



author

Denis Arefev <arefev@swemel.ru>

2025-03-21 14:08:15 +0300

committer

Greg Kroah-Hartman <gregkh@linuxfoundation.org>

2025-05-02 07:41:03 +0200

commit

e109528bbf460e50074c156253d9080d223ee37f

(patch)

tree

4607f89284422f1de569e5b3c8921445f3950b9d

parent

c8b73b3fbc4bcbdd9ca97e2fc6df2baf92ab990b8

(diff)

download

linux-e109528bbf460e50074c156253d9080d223ee37f.tar.gz

diff options

context:

3

space:

include

mode:

unified

drm/amd/pm/powerplay: Prevent division by zero

commit 4b8c3c0d17c07f301011e2908fecdd2ebdcfe3d1c 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: c52dcf49195d ("drm/amd/pp: Avoid divide-by-zero in fan_ctrl_set_fan_speed_rpm")
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/powerplay/hwmgr/vega10_thermal.c 4

1 files changed, 2 insertions, 2 deletions

```
diff --git a/drivers/gpu/drm/amd/pm/powerplay/hwmgr/vega10_thermal.c b/drivers/gpu/drm/amd/pm/powerplay/hwmgr/vega10_thermal.c
index 952cd3d7240e38..303538efdc972f 100644
--- a/drivers/gpu/drm/amd/pm/powerplay/hwmgr/vega10_thermal.c
+++ b/drivers/gpu/drm/amd/pm/powerplay/hwmgr/vega10_thermal.c
@@ -311,10 +311,10 @@ int vega10_fan_ctrl_set_fan_speed_rpm(struct pp_hwmgr *hwmgr, uint32_t speed)
     int result = 0;

     if (hwmgr->thermal_controller.fanInfo.bNoFan ||
-        speed == 0 ||
+        (!speed || speed > UINT_MAX/8) ||
         (speed < hwmgr->thermal_controller.fanInfo.ulMinRPM) ||
         (speed > hwmgr->thermal_controller.fanInfo.ulMaxRPM))
-        return -1;
+        return -EINVAL;

     if (PP_CAP(PHM_PlatformCaps_MicrocodeFanControl))
         result = vega10_fan_ctrl_stop_smc_fan_control(hwmgr);
```