

## Reconstructed stack trace:

- PC 0x0802e5c8 Line 1283 of "serial/serial.c" starts at address 0x0802e5c6 <uart\_ioctl+10> and ends at 0x0802e5cc <uart\_ioctl+16>.
- LR 0x803015e Line 74 of "vfs/fs\_ioctl.c" starts at address 0x803015e <file\_vioctl+80> and ends at 0x8030168 <file\_vioctl+90>.
- LR 0x8030207 Line 260 of "vfs/fs\_ioctl.c" starts at address 0x8030206 <ioctl+32> and ends at 0x803020a <ioctl+36>.
- LR 0x80e7e2e Line 3067 of "src/modules/mavlink/modules\_\_mavlink\_unity.cpp" starts at address 0x80e7e2e <Mavlink::get\_free\_tx\_buf()+22>
- LR 0x080f8b2f Line 8177 of "src/modules/mavlink/modules\_\_mavlink\_unity.cpp" starts at address 0x80f8b2e <MavlinkParametersManager::send()+194>
- LR 0x080fcc3b Line 497 of "src/modules/mavlink/mavlink\_main.h" starts at address 0x80fcc3a <MavlinkReceiver::run()+2154>

[hardfault\_log] -- 2025-11-27-14:27:15 Begin Fault Log --

System fault Occurred on: 2025-11-27-14:27:15

Type:Hard Fault in file:armv7-m/arm\_hardfault.c at line: 173 running task: mavlink\_rcv\_if2

FW git-hash: 99c40407ffd7ac184e2d7b4b293f36f10fe561ef

Build datetime: Nov 4 2025 14:23:52

Build url: localhost

Processor registers: from 0x30021424

r0:0x3001d710 r1:0x00000309 r2:0x3002155c r3:0x0000004f r4:0x300176b0 r5:0x3002155c

r6:0x00000309 r7:0x3000eb10

r8:0x000000ae r9:0x00000000 r10:0x00000000 r11:0xffffffff r12:0x30021550 sp:0x300214f8

lr:0x0803015f pc:0x0802e5c8

xpsr:0x21000000 basepri:0x000000f0 control:0x00000004

exe return:0xffffffffe9

Fault status registers: from NVIC

cfsr:0x00008200 hfsr:0x40000000 dfsr:0x00000000 mmfsr:0x0000005f bfsr:0x0000005f

afsr:0x00000000 abfsr:0x00000000

IRQ stack:

top: 0x24000f80

sp: 0x24000f10 Valid

bottom: 0x24000c80

size: 0x00000300

Invalid Stack! (Corrupted TCB) Stack base: 0x24000c80 Stack size: 0x00000300

User stack:

top: 0x300217f0

sp: 0x300214f8 Valid

bottom: 0x30020548

size: 0x000012a8

Invalid Stack! (Corrupted TCB) Stack base: 0x30020548 Stack size: 0x000012a8

Interrupt sp memory region, stack pointer lies within stack

0x240011cc 0x00000000

0x240011c8 0x00000000

0x240011c4 0x240011d8

0x240011c0 0x00000000

0x240011bc 0x00000000

0x240011b8 0x00000000

0x240011b4 0x00000000

0x240011b0 0x240011c4

0x240011ac 0x00000000

0x240011a8 0x00000000

0x240011a4 0x00000000

0x240011a0 0x00000000

0x2400119c 0x240011b0

0x24001198 0x00000000

0x24001194 0x00000000

0x24001190 0x00000000

0x2400118c 0x00000000  
0x24001188 0x2400119c  
0x24001184 0x00000000  
0x24001180 0x00000000  
0x2400117c 0x00000000  
0x24001178 0x00000000  
0x24001174 0x24001188  
0x24001170 0x00000000  
0x2400116c 0x00000000  
0x24001168 0x00000000  
0x24001164 0x00000000  
0x24001160 0x24001174  
0x2400115c 0x00000000  
0x24001158 0x00000000  
0x24001154 0x00000000  
0x24001150 0x00000000  
0x2400114c 0x24001160  
0x24001148 0x00000000  
0x24001144 0x00000000  
0x24001140 0x00000000  
0x2400113c 0x00000000  
0x24001138 0x2400114c  
0x24001134 0x00000000  
0x24001130 0x00000000  
0x2400112c 0x00000000  
0x24001128 0x00000000  
0x24001124 0x24001138  
0x24001120 0x00000000  
0x2400111c 0x00000000  
0x24001118 0x00000000  
0x24001114 0x00000000  
0x24001110 0x240010d4  
0x2400110c 0x00000001  
0x24001108 0x3800c6c0  
0x24001104 0x38006074  
0x24001100 0x24001084  
0x240010fc 0x00000000  
0x240010f8 0x00000000  
0x240010f4 0x00000000  
0x240010f0 0x00000000  
0x240010ec 0x00000000  
0x240010e8 0x24001110  
0x240010e4 0x00000000  
0x240010e0 0x00000000  
0x240010dc 0x00000000  
0x240010d8 0x00000000  
0x240010d4 0x24001124  
0x240010d0 0x00000000  
0x240010cc 0x00000000  
0x240010c8 0x00000000  
0x240010c4 0x00000000  
0x240010c0 0x24001098

0x240010bc 0x00000000  
0x240010b8 0x00000000  
0x240010b4 0x00000000  
0x240010b0 0x00000000  
0x240010ac 0x240010c0  
0x240010a8 0x00000000  
0x240010a4 0x00000000  
0x240010a0 0x00000000  
0x2400109c 0x00000000  
0x24001098 0x240010e8  
0x24001094 0x00000001  
0x24001090 0x3800c6c0  
0x2400108c 0x38009374  
0x24001088 0x00000000  
0x24001084 0x00000000  
0x24001080 0x240010ac  
0x2400107c 0x2000ae50  
0x24001078 0x2000ae50  
0x24001074 0x38000bf0  
0x24001070 0x38002ea0  
0x2400106c 0x00000000  
0x24001068 0x00000000  
0x24001064 0x30020440  
0x24001060 0x24000f94  
0x2400105c 0x30020440  
0x24001058 0x2000ac10  
0x24001054 0x00000000  
0x24001050 0x00000000  
0x2400104c 0x00000006  
0x24001048 0x00000020  
0x24001044 0x000004b3  
0x24001040 0x00000000  
0x2400103c 0x00000000  
0x24001038 0x00000000  
0x24001034 0x00000000  
0x24001030 0x00000000  
0x2400102c 0x00000000  
0x24001028 0x0000006b  
0x24001024 0x73615420  
0x24001020 0x656c6449  
0x2400101c 0x2400aadc  
0x24001018 0x00000000  
0x24001014 0x00000000  
0x24001010 0x00000000  
0x2400100c 0x00000000  
0x24001008 0x00000000  
0x24001004 0x00000000  
0x24001000 0x00000000  
0x24000ffc 0x00000000  
0x24000ff8 0x00000000  
0x24000ff4 0x00000000  
0x24000ff0 0x00000000

0x24000fec 0x00000000  
0x24000fe8 0x2400a8f4  
0x24000fe4 0x2400a8dc  
0x24000fe0 0x000002d6  
0x24000fdc 0x00000000  
0x24000fd8 0x00000000  
0x24000fd4 0x00000000  
0x24000fd0 0x00000000  
0x24000fcc 0x00000000  
0x24000fc8 0x00000006  
0x24000fc4 0x00000000  
0x24000fc0 0x00000000  
0x24000fbc 0x00000000  
0x24000fb8 0x00000000  
0x24000fb4 0x00000000  
0x24000fb0 0x00000002  
0x24000fac 0x08021239  
0x24000fa8 0x08021239  
0x24000fa4 0x00000000  
0x24000fa0 0x00000000  
0x24000f9c 0x2400ad70  
0x24000f98 0x300096f0  
0x24000f94 0x00000000  
0x24000f90 0x00000000  
0x24000f8c 0x24001020  
0x24000f88 0x00000000  
0x24000f84 0x30021424  
0x24000f80 0x00010000<-- Interrupt sp top  
0x24000f7c 0x080202dd  
0x24000f78 0x3002155c  
0x24000f74 0x300176b0  
0x24000f70 0x300214f8  
0x24000f6c 0x00000003  
0x24000f68 0x00000003  
0x24000f64 0x08020955  
0x24000f60 0x00000000  
0x24000f5c 0x0802140f  
0x24000f58 0x3000eb10  
0x24000f54 0x00000309  
0x24000f50 0x24000f84  
0x24000f4c 0x00000000  
0x24000f48 0x081e608c  
0x24000f44 0x00000000  
0x24000f40 0x0000005f  
0x24000f3c 0x00000000  
0x24000f38 0x40000000  
0x24000f34 0x08020d3f  
0x24000f30 0x00000000  
0x24000f2c 0x08021017  
0x24000f28 0x00000000  
0x24000f24 0x00000000  
0x24000f20 0x000000ae

0x24000f1c 0x00008200  
0x24000f18 0x30021424  
0x24000f14 0x00000003  
0x24000f10 0x40000000<-- Interrupt sp  
0x24000f0c 0x00000020  
0x24000f08 0x00000003  
0x24000f04 0x0000003b  
0x24000f00 0x000001c8  
0x24000efc 0x080291c1  
0x24000ef8 0x000000ad  
0x24000ef4 0x24000f10  
0x24000ef0 0x081849cb  
0x24000eec 0x24000f84  
0x24000ee8 0x00000251  
0x24000ee4 0x081732ff  
0x24000ee0 0x24000010  
0x24000edc 0x08020e09  
0x24000ed8 0x24000c54  
0x24000ed4 0xffffffff  
0x24000ed0 0x300214f8  
0x24000ecc 0x000001c8  
0x24000ec8 0x0000045a  
0x24000ec4 0x24000f10  
0x24000ec0 0x24000f84  
0x24000ebc 0x30020440  
0x24000eb8 0x24000000  
0x24000eb4 0x00000000  
0x24000eb0 0x00000000  
0x24000eac 0x00000000  
0x24000ea8 0x00000000  
0x24000ea4 0x00000000  
0x24000ea0 0x00000000  
0x24000e9c 0x00000000  
0x24000e98 0x00000000  
0x24000e94 0x00000000  
0x24000e90 0x00000000  
0x24000e8c 0x00000000  
0x24000e88 0x00003033  
0x24000e84 0x37636531  
0x24000e80 0x38783020  
0x24000e7c 0x000002ff  
0x24000e78 0x24000ec0  
0x24000e74 0x24000e80  
0x24000e70 0x2000942c  
0x24000e6c 0x00000020  
0x24000e68 0x00000002  
0x24000e64 0x0000003d  
0x24000e60 0x00000e4c  
0x24000e5c 0x00001758  
0x24000e58 0x000000ef  
0x24000e54 0x000002ff  
0x24000e50 0x08185ac9

0x24000e4c 0x081858c9  
0x24000e48 0x08029005  
0x24000e44 0x24000e50  
0x24000e40 0x00000000  
0x24000e3c 0x0802110d  
0x24000e38 0x24000e50  
0x24000e34 0x24000e50  
0x24000e30 0x00000000  
0x24000e2c 0x080210f1  
0x24000e28 0x2000942c  
0x24000e24 0x0000004f  
0x24000e20 0x0802ce2d  
0x24000e1c 0x081a2504  
0x24000e18 0x080211b1  
0x24000e14 0x081858c9  
0x24000e10 0xffffffff  
0x24000e0c 0x080211ad  
0x24000e08 0x24000e50  
0x24000e04 0x081858c9  
0x24000e00 0x24000e50  
0x24000dfc 0x0802b9dd  
0x24000df8 0xffffffff  
0x24000df4 0x300214f8  
0x24000df0 0x00000000  
0x24000dec 0x00001758  
0x24000de8 0x24000e80  
0x24000de4 0x000000ef  
0x24000de0 0x00000020  
0x24000ddc 0x24000e34  
0x24000dd8 0x63373330  
0x24000dd4 0x080389e1  
0x24000dd0 0x00000080  
0x24000dcc 0x00000000  
0x24000dc8 0x00000000  
0x24000dc4 0x00000008  
0x24000dc0 0x33363620  
0x24000dbc 0x00000007  
0x24000db8 0x00000010  
0x24000db4 0x0802c1ff  
0x24000db0 0x24000df0  
0x24000dac 0x30000030  
0x24000da8 0x081858fe  
0x24000da4 0x00000001  
0x24000da0 0x00000003  
0x24000d9c 0x0802ba15  
0x24000d98 0x0000004f  
0x24000d94 0x24000e18  
0x24000d90 0x080211b1  
0x24000d8c 0x080211c1  
0x24000d88 0x0000000a  
0x24000d84 0x24000e18  
0x24000d80 0x080211b1

0x24000d7c 0x24000e18  
0x24000d78 0x0000000a  
0x24000d74 0x00000000  
0x24000d70 0x00000002  
0x24000d6c 0x0802c23d  
0x24000d68 0x24000d70  
0x24000d64 0x080389e1  
0x24000d60 0x00000064  
0x24000d5c 0x00000000  
0x24000d58 0x00000000  
0x24000d54 0x00000002  
0x24000d50 0x24000dc0  
0x24000d4c 0x00000000  
0x24000d48 0x0000000a  
0x24000d44 0xdeadbeef  
0x24000d40 0xdeadbeef  
0x24000d3c 0xdeadbeef  
0x24000d38 0xdeadbeef  
0x24000d34 0xdeadbeef  
0x24000d30 0xdeadbeef  
0x24000d2c 0xdeadbeef  
0x24000d28 0xdeadbeef  
0x24000d24 0xdeadbeef  
0x24000d20 0xdeadbeef  
0x24000d1c 0xdeadbeef  
0x24000d18 0xdeadbeef  
0x24000d14 0xdeadbeef  
0x24000d10 0xdeadbeef  
0x24000d0c 0xdeadbeef  
0x24000d08 0xdeadbeef  
0x24000d04 0xdeadbeef  
0x24000d00 0xdeadbeef  
0x24000cfc 0xdeadbeef  
0x24000cf8 0xdeadbeef  
0x24000cf4 0xdeadbeef  
0x24000cf0 0xdeadbeef  
0x24000cec 0xdeadbeef  
0x24000ce8 0xdeadbeef  
0x24000ce4 0xdeadbeef  
0x24000ce0 0xdeadbeef  
0x24000cdc 0xdeadbeef  
0x24000cd8 0xdeadbeef  
0x24000cd4 0xdeadbeef  
0x24000cd0 0xdeadbeef  
0x24000ccc 0xdeadbeef  
0x24000cc8 0xdeadbeef  
0x24000cc4 0xdeadbeef  
0x24000cc0 0xdeadbeef  
0x24000cbc 0xdeadbeef  
0x24000cb8 0xdeadbeef  
0x24000cb4 0xdeadbeef  
0x24000cb0 0xdeadbeef

0x24000cac 0xdeadbeef  
0x24000ca8 0xdeadbeef  
0x24000ca4 0xdeadbeef  
0x24000ca0 0xdeadbeef  
0x24000c9c 0xdeadbeef  
0x24000c98 0xdeadbeef  
0x24000c94 0xdeadbeef  
0x24000c90 0xdeadbeef  
0x24000c8c 0xdeadbeef  
0x24000c88 0xdeadbeef  
0x24000c84 0xdeadbeef  
0x24000c80 0xdeadbeef<-- Interrupt sp bottom  
0x24000c7c 0x00000000  
0x24000c78 0x00000000  
0x24000c74 0x00000000  
0x24000c70 0x00000000  
0x24000c6c 0x00000000  
0x24000c68 0x00000000  
0x24000c64 0x00000000  
0x24000c60 0x00000000  
0x24000c5c 0x00000000  
0x24000c58 0xffffffff  
0x24000c54 0x00000000  
0x24000c50 0x30020440

User sp memory region, stack pointer lies within stack

0x300217b4 0x30020440  
0x300217b0 0x00000000  
0x300217ac 0x00000000  
0x300217a8 0x00000000  
0x300217a4 0x01000000  
0x300217a0 0x00000000  
0x3002179c 0x00000000  
0x30021798 0x0000aee7  
0x30021794 0x00000000  
0x30021790 0x00000000  
0x3002178c 0x00000000  
0x30021788 0x00000000  
0x30021784 0x00000000  
0x30021780 0x00000000  
0x3002177c 0x00000000  
0x30021778 0x00000000  
0x30021774 0x00000000  
0x30021770 0x00000000  
0x3002176c 0x00000000  
0x30021768 0x00000000  
0x30021764 0x00000000  
0x30021760 0x00000000  
0x3002175c 0x00000000  
0x30021758 0x00000000  
0x30021754 0x00000000  
0x30021750 0x00000000  
0x3002174c 0x00000000

0x30021748 0x00000000  
0x30021744 0x00000000  
0x30021740 0x00000000  
0x3002173c 0x00000000  
0x30021738 0x00000000  
0x30021734 0x00000000  
0x30021730 0x00000000  
0x3002172c 0x00000000  
0x30021728 0x00000000  
0x30021724 0x00000000  
0x30021720 0x00000000  
0x3002171c 0x00000000  
0x30021718 0x00000000  
0x30021714 0x00000000  
0x30021710 0x00000000  
0x3002170c 0x00000000  
0x30021708 0x00000000  
0x30021704 0x00000000  
0x30021700 0x00000000  
0x300216fc 0x00000000  
0x300216f8 0x00000000  
0x300216f4 0x00000000  
0x300216f0 0x00000000  
0x300216ec 0x00000000  
0x300216e8 0x00000000  
0x300216e4 0x00000000  
0x300216e0 0x00000000  
0x300216dc 0x00000000  
0x300216d8 0x00000000  
0x300216d4 0x00000000  
0x300216d0 0x00000000  
0x300216cc 0x00000000  
0x300216c8 0x00000000  
0x300216c4 0x00000000  
0x300216c0 0x00000000  
0x300216bc 0x00000000  
0x300216b8 0x00000000  
0x300216b4 0x00000000  
0x300216b0 0x00000000  
0x300216ac 0x01010200  
0x300216a8 0x00000000  
0x300216a4 0x00000000  
0x300216a0 0x00000000  
0x3002169c 0x00000101  
0x30021698 0x00000003  
0x30021694 0x04c00806  
0x30021690 0x00000000  
0x3002168c 0x000000be  
0x30021688 0xff600000  
0x30021684 0x09fdae7  
0x30021680 0xdeadbeef  
0x3002167c 0xdeadbeef

0x30021678 0xdeadbeef  
0x30021674 0xdeadbeef  
0x30021670 0xdeadbeef  
0x3002166c 0xdeadbeef  
0x30021668 0xdeadbeef  
0x30021664 0xdeadbeef  
0x30021660 0xdeadbeef  
0x3002165c 0xdeadbeef  
0x30021658 0xdeadbeef  
0x30021654 0xdeadbeef  
0x30021650 0xdeadbeef  
0x3002164c 0xdeadbeef  
0x30021648 0xdeadbeef  
0x30021644 0xdeadbeef  
0x30021640 0xdeadbeef  
0x3002163c 0x00000000  
0x30021638 0x0000002d  
0x30021634 0x008f0030  
0x30021630 0x00000000  
0x3002162c 0x000000ea  
0x30021628 0x0000008f  
0x30021624 0x0000002b  
0x30021620 0x000000b8  
0x3002161c 0x00000000  
0x30021618 0x0d216787  
0x30021614 0x000b0000  
0x30021610 0x000000ce  
0x3002160c 0xa3270000  
0x30021608 0x04beffe6  
0x30021604 0x00befb03  
0x30021600 0x04c00806  
0x300215fc 0x00000000  
0x300215f8 0x000000be  
0x300215f4 0xff1e0000  
0x300215f0 0x09fddab0  
0x300215ec 0x010100ae  
0x300215e8 0xe70304c0  
0x300215e4 0x08060000  
0x300215e0 0x00000000  
0x300215dc 0x00beff60  
0x300215d8 0x000009fd  
0x300215d4 0x00000000  
0x300215d0 0x00000000  
0x300215cc 0x00000000  
0x300215c8 0x00000018  
0x300215c4 0x00000019  
0x300215c0 0x00000003  
0x300215bc 0xdeadbeef  
0x300215b8 0xdeadbeef  
0x300215b4 0xdeadbeef  
0x300215b0 0xdeadbeef  
0x300215ac 0xdeadbeef

```
0x300215a8 0xdeadbeef
0x300215a4 0x00000000
0x300215a0 0x0d1fdc6f
0x3002159c 0x00000000
0x30021598 0x00018b18
0x30021594 0xdeadbeef
0x30021590 0xdeadbeef
0x3002158c 0x00000002
0x30021588 0x3001e4c0
```

so stack frame size is  $9+2+548/4 = 148$  words, but fewer are in the dump

```
0x30021584 0x080fcc3b LR MavlinkParametersManager::send()
0x30021580 0x3001e860
0x3002157c 0x3001e3a8
0x30021578 0x3001ea48
0x30021574 0x080f8b2f LR get_free_tx_buf()
0x30021570 0x3001eef8
0x3002156c 0x00000014
0x30021568 0x00000000
0x30021564 0x3001e5c0
0x30021560 0x00000000
0x3002155c 0x00000000
0x30021558 0x3001e390
0x30021554 0x00000001 ioctl()
0x30021550 0x3002155c
0x3002154c 0x00000309
0x30021548 0x080e7e2f LR
0x30021544 0x00000014
0x30021540 0x00000000
0x3002153c 0x3001e390
0x30021538 0x3002155c
0x30021534 0x3001d710
0x30021530 0x30021550
0x3002152c 0x08030207 LR file_ioctl()
0x30021528 0x3001eef8
0x30021524 0x00000309
0x30021520 0x30021550
0x3002151c 0x00000000
0x30021518 0x00000001
0x30021514 0x0802fcab
0x30021510 0x3001d2c4
0x3002150c 0x3001d710
0x30021508 0x00000000
0x30021504 0x0803015f LR uart_ioctl()
0x30021500 0x3002155c
0x300214fc 0x00000309
0x300214f8 0x3001d710<-- User sp
0x300214f4 0x00000000
0x300214f0 0x20000011
0x300214ec 0x00000000
0x300214e8 0x3f5ced92
```

0x300214e4 0x3f000000  
0x300214e0 0x00000000  
0x300214dc 0x00000000  
0x300214d8 0x00000000  
0x300214d4 0x00000000  
0x300214d0 0x00000000  
0x300214cc 0x00000000  
0x300214c8 0x00000000  
0x300214c4 0x00000000  
0x300214c0 0x00000000  
0x300214bc 0x00000000  
0x300214b8 0x00000000  
0x300214b4 0x00000000  
0x300214b0 0x00000000  
0x300214ac 0x21000000  
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0x300214a4 0x0803015f  
0x300214a0 0x30021550  
0x3002149c 0x0000004f  
0x30021498 0x3002155c  
0x30021494 0x00000309  
0x30021490 0x3001d710  
0x3002148c 0x00000000  
0x30021488 0x00000000  
0x30021484 0x00000000  
0x30021480 0x00000000  
0x3002147c 0x00000000  
0x30021478 0x00000000  
0x30021474 0x00000000  
0x30021470 0x00000000  
0x3002146c 0x00000000  
0x30021468 0x00000000  
0x30021464 0x00000000  
0x30021460 0x00000000  
0x3002145c 0x00000000  
0x30021458 0x00000000  
0x30021454 0x00000000  
0x30021450 0x00000000  
0x3002144c 0xfffffe9  
0x30021448 0xffffffff  
0x30021444 0x00000000  
0x30021440 0x00000000  
0x3002143c 0x000000ae  
0x30021438 0x3000eb10  
0x30021434 0x00000309  
0x30021430 0x3002155c  
0x3002142c 0x300176b0  
0x30021428 0x000000f0  
0x30021424 0x300214f8  
0x30021420 0x00000000  
0x3002141c 0x00000000  
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0x3002140c 0x00000000  
0x30021408 0x00000000  
0x30021404 0x00000000  
0x30021400 0x00000000  
0x300213fc 0x61000000  
0x300213f8 0x08021764  
0x300213f4 0x080217bb  
0x300213f0 0x30021550  
0x300213ec 0x00000000  
0x300213e8 0x30020440  
0x300213e4 0x00000080  
0x300213e0 0x00000000  
0x300213dc 0x080f89a7  
0x300213d8 0x3001e5c0  
0x300213d4 0x30021408  
0x300213d0 0x3001e5d4  
0x300213cc 0x0803941d  
0x300213c8 0x3001e5d4  
0x300213c4 0x00000000  
0x300213c0 0x00000000  
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0x300213b8 0x000000ae  
0x300213b4 0x3001eef8  
0x300213b0 0x00000014  
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0x300213a4 0x0817c297  
0x300213a0 0x000000e9  
0x3002139c 0x2400a8a4  
0x30021398 0x38001cb0  
0x30021394 0x3f000000  
0x30021390 0x00000000  
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0x3002132c 0x00000000  
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0x30021308 0x00000000  
0x30021304 0x00000000  
0x30021300 0x00000000  
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0x300212f8 0xffffffff  
0x300212f4 0x00000000  
0x300212f0 0x00000000  
0x300212ec 0x000000ae  
0x300212e8 0x00000000  
0x300212e4 0x300213c4  
0x300212e0 0x081ee800  
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0x300212d8 0x000000f0  
0x300212d4 0x300213a8  
0x300212d0 0x38004490  
0x300212cc 0x2400a8a4  
0x300212c8 0x000000f0  
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0x300212b4 0x00000000  
0x300212b0 0x00000000  
0x300212ac 0x00000000  
0x300212a8 0x00000000  
0x300212a4 0x00000000  
0x300212a0 0x00000000  
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0x30021298 0x0000002c  
0x30021294 0x00000001  
0x30021290 0x300213c0  
0x3002128c 0x3002047c  
0x30021288 0x00000080  
0x30021284 0x30021378  
0x30021280 0x00000000  
0x3002127c 0x30020440  
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0x30021260 0x00000000  
0x3002125c 0x00000000  
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0x30021250 0x00000000  
0x3002124c 0x00000000  
0x30021248 0x00000000  
0x30021244 0x00000000  
0x30021240 0x00000000  
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[hardfault\_log] -- 2025-11-27-14:27:15 END Fault Log --