



Arm Mali GPU Kernel Driver Use-After-Free Vulnerability

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

Summary

CVE	CVE-2022-38181
State	PUBLIC
Assigner	cve@mitre.org
Source Priority	CVE Program / NVD first with legacy fallback
Published	2022-10-25 19:15:00 UTC
Updated	2023-12-13 13:51:00 UTC
Description	The Arm Mali GPU kernel driver allows unprivileged users to access freed memory because GPU memory operations are n

Risk And Classification

EPSS: 0.245470000 probability, percentile 0.960860000 (date 2026-04-01)

CISA KEV: Listed on 2023-03-30; due 2023-04-20; ransomware use Unknown

Problem Types: CWE-416

CISA Known Exploited Vulnerability

Vendor	Arm
Product	Mali Graphics Processing Unit (GPU)
Name	Arm Mali GPU Kernel Driver Use-After-Free Vulnerability
Required Action	Apply updates per vendor instructions.
Notes	https://developer.arm.com/Arm%20Security%20Center/Mali%20GPU%20Driver%20Vulnerabilities ; https://nvd.nist.gov/vuln/detail/CVE-2022-38181

NVD Known Affected Configurations (CPE 2.3)

Type	Vendor	Product	Version	Update	Edition	Language
Application	Arm	Bifrost Gpu Kernel Driver	r39p0	All	All	All
Application	Arm	Bifrost Gpu Kernel Driver	All	All	All	All
Application	Arm	Midgard Gpu Kernel Driver	All	All	All	All
Application	Arm	Midguard Gpu Kernel Driver	All	All	All	All
Application	Arm	Valhall Gpu Kernel Driver	r39p0	All	All	All
Application	Arm	Valhall Gpu Kernel Driver	All	All	All	All

References

Reference	Source	Link
Arm Security Center	MISC	developer.arm.c
GHSL-2022-054: Use-after-free (UAF) in the Arm Mali Kernel driver - CVE-2022-38181 GitHub Security Lab	MISC	securitylab.githu
developer.arm.com/Arm%20Security%20Center/Mali%20GPU%20Driver%20Vulnerabilities	MISC	developer.arm.c
Android Arm Mali GPU Arbitrary Code Execution ≈ Packet Storm	MISC	packetstormsecu
Pwning the all Google phone with a non-Google bug The GitHub Blog	MISC	github.blog
CVE Program record	CVE.ORG	www.cve.org
NVD vulnerability detail	NVD	nvd.nist.gov
CISA Known Exploited Vulnerabilities catalog	CISA	www.cisa.gov

No vendor comments have been submitted for this CVE.

Legacy QID Mappings

- [610480](#) Google Android Devices April 2023 Security Patch Missing
- [610485](#) Google Android May 2023 Security Patch Missing for Samsung
- [610487](#) Google Android May 2023 Security Patch Missing for Huawei EMUI

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