



author Denis Arefev <arefev@swemel.ru> 2025-03-21 13:52:32 +0300
committer Greg Kroah-Hartman <gregkh@linuxfoundation.org> 2025-04-25 10:47:58 +0200
commit [6413fed016208171592c88b5df002af8a1387e24](#) (patch)
tree [8d6eefa4a4ad9aef49822f50d091f5d04b5673b9](#)
parent [2a2b7b6f90a2e378959445097f5aa7d25a1edf37](#) (diff)
download [linux-6413fed016208171592c88b5df002af8a1387e24.tar.gz](#)

diff options

context: ▼
space: ▼
mode: ▼

drm/amd/pm: Prevent division by zero

commit 7d641c2b83275d3b0424127b2e0d2d0f7dd82aef upstream.

The user can set any speed value.
If speed is greater than UINT_MAX/8, division by zero is possible.

Found by Linux Verification Center (linuxtesting.org) with SVACE.

Fixes: b64625a303de ("drm/amd/pm: correct the address of Arcturus fan related registers")
Signed-off-by: Denis Arefev <arefev@swemel.ru>
Signed-off-by: Alex Deucher <alexander.deucher@amd.com>
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Diffstat

-rw-r--r-- [drivers/gpu/drm/amd/pm/swsmu/smu11/arcturus_ppt.c](#) 3

1 files changed, 3 insertions, 0 deletions

```
diff --git a/drivers/gpu/drm/amd/pm/swsmu/smu11/arcturus_ppt.c b/drivers/gpu/drm/amd/pm/swsmu/smu11/arcturus_ppt.c
index fc1297fecc62e0..d4b954b22441c5 100644
--- a/drivers/gpu/drm/amd/pm/swsmu/smu11/arcturus_ppt.c
+++ b/drivers/gpu/drm/amd/pm/swsmu/smu11/arcturus_ppt.c
@@ -1267,6 +1267,9 @@ static int arcturus_set_fan_speed_rpm(struct smu_context *smu,
     uint32_t crystal_clock_freq = 2500;
     uint32_t tach_period;

+    if (!speed || speed > UINT_MAX/8)
+        return -EINVAL;
+
     tach_period = 60 * crystal_clock_freq * 10000 / (8 * speed);
     WREG32_SOC15(THM, 0, mmCG_TACH_CTRL_ARCT,
                 REG_SET_FIELD(RREG32_SOC15(THM, 0, mmCG_TACH_CTRL_ARCT),
```