

TPM firmware error causes AMD computers running Windows 11, 10 to hang and a temporary fix

Over the last month or two, many computers with AMD Ryzen chips running Windows 11 and Windows 10 with TPM firmware (fTPM) enabled have been frozen or frozen. AMD has just released a temporary fix after determining the cause of the problem.

According to AMD, the crashes are caused by extended memory transactions inside the Serial Peripheral Interface (ISP) flash ROM.

AMD realizes that some AMD Ryzen-based machines can seamlessly perform extended fTPM-related memory transactions in the SPI flas memory (SPIROM) located on the motherboard. This may result in the computer suspending interaction or response until the transaction is completed.



AMD announced that a permanent patch will be made available through AMD Generic Encapsulated Software Architecture (AGESA) update version 1207, released in early May 2022. Basically, users will have to update the motherboard's firmware to fix the problem.

In addition, AMD also provides a temporary fix for those affected. Specifically, AMD recommends that users switch from fTPM to dTPM, a hardware-based security solution. dTPM platform modules use built-in non-volatile memory (NVRAM) as an alternative to TPM/SPIROM interaction thus avoiding the above problem.

AMD notes that users should check their computer or motherboard that their platform supports the plug-in dTPM module before implementing this temporary workaround.

Warning: If you switch a computer running fTPM to dTPM you will have to disable encryption systems that TPM supports first (e.g. BitLocker Drive Encryption) and/or back up data. In addition, you need to have admin-level access to the computer with consent from an IT administrator (if the machine is owned by a school or work).

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