



CVE-2020-12965

[MITRE](#)[NVD](#)[CVE.ORG](#)[Print: PDF](#)

Summary

CVE	CVE-2020-12965
State	PUBLIC
Assigner	psirt@amd.com
Source Priority	CVE Program / NVD first with legacy fallback
Published	2022-02-04 23:15:00 UTC
Updated	2023-12-06 03:15:00 UTC
Description	When combined with specific software sequences, AMD CPUs may transiently execute non-canonical loads and store using

Risk And Classification

Problem Types: CWE-74

NVD Known Affected Configurations (CPE 2.3)

Type	Vendor	Product	Version	Update	Edition	Language
Hardware	Amd	Athlon 3050ge	-	All	All	All
Operating System	Amd	Athlon 3050ge Firmware	-	All	All	All
Hardware	Amd	Athlon 3150g	-	All	All	All
Hardware	Amd	Athlon 3150ge	-	All	All	All
Operating System	Amd	Athlon 3150ge Firmware	-	All	All	All
Operating System	Amd	Athlon 3150g Firmware	-	All	All	All
Hardware	Amd	Athlon Gold Pro 3150g	-	All	All	All
Hardware	Amd	Athlon Gold Pro 3150ge	-	All	All	All
Operating System	Amd	Athlon Gold Pro 3150ge Firmware	-	All	All	All
Operating System	Amd	Athlon Gold Pro 3150g Firmware	-	All	All	All
Hardware	Amd	Athlon Pro 200ge	-	All	All	All
Operating System	Amd	Athlon Pro 200ge Firmware	-	All	All	All
Hardware	Amd	Athlon Pro 300ge	-	All	All	All
Operating System	Amd	Athlon Pro 300ge Firmware	-	All	All	All
Hardware	Amd	Athlon Silver Pro 3125ge	-	All	All	All
Operating System	Amd	Athlon Silver Pro 3125ge Firmware	-	All	All	All
Hardware	Amd	Ryzen 4300g	-	All	All	All

Hardware	Amd	Ryzen 4300ge	-	All	All	All
Operating System	Amd	Ryzen 4300ge Firmware	-	All	All	All
Operating System	Amd	Ryzen 4300g Firmware	-	All	All	All
Hardware	Amd	Ryzen 4600g	-	All	All	All
Hardware	Amd	Ryzen 4600ge	-	All	All	All
Operating System	Amd	Ryzen 4600ge Firmware	-	All	All	All
Operating System	Amd	Ryzen 4600g Firmware	-	All	All	All
Hardware	Amd	Ryzen 4700g	-	All	All	All
Hardware	Amd	Ryzen 4700ge	-	All	All	All
Operating System	Amd	Ryzen 4700ge Firmware	-	All	All	All
Operating System	Amd	Ryzen 4700g Firmware	-	All	All	All
Hardware	Amd	Ryzen 5300g	-	All	All	All
Hardware	Amd	Ryzen 5300ge	-	All	All	All
Operating System	Amd	Ryzen 5300ge Firmware	-	All	All	All
Operating System	Amd	Ryzen 5300g Firmware	-	All	All	All
Hardware	Amd	Ryzen 5600g	-	All	All	All
Hardware	Amd	Ryzen 5600ge	-	All	All	All
Operating System	Amd	Ryzen 5600ge Firmware	-	All	All	All
Operating System	Amd	Ryzen 5600g Firmware	-	All	All	All
Hardware	Amd	Ryzen 5600x	-	All	All	All
Operating System	Amd	Ryzen 5600x Firmware	-	All	All	All
Hardware	Amd	Ryzen 5700g	-	All	All	All
Hardware	Amd	Ryzen 5700ge	-	All	All	All
Operating System	Amd	Ryzen 5700ge Firmware	-	All	All	All
Operating System	Amd	Ryzen 5700g Firmware	-	All	All	All
Hardware	Amd	Ryzen 5800x	-	All	All	All
Hardware	Amd	Ryzen 5800x3d	-	All	All	All
Operating System	Amd	Ryzen 5800x3d Firmware	-	All	All	All
Operating System	Amd	Ryzen 5800x Firmware	-	All	All	All
Hardware	Amd	Ryzen 5900x	-	All	All	All
Operating System	Amd	Ryzen 5900x Firmware	-	All	All	All
Hardware	Amd	Ryzen 5950x	-	All	All	All
Operating System	Amd	Ryzen 5950x Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 2200g	-	All	All	All
Hardware	Amd	Ryzen Pro 2200ge	-	All	All	All

Operating System	Amd	Ryzen Pro 2200ge Firmware	-	All	All	All
Operating System	Amd	Ryzen Pro 2200g Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 2400g	-	All	All	All
Hardware	Amd	Ryzen Pro 2400ge	-	All	All	All
Operating System	Amd	Ryzen Pro 2400ge Firmware	-	All	All	All
Operating System	Amd	Ryzen Pro 2400g Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 3200g	-	All	All	All
Hardware	Amd	Ryzen Pro 3200ge	-	All	All	All
Operating System	Amd	Ryzen Pro 3200ge Firmware	-	All	All	All
Operating System	Amd	Ryzen Pro 3200g Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 3350g	-	All	All	All
Operating System	Amd	Ryzen Pro 3350g Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 3400g	-	All	All	All
Hardware	Amd	Ryzen Pro 3400ge	-	All	All	All
Operating System	Amd	Ryzen Pro 3400ge Firmware	-	All	All	All
Operating System	Amd	Ryzen Pro 3400g Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 3600	-	All	All	All
Operating System	Amd	Ryzen Pro 3600 Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 3700	-	All	All	All
Operating System	Amd	Ryzen Pro 3700 Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 3900	-	All	All	All
Operating System	Amd	Ryzen Pro 3900 Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 4350g	-	All	All	All
Hardware	Amd	Ryzen Pro 4350ge	-	All	All	All
Operating System	Amd	Ryzen Pro 4350ge Firmware	-	All	All	All
Operating System	Amd	Ryzen Pro 4350g Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 4650g	-	All	All	All
Hardware	Amd	Ryzen Pro 4650ge	-	All	All	All
Operating System	Amd	Ryzen Pro 4650ge Firmware	-	All	All	All
Operating System	Amd	Ryzen Pro 4650g Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 4750g	-	All	All	All
Hardware	Amd	Ryzen Pro 4750ge	-	All	All	All
Operating System	Amd	Ryzen Pro 4750ge Firmware	-	All	All	All
Operating System	Amd	Ryzen Pro 4750g Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 5350g	-	All	All	All

Hardware	Amd	Ryzen Pro 5350ge	-	All	All	All
Operating System	Amd	Ryzen Pro 5350ge Firmware	-	All	All	All
Operating System	Amd	Ryzen Pro 5350g Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 5650g	-	All	All	All
Hardware	Amd	Ryzen Pro 5650ge	-	All	All	All
Operating System	Amd	Ryzen Pro 5650ge Firmware	-	All	All	All
Operating System	Amd	Ryzen Pro 5650g Firmware	-	All	All	All
Hardware	Amd	Ryzen Pro 5750g	-	All	All	All
Hardware	Amd	Ryzen Pro 5750ge	-	All	All	All
Operating System	Amd	Ryzen Pro 5750ge Firmware	-	All	All	All
Operating System	Amd	Ryzen Pro 5750g Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper 1900x	-	All	All	All
Operating System	Amd	Ryzen Threadripper 1900x Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper 1920x	-	All	All	All
Operating System	Amd	Ryzen Threadripper 1920x Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper 1950x	-	All	All	All
Operating System	Amd	Ryzen Threadripper 1950x Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper 2920x	-	All	All	All
Operating System	Amd	Ryzen Threadripper 2920x Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper 2950x	-	All	All	All
Operating System	Amd	Ryzen Threadripper 2950x Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper 2970wx	-	All	All	All
Operating System	Amd	Ryzen Threadripper 2970wx Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper 2990wx	-	All	All	All
Operating System	Amd	Ryzen Threadripper 2990wx Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper 3960x	-	All	All	All
Operating System	Amd	Ryzen Threadripper 3960x Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper 3970x	-	All	All	All
Operating System	Amd	Ryzen Threadripper 3970x Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper 3990x	-	All	All	All
Operating System	Amd	Ryzen Threadripper 3990x Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper Pro 3945wx	-	All	All	All
Operating System	Amd	Ryzen Threadripper Pro 3945wx Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper Pro 3955wx	-	All	All	All
Operating System	Amd	Ryzen Threadripper Pro 3955wx Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper Pro 3975wx	-	All	All	All

Operating System	Amd	Ryzen Threadripper Pro 3975wx Firmware	-	All	All	All
Hardware	Amd	Ryzen Threadripper Pro 3995wx	-	All	All	All
Operating System	Amd	Ryzen Threadripper Pro 3995wx Firmware	-	All	All	All

References

Reference	Source	Link	Tags
Transient Execution of Non-canonical Accesses AMD	MISC	www.amd.com	
[oss-security] 20231205 SLAM: Spectre based on Linear Address Masking		www.openwall.com	
CVE Program record	CVE.ORG	www.cve.org	canonical
NVD vulnerability detail	NVD	nvd.nist.gov	canonical, analysis

No vendor comments have been submitted for this CVE.

There are currently no legacy QID mappings associated with this CVE.

© [CVE.report](https://cve.report) 2026 |

Use of this information constitutes acceptance for use in an AS IS condition. There are NO warranties, implied or otherwise, with regard to this information or its use. Any use of this information is at the user's risk. It is the responsibility of user to evaluate the accuracy, completeness or usefulness of any information, opinion, advice or other content. EACH USER WILL BE SOLELY RESPONSIBLE FOR ANY consequences of his or her direct or indirect use of this web site. ALL WARRANTIES OF ANY KIND ARE EXPRESSLY DISCLAIMED. This site will NOT BE LIABLE FOR ANY DIRECT, INDIRECT or any other kind of loss.

CVE, CWE, and OVAL are registered trademarks of [The MITRE Corporation](https://www.mitre.org) and the authoritative source of CVE content is [MITRE's CVE web site](https://www.mitre.org/cve). This site includes MITRE data granted under the following [license](https://www.mitre.org/cve).

CVE.report and Source URL Uptime Status status.cve.report