



author

Denis Arefev <arefev@swemel.ru>

2025-03-21 13:52:32 +0300

committer

Greg Kroah-Hartman <gregkh@linuxfoundation.org>

2025-04-25 10:45:52 +0200

commit

5096174074114f83c700a27869c54362cbb10f3e

(patch)

tree

10df72fb4d8f780d3d8d74d55e8f1cb32a346964

parent

d189b32f9dd801dd6fd09e80b1f2c5f808b5dec7

(diff)

download

linux-5096174074114f83c700a27869c54362cbb10f3e.tar.gz

diff options

context: 3

space: include

mode: unified

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>
Cc: stable@vger.kernel.org
Signed-off-by: Greg Kroah-Hartman <gregkh@linuxfoundation.org>

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 4c58c2cd26d886..0cdf3257b19b3b 100644
--- a/drivers/gpu/drm/amd/pm/swsmu/smu11/arcturus_ppt.c
+++ b/drivers/gpu/drm/amd/pm/swsmu/smu11/arcturus_ppt.c
@@ -1274,6 +1274,9 @@ 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),