/block/platform/fe330000.sdhci/by-name/cache:
      recovering journal
 987
      Γ 26.113626]
988
      [ 26.113754] e2fsck: Superblock last mount time is in the future.
989
       [ 26.113754]
 990
       26.113806] e2fsck: (by less than a day, probably due to the hardware clock
      being incorrectly set) Fix? yes
 991
      [ 26.113806]
992
      [ 26.113852] e2fsck:
      [ 26.113852]
993
994
      [ 26.113897] e2fsck: /dev/block/platform/fe330000.sdhci/by-name/cache: clean,
      23/8192 files, 1611/32768 blocks (check in 4 mounts)
 995
          26.113897]
          26.121478] EXT4-fs (mmcblk1p9): mounted filesystem with ordered data mode.
 996
      Ε
      Opts: noauto_da_alloc,discard
997
      [ 26.126613] fs_mgr: __mount(source=/dev/block/platform/fe330000.sdhci/by-
      name/cache,target=/cache,type=ext4)=0
998
      [ 26.129054] EXT4-fs (mmcblk1p11): Ignoring removed nomblk_io_submit option
999
          26.136758] EXT4-fs (mmcblk1p11): recovery complete
1000
          26.137805] EXT4-fs (mmcblk1p11): mounted filesystem with ordered data mode.
       Opts: errors=remount-ro,nomblk_io_submit
      [ 26.138954] fs_mgr: check_fs(): mount(/dev/block/platform/fe330000.sdhci/by-
1001
      name/metadata,/metadata,ext4)=0: Success
1002
          26.150279] fs_mgr: check_fs(): unmount(/metadata) succeeded
1003
          26.150621] fs_mgr: Running /system/bin/e2fsck on
      /dev/block/platform/fe330000.sdhci/by-name/metadata
      [ 26.155247] random: e2fsck: uninitialized urandom read (40 bytes read, 81 bits
1004
      of entropy available)
1005
      [ 26.184481] e2fsck: e2fsck 1.42.9 (28-Dec-2013)
1006
       26.1844817
```

```
1007 [ 26.184710] e2fsck: /dev/block/platform/fe330000.sdhci/by-name/metadata: clean,
      12/1024 files, 1105/4096 blocks (check in 2 mounts)
1008
           26.184710]
           26.190749] EXT4-fs (mmcb]k1p11): mounted filesystem with ordered data mode.
1009
      Opts: noauto_da_alloc,discard
1010
      Γ
           26.190969] fs_mgr: __mount(source=/dev/block/platform/fe330000.sdhci/by-
      name/metadata,target=/metadata,type=ext4)=0
1011
           26.191173] fs_mgr: Running /system/bin/fsck.f2fs -a
      /dev/block/platform/fe330000.sdhci/by-name/userdata
          26.204001] fsck.f2fs: executing /system/bin/fsck.f2fs failed: No such file or
1012
      Ε
      directory
1013
      [ 26.204001]
1014
      Γ
          26.204958] fsck.f2fs: fsck.f2fs terminated by exit(255)
1015
          26.204958]
1016
       Γ
          26.209577] F2FS-fs (mmcblk1p15): Magic Mismatch, valid(0xf2f52010) -
      read(0x60fe5652)
1017
          26.210327] F2FS-fs (mmcblk1p15): Can't find valid F2FS filesystem in 1th
      Γ
      superblock
1018
      26.211674] F2FS-fs (mmcblk1p15): Magic Mismatch, valid(0xf2f52010) -
      read(0x9df872fc)
          26.212417] F2FS-fs (mmcblk1p15): Can't find valid F2FS filesystem in 2th
1019
      Γ
      superblock
1020
      [
          26.213162] F2FS-fs (mmcblk1p15): Magic Mismatch, valid(0xf2f52010) -
      read(0x60fe5652)
1021
      26.213899] F2FS-fs (mmcblk1p15): Can't find valid F2FS filesystem in 1th
      superblock
1022
      26.213938] F2FS-fs (mmcblk1p15): Magic Mismatch, valid(0xf2f52010) -
      read(0x9df872fc)
           26.213964] F2FS-fs (mmcblk1p15): Can't find valid F2FS filesystem in 2th
1023
      Γ
      superblock
1024
      [
          26.214215] fs_mgr: __mount(source=/dev/block/platform/fe330000.sdhci/by-
      name/userdata,target=/data,type=f2fs)=-1
1025
       Γ
          26.217457] fs_mgr: fs_mgr_mount_all(): possibly an encryptable blkdev
      /dev/block/platform/fe330000.sdhci/by-name/userdata for mount /data type f2fs )
1026
           26.225533] init: (Parsing /system/etc/init/atrace.rc took 0.00s.)
          26.226359] init: (Parsing /system/etc/init/audioserver.rc took 0.00s.)
1027
          26.226836] init: (Parsing /system/etc/init/bootanim.rc took 0.00s.)
1028
       1029
          26.227458] init: (Parsing /system/etc/init/bootstat.rc took 0.00s.)
       1030
       26.227969] init: (Parsing /system/etc/init/cameraserver.rc took 0.00s.)
          26.228449] init: (Parsing /system/etc/init/debuggerd.rc took 0.00s.)
1031
       1032
       Γ
          26.228910] init: (Parsing /system/etc/init/debuggerd64.rc took 0.00s.)
          26.229401] init: (Parsing /system/etc/init/drmserver.rc took 0.00s.)
1033
       1034
       26.230037] init: (Parsing /system/etc/init/dumpstate.rc took 0.00s.)
          26.230623] init: (Parsing /system/etc/init/gatekeeperd.rc took 0.00s.)
1035
       1036
       Γ
           26.231164] init: (Parsing /system/etc/init/init-debug.rc took 0.00s.)
1037
       26.231681] init: (Parsing /system/etc/init/installd.rc took 0.00s.)
1038
       26.232161] init: (Parsing /system/etc/init/keystore.rc took 0.00s.)
1039
          26.232647] init: (Parsing /system/etc/init/lmkd.rc took 0.00s.)
       26.233663] init: (Parsing /system/etc/init/logcatd.rc took 0.00s.)
1040
       1041
       26.235914] init: (Parsing /system/etc/init/logd.rc took 0.00s.)
1042
       26.236422] init: (Parsing /system/etc/init/mdnsd.rc took 0.00s.)
1043
       26.236909] init: (Parsing /system/etc/init/mediacodec.rc took 0.00s.)
1044
       26.237508] init: (Parsing /system/etc/init/mediadrmserver.rc took 0.00s.)
```

```
26.238001] init: (Parsing /system/etc/init/mediaextractor.rc took 0.00s.)
1045
1046
           26.238542] init: ignored duplicate definition of service 'media'init: (Parsing
      /system/etc/init/mediaserver.rc took 0.00s.)
          26.239089] init: (Parsing /system/etc/init/mtpd.rc took 0.00s.)
1047
1048
       26.239574] init: (Parsing /system/etc/init/netd.rc took 0.00s.)
1049
          26.239959] init: (Parsing /system/etc/init/perfprofd.rc took 0.00s.)
       Γ
1050
          26.240387] init: (Parsing /system/etc/init/racoon.rc took 0.00s.)
1051
           26.241091] init: ignored duplicate definition of service 'ril-daemon'init:
      (Parsing /system/etc/init/rild.rc took 0.00s.)
          26.241636] init: (Parsing /system/etc/init/servicemanager.rc took 0.00s.)
1052
1053
          26.242115] init: (Parsing /system/etc/init/surfaceflinger.rc took 0.00s.)
1054
       [ 26.242614] init: (Parsing /system/etc/init/uncrypt.rc took 0.00s.)
1055
       Γ
          26.243115] init: (Parsing /system/etc/init/vdc.rc took 0.00s.)
1056
          26.243614] init: (Parsing /system/etc/init/vold.rc took 0.00s.)
       26.246165] init: Starting service 'logd'...
1057
1058
           26.261334] random: logd: uninitialized urandom read (40 bytes read, 85 bits of
       entropy available)
1059
       Γ
           26.268730] init: insmod: open("/system/lib/modules/ump.ko") failed: No such
      file or directoryinit: insmod: open("/system/lib/modules/mali.ko") failed: No such
      file e
       Γ
1060
           26.278412] zram0: detected capacity change from 0 to 533413888
1061
           26.286518] random: mkswap: uninitialized urandom read (40 bytes read, 86 bits
       of entropy available)
           26.324320] random: mkswap: uninitialized urandom read (16 bytes read, 87 bits
1062
      Ε
      of entropy available)
          26.325523] logd.auditd: start
1063
      1064
          26.325597] logd.klogd: 26321917163
       1065
       26.327870] Adding 520908k swap on /dev/block/zram0. Priority:-1 extents:1
           26.332192] init: property_set("ro.board.platform", "rk3399") failed
1066
1067
          26.332978] init: property_set("ro.rk.screenshot_enable", "true") failed
          26.333223] init: (Loading properties from /system/build.prop took 0.00s.)
1068
       1069
          26.333311] init: (Loading properties from /vendor/build.prop took 0.00s.)
       1070
          26.333405] init: (Loading properties from /factory/factory.prop took 0.00s.)
       1071
       Γ
          26.333558] fs_mgr: Warning: unknown flag resize
          26.333740] init: /recovery not specified in fstab
1072
          26.334809] init: Starting service 'debuggerd'...
1073
       1074
          26.336563] init: Starting service 'debuggerd64'...
       1075
       Γ
          26.338689] init: Starting service 'vold'...
           26.341710] init: Not bootcharting.
1076
       1077
           26.344111] random: debuggerd64: uninitialized urandom read (40 bytes read, 88
      bits of entropy available)
1078
       26.352356] random: debuggerd: uninitialized urandom read (40 bytes read, 88
      bits of entropy available)
           26.355525] random: vold: uninitialized urandom read (40 bytes read, 88 bits of
1079
       Γ
      entropy available)
1080
           26.361691] random: vdc: uninitialized urandom read (40 bytes read, 89 bits of
      entropy available)
1081
      Ε
          26.495989] fs_mgr: Warning: unknown flag resize
1082
           26.536908] init: Starting service 'exec 1 (/system/bin/tzdatacheck)'...
1083
       Γ
          26.542318] random: tzdatacheck: uninitialized urandom read (40 bytes read, 94
      bits of entropy available)
```

```
1084 [ 26.555665] init: Service 'exec 1 (/system/bin/tzdatacheck)' (pid 231) exited
      with status 0
1085
      26.562770] tmpfs: Bad mount option background_gc
1086
          26.563864] type=1400 audit(1358499039.640:4): avc: denied { create } for pid=1
      comm="init" name="cifsmanager" scontext=u:r:init:s0
      tcontext=u:object_r:cifsmanager_e1
         26.566680] init: write_file: Unable to open '/proc/sys/kernel/core_pattern':
1087
      No such file or directory
1088
          26.567171] type=1400 audit(1358499039.640:5): avc: denied { setattr } for
      pid=1 comm="init" name="cifsmanager" dev="tmpfs" ino=3507 scontext=u:r:init:s0
      tcontext=u:1
1089
      [ 26.568042] init: (Loading properties from /data/local.prop took 0.00s.)
1090
          26.570632] init: Starting service 'logd-reinit'...
1091
          26.573275] init: write_file: Unable to open
      '/proc/sys/vm/min_free_order_shift': No such file or directory
          26.575905] init: Starting service 'healthd'...
1092
1093
          26.577441] init: cannot find '/system/bin/displayd' (No such file or
      Γ
      directory), disabling 'displayd'
1094
      [ 26.579263] init: Starting service 'earlylogs'...
        26.581434] binder: 235:235 transaction failed 29189/-22, size 0-0 line 3008
1095
      [ 26.581727] init: Starting service 'lmkd'...
1096
       [ 26.583352] init: Starting service 'servicemanager'...
1097
1098
      26.586345] init: Starting service 'surfaceflinger'...
          26.590300] init: SELinux: Could not stat
1099
      /sys/devices/system/cpu/cpufreq/interactive: No such file or directory.
1100
      [
          26.594621] init: write_file: Unable to open
      '/proc/sys/vm/lazy_vfree_tlb_flush_all_threshold': No such file or directory
1101
      [ 26.603566] init: property 'ro.serialno' doesn't exist while expanding
      '${ro.serialno}'
      [ 26.604450] init: write: cannot expand '${ro.serialno}'
1102
1103
      [ 26.605181] init: Service 'earlylogs' (pid 236) exited with status 0
1104
      [ 26.608201] file system registered
1105
      [ 26.609726] using random self ethernet address
      [ 26.610153] using random host ethernet address
1106
1107
      26.610633] init: write_file: Unable to open
      '/config/usb_gadget/g1/functions/rndis.gs4/wceis': Permission denied
          26.618941] init: Starting service 'console'...
1108
1109
          26.619950] type=1400 audit(1358499039.676:6): avc: denied { relabelto } for
      pid=1 comm="init" name="recovery" dev="tmpfs" ino=10040 scontext=u:r:init:s0
      tcontext=u:1
1110
          26.620279] type=1400 audit(1358499039.676:7): avc: denied { relabelto } for
      pid=1 comm="init" name="boot" dev="tmpfs" ino=10036 scontext=u:r:init:s0
      tcontext=u:obje1
      [ 26.621405] logd.daemon: reinit
1111
          26.622083] init: Starting service 'adbd'...
1112
      Γ
1113
      [ 26.626065] init: Service 'logd-reinit' (pid 234) exited with status 0
1114
          26.627176] init: Starting service 'exec 2 (/system/bin/vdc)'...
1115
      26.642745] init: Service 'exec 2 (/system/bin/vdc)' (pid 243) exited with
      status 0
1116
      rk3399_mid:/ $ [ 27.338230] init: Starting service 'bootanim'... //ANDROID动画开
      始
1117
      27.586005] healthd: BatteryCurrentNowPath not found
1118
          27.586044] healthd: BatteryCycleCountPath not found
```

```
1119 [ 27.586486] healthd: battery l=50 v=3 t=2.6 h=2 st=3 fc=100 chg=au
1120
      [ 27.586881] healthd: battery l=50 v=3 t=2.6 h=2 st=3 fc=100 chg=au
1121
       [ 27.587321] healthd: battery l=50 v=3 t=2.6 h=2 st=3 fc=100 chg=au
      [ 27.587696] healthd: battery l=50 v=3 t=2.6 h=2 st=3 fc=100 chg=au
1122
1123
          27.709328] init: avc: denied { set } for property=ctl.bootanim pid=224 uid=0
      gid=0 scontext=u:r:vold:s0 tcontext=u:object_r:ctl_bootanim_prop:s0
      tclass=property_s1
1124
           27.724849] fs_mgr: Running /system/bin/fsck.f2fs -a /dev/block/dm-1
           27.737113] fsck.f2fs: executing /system/bin/fsck.f2fs failed: No such file or
1125
      directory
      [ 27.737113]
1126
1127
      [ 27.738045] fsck.f2fs: fsck.f2fs terminated by exit(255)
1128
      [ 27.738045]
1129
      [ 27.836446] F2FS-fs (dm-1): recover_inode: ino = 536, name = .temp.7kN7Pf
1130
       27.837893] F2FS-fs (dm-1): recover_dentry: ino = 536, name = .temp.7kN7Pf, dir
      = 2e, err = 0
1131
      [ 27.871587] fs_mgr: __mount(source=/dev/block/dm-1,target=/data,type=f2fs)=0
1132
      [ 27.875185] init: (Loading properties from /data/local.prop took 0.00s.)
1133
      [ 27.903178] init: Starting service 'logd-reinit'...
       [ 27.909327] init: Starting service 'ap_log_srv'...
1134
      [ 27.919508] init: Not bootcharting.
1135
      [ 27.940149] logd.daemon: reinit
1136
1137
      [ 27.943390] init: Service 'logd-reinit' (pid 302) exited with status 0
      [ 28.005049] init: Starting service 'exec 3 (/system/bin/tzdatacheck)'... //启动
1138
      各种ANDROID服务
1139
      [ 28.019594] init: Starting service 'apk_logfs'...
         28.023342] init: Service 'ap_log_srv' (pid 303) exited with status 0
1140
1141
      [
          28.024807] init: Service 'exec 3 (/system/bin/tzdatacheck)' (pid 309) exited
      with status 0
1142
      Γ
           28.035033] type=1400 audit(1358499041.113:8): avc: denied { setattr } for
      pid=1 comm="init" name="cifsmanager" dev="dm-1" ino=86 scontext=u:r:init:s0
      tcontext=u:obj1
1143
      Ε
          28.046055] init: write_file: Unable to open '/proc/sys/kernel/core_pattern':
      No such file or directory
1144
          28.047219] init: Starting service 'exec 4 (/system/bin/bootstat)'...
          28.075711] init: Service 'exec 4 (/system/bin/bootstat)' (pid 312) exited with
1145
      Ε
      status 0
1146
          28.076529] init: cannot find '/system/bin/update_verifier' (No such file or
      [
      directory), disabling 'exec 5 (/system/bin/update_verifier)'
           28.076580] init: cannot find '/system/bin/install-recovery.sh' (No such file
1147
      or directory), disabling 'flash_recovery'
1148
          28.077174] init: Starting service 'drmservice'...
1149
      [
          28.079267] init: cannot find '/system/bin/bplus_helper' (No such file or
      directory), disabling 'bplus_helper'
          28.079915] init: Service up_ethO does not have a SELinux domain defined.
1150
1151
          28.079947] init: cannot find '/system/bin/rk_store_keybox' (No such file or
      directory), disabling 'rk_store_keybox'
1152
      [ 28.080218] init: Starting service 'akmd'...
       [ 28.084184] init: Starting service 'media'...
1153
1154
       [ 28.088216] init: Starting service 'zygote'...
1155
       [ 28.092223] init: Starting service 'zygote_secondary'...
1156
       Γ
          28.096382] init: Starting service 'audioserver'...
          28.099994] init: Starting service 'cameraserver'...
1157
```

```
1158 [ 28.101635] init: couldn't write 321 to /dev/cpuset/camera-daemon/tasks: No
     such file or directory
1159
      [ 28.103584] init: Starting service 'drm'...
      [ 28.107808] init: Starting service 'installd'...
1160
1161
      [ 28.113526] init: Starting service 'keystore'...
1162
      [ 28.121386] init: Starting service 'mediacodec'...
      [ 28.125026] init: Starting service 'mediadrm'...
1163
1164
      [ 28.130230] init: Starting service 'mediaextractor'...
      [ 28.136504] init: Starting service 'netd'...
1165
        28.148010] random: nonblocking pool is initialized
1166
      [ 28.174167] init: Starting service 'crashlogd'...
1167
1168
      [ 28.176240] init: Starting service 'log-watch'...
1169
      Γ
          28.180606] init: Starting service 'gatekeeperd'...
1170
      [ 28.202351] init: Starting service 'perfprofd'...
         28.217467] init: Service 'drmservice' (pid 314) exited with status 0
1171
      [ 28.231108] read descriptors
1172
1173
      [ 28.231159] read descriptors
1174
      Γ
          28.231168] read strings
1175
     [ 28.234740] akmd[315]: unhandled level 1 translation fault (11) at 0x00000000,
                         //应用层非法使用
      esr 0x92000005
      [ 28.234780] pgd = ffffffc0e8190000
1176
1177
      [ 28.234787] [00000000] *pgd=000000000000000, *pud=00000000000000
1178
      [ 28.234800]
1179
      [ 28.234811] CPU: 2 PID: 315 Comm: akmd Not tainted 4.4.103 #1185
1180
         28.234818] Hardware name: Rockchip RK3399 Evaluation Board v3 (Android) (DT)
      [ 28.234827] task: ffffffc0e8220000 task.stack: ffffffc0e8210000
1181
      [ 28.234837] PC is at 0x799b4f47d8
1182
1183
      28.234843] LR is at 0x65478a7720
     [ 28.234850] pc : [<000000799b4f47d8>] lr : [<00000065478a7720>] pstate:
1184
      60000000
1185
     [ 28.234857] sp : 0000007fc03adce0
1186
        28.234862] x29: 0000007fc03adcf0 x28: 000000000000000
      [ 28.234873] x27: 0000007fc03add58 x26: e30d94d4d4dd6983
1187
1188
      [ 28.234884] x25: 000000000000000 x24: 000000000000000
1189
      Γ
          28.234895] x23: 000000000000000 x22: 0000007fc03ae688
      [ 28.234906] x21: 00000065478a6e84 x20: 00000065478b4000
1190
        28.234917] x19: 000000000000000 x18: 000000000000000
1191
      1192
      [ 28.234927] x17: 000000799b4f47c8 x16: 00000065478b3fe0
1193
      [ 28.234939] x15: 00001f0ffc89c449 x14: 000b532cf2c194a5
1194
          28.234949] x13: 0000000050f90ce1 x12: 000000000000018
      1195
      [ 28.234960] x11: 00000000000000 x10: 0000007fc03ad790
         28.234971] x9 : 000000000000010 x8 : 000000000000000
1196
      [ 28.234981] x7 : 0000000000000c7c x6 : 000000799b63d000
1197
      [ 28.234992] x5 : 000080000000000 x4 : 00000000000004d
1198
          28.235002] x3 : 00000000000000 x2 : 000000000000005
1199
      Γ
1200
      [ 28.235013] x1 : 0000007fc03ad600 x0 : 000000000000000
1201
      28.235023]
1202
          28.257851] init: Service 'akmd' (pid 315) killed by signal 11
      1203
          28.451338] Freeing drm_logo memory: 660K
      Ε
1204
          31.193137] capability: warning: `main' uses 32-bit capabilities (legacy
      Γ
     support in use)
1205
      Γ
          38.191997] healthd: battery l=50 v=3 t=2.6 h=2 st=3 fc=100 chg=au
1206
          39.993352] android_work: did not send uevent (0 0
                                                                    (null))
```

```
[ 39.993466] configfs-gadget gadget: unbind function 'mtp'/ffffffc0ef13b400
1207
1208
          39.993530] configfs-gadget gadget: unbind function 'Function FS
     Gadget'/ffffffc0e71a6e38
1209
          39.994133] init: Service 'adbd' is being killed...
1210
          39.998168] init: Service 'adbd' (pid 242) killed by signal 9
          39.998282] init: Service 'adbd' (pid 242) killing any children in process
1211
      [
     group
1212
      [ 40.043397] init: Starting service 'adbd'...
     [ 40.058164] read descriptors
1213
      [ 40.058330] read descriptors
1214
     [ 40.058361] read strings
1215
1216
     [ 40.097118] acc_open
1217
      [ 40.097299] acc_release
1218
     [ 40.507346] rk_gmac-dwmac fe300000.ethernet: rk_get_eth_addr: mac address:
     22:9a:18:a4:eb:d9
          40.507445] eth0: device MAC address 22:9a:18:a4:eb:d9
1219
     [
1220
          42.019341] type=1400 audit(1358499055.096:9): avc: denied { read } for pid=320
      comm="AudioOut_D" name="audioformat" dev="sysfs" ino=19012
     scontext=u:r:audioserver:s1
1221
          42.019794] type=1400 audit(1358499055.096:10): avc: denied { open } for
      pid=320 comm="AudioOut_D" path="/sys/devices/platform/display-
     subsystem/drm/card0/card0-HDMI1
1222
      42.020004] type=1400 audit(1358499055.096:11): avc: denied { getattr } for
     pid=320 comm="AudioOut_D" path="/sys/devices/platform/display-
     subsystem/drm/card0/card0-H1
1223
      [ 42.605903] init: Service 'bootanim' is being killed...
                                                                      //ANDROID动画结
     束
1224
      [ 42.636539] init: cannot find '/system/bin/glgps' (No such file or directory),
     disabling 'gpsd'
      [ 42.636879] init: Starting service 'exec 6 (/system/bin/bootstat)'...
1225
1226
      [ 42.646035] init: Service 'bootanim' (pid 292) killed by signal 9
      [ 42.655098] init: Service 'exec 6 (/system/bin/bootstat)' (pid 1062) exited
1227
     with status 0
          42.656133] init: Starting service 'exec 7 (/system/bin/bootstat)'...
1228
1229
      42.671000] init: Service 'exec 7 (/system/bin/bootstat)' (pid 1065) exited
     with status 0
         42.671989] init: Starting service 'exec 8 (/system/bin/bootstat)'...
1230
1231
      [ 42.688309] init: Service 'exec 8 (/system/bin/bootstat)' (pid 1066) exited
     with status 0
      [ 42.689272] init: Starting service 'exec 9 (/system/bin/bootstat)'...
1232
1233
          42.731200] init: Service 'exec 9 (/system/bin/bootstat)' (pid 1067) exited
     with status 0
                         //ANDROID动画结束
1234
      [ 53.838543] dw-mipi-dsi ff960000.dsi: vop BIG output to dsi0
      [ 53.838705] dw-mipi-dsi ff960000.dsi: final DSI-Link bandwidth: 1064 x 4 Mbps
1235
      [ 53.849049] dw-mipi-dsi ff960000.dsi: failed to wait for phy lock state
1236
1237
      [ 53.977794] PM: suspend entry 2013-01-18 08:51:07.058334719 UTC //待机启动标志
1238
         53.977892] PM: Syncing filesystems ... done.
1239
          54.025426] Freezing user space processes ... (elapsed 0.005 seconds) done.
      [ 54.031296] Freezing remaining freezable tasks ... (elapsed 0.003 seconds)
1240
     done.
1241
          54.035404] Suspending console(s) (use no_console_suspend to debug)
1242
      INFO:
               sleep mode config[0xfe]:
1243
      INFO:
                      AP_PWROFF
```

```
1244
      INFO:
                      SLP ARMPD
1245
      INFO:
                      SLP_PLLPD
1246
      INFO:
                      DDR_RET
1247
      INFO:
                      SLP_CENTER_PD
1248
      INFO:
                      OSC_DIS
1249
      INFO:
            wakeup source config[0x4]:
1250
      INFO:
                      GPIO interrupt can wakeup system
1251
      INFO:
               PWM CONFIG[0x4]:
1252
      INFO:
                      PWM: PWM2D_REGULATOR_EN
1253
      INFO: APIOS info[0x0]:
1254
      INFO:
                      not config
1255
      INFO: GPIO POWER INFO:
1256
      TNFO:
                      GPT01 C1
1257
      INFO: PMU_MODE_CONG: 0x1477bf79
      INFO: RK3399 the wake up information:
1258
1259
      INFO: wake up status: 0x4
                      GPIO interrupt wakeup
1260
      INFO:
1261
      INFO:
                      GPI00: 0x0
1262
      INFO:
                      GPIO1: 0x200000
1263
                      GPI02: 0x0
      INFO:
1264
      TNFO:
                      GPI03: 0x0
1265
      • [ 54.241088] [WLAN_RFKILL]: Enter rfkill_wlan_suspend
1266
          54.242183] PM: suspend of devices complete after 205.187 msecs
1267
      [ 54.254053] PM: late suspend of devices complete after 2.598 msecs
         54.256545] PM: noirg suspend of devices complete after 2.475 msecs
1268
1269
       [ 54.256553] Disabling non-boot CPUs ...
1270
      [ 54.277766] CPU1: shutdown
1271
      [
          54.290360] psci: Retrying again to check for CPU kill
      [ 54.290365] psci: CPU1 killed.
1272
1273
       Γ
         54.344261] CPU2: shutdown
1274
      [ 54.357035] psci: Retrying again to check for CPU kill
1275
       [ 54.357039] psci: CPU2 killed.
1276
      [
          54.397515] CPU3: shutdown
      [ 54.410365] psci: Retrying again to check for CPU kill
1277
1278
       Γ
          54.410369] psci: CPU3 killed.
      [ 54.444054] CPU4: shutdown
1279
        54.457014] psci: Retrying again to check for CPU kill
1280
       1281
      [
          54.457018] psci: CPU4 killed.
1282
      [ 54.490618] CPU5: shutdown
1283
          54.503682] psci: Retrying again to check for CPU kill
      1284
      [ 54.503686] psci: CPU5 killed.
1285
         54.516595] Enabling non-boot CPUs ...
      1286
      [
          54.534909] Detected VIPT I-cache on CPU1
1287
      [ 54.534949] CPU1: found redistributor 1 region 0:0x000000000fef20000
1288
       Γ
          54.535017] CPU1: update cpu_capacity 401
1289
      [ 54.535021] CPU1: Booted secondary processor [410fd034]
1290
       Γ
          54.535706] CPU1 is up
1291
          54.554700] Detected VIPT I-cache on CPU2
      [ 54.554723] CPU2: found redistributor 2 region 0:0x000000000fef40000
1292
1293
       Γ
          54.554761] CPU2: update cpu_capacity 401
1294
      [ 54.554764] CPU2: Booted secondary processor [410fd034]
1295
       Γ
          54.555426] CPU2 is up
1296
       Γ
          54.574932] Detected VIPT I-cache on CPU3
```

```
1297 [ 54.574955] CPU3: found redistributor 3 region 0:0x00000000fef600000
1298
          54.574994] CPU3: update cpu_capacity 401
1299
       54.574998] CPU3: Booted secondary processor [410fd034]
          54.575801] CPU3 is up
1300
      [
1301
      [ 54.595191] Detected PIPT I-cache on CPU4
          54.595220] CPU4: found redistributor 100 region 0:0x00000000fef80000
1302
1303
      [ 54.595280] CPU4: update cpu_capacity 1024
1304
      Ε
          54.595283] CPU4: Booted secondary processor [410fd082]
      [ 54.598647] CPU4 is up
1305
        54.622231] Detected PIPT I-cache on CPU5
1306
1307
      [ 54.622249] CPU5: found redistributor 101 region 0:0x000000000fefa0000
1308
      [ 54.622289] CPU5: update cpu_capacity 1024
1309
      Γ
          54.622292] CPU5: Booted secondary processor [410fd082]
1310
      [ 54.625630] CPU5 is up
         54.627806] PM: noirg resume of devices complete after 2.017 msecs
1311
      [ 54.631002] PM: early resume of devices complete after 2.605 msecs
1312
1313
     [ 54.637408] rk_gmac-dwmac fe300000.ethernet: init for RGMII
1314
      [
          54.716006] [WLAN_RFKILL]: Enter rfkill_wlan_resume
1315
          54.721769] Suspended for 33.201 seconds
          54.722040] cdn-dp fec00000.dp: [drm:cdn_dp_pd_event_work] Not connected.
1316
      Ε
     Disabling cdn
1317
      [ 54.724641] usb usb1: root hub lost power or was reset
1318
      [
          54.726843] usb usb2: root hub lost power or was reset
1319
     [ 54.784794] usb usb3: root hub lost power or was reset
         54.841509] usb usb4: root hub lost power or was reset
1320
          54.853801] mmc_host mmc2: Bus speed (slot 0) = 400000Hz (slot req 400000Hz,
1321
      Γ
     actual 400000HZ div = 0)
1322
      [
          54.912694] mmc2: queuing unknown CIS tuple 0x80 (2 bytes)
      [ 54.914290] mmc2: queuing unknown CIS tuple 0x80 (3 bytes)
1323
          54.915875] mmc2: queuing unknown CIS tuple 0x80 (3 bytes)
1324
1325
      [ 54.918719] mmc2: queuing unknown CIS tuple 0x80 (7 bytes)
1326
          54.975663] mmc_host mmc2: Bus speed (slot 0) = 1500000000Hz (slot req
      Γ
     150000000Hz, actual 150000000HZ div = 0)
          55.104118] dwmmc_rockchip fe310000.dwmmc: Successfully tuned phase to 205
1327
      Γ
1328
      55.104173] PM: resume of devices complete after 472.044 msecs
      [ 55.105538] [BT_RFKILL]: ** disable irq
1329
      [ 55.109774] Restarting tasks ...
1330
1331
      [ 55.125869] healthd: battery l=50 v=3 t=2.6 h=2 st=3 fc=100 chg=au
1332
      [ 55.151813] done.
1333
          55.156142] PM: suspend exit 2013-01-18 08:51:41.437918253 UTC
      1334
      [ 55.207785] binder: release 1350:1365 transaction 18865 in, still active
1335
        55.207869] binder: send failed reply for transaction 18865 to 603:677
      1336
      [ 55.307869] PM: suspend entry 2013-01-18 08:51:41.589653268 UTC
      [ 55.307941] PM: Syncing filesystems ... done.
1337
          55.319202] Freezing user space processes ... (elapsed 0.002 seconds) done.
1338
1339
      [ 55.322026] Freezing remaining freezable tasks ... (elapsed 0.002 seconds)
     done.
1340
      [ 55.324154] Suspending console(s) (use no_console_suspend to debug)
```