



CVE-2019-10706

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

Summary

CVE	CVE-2019-10706
State	PUBLIC
Assigner	cve@mitre.org
Source Priority	CVE Program / NVD first with legacy fallback
Published	2020-03-10 13:15:00 UTC
Updated	2020-03-13 16:23:00 UTC
Description	Western Digital SanDisk SanDisk X300, X300s, X400, and X600 devices: The firmware update authentication method relies on a weak random number generator (RNG) to generate a one-time password (OTP) for authentication. An attacker can predict the OTP by analyzing the RNG output, allowing them to bypass the authentication and gain unauthorized access to the device's firmware.

Risk And Classification

Problem Types: CWE-522

NVD Known Affected Configurations (CPE 2.3)

Type	Vendor	Product	Version	Update	Edition	Language
Hardware	Westerndigital	Sandisk X300s Sd7sb3q-064g	-	All	All	All
Hardware	Westerndigital	Sandisk X300s Sd7sb3q-064g	-	All	All	All
Operating System	Westerndigital	Sandisk X300s Sd7sb3q-064g Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X300s Sd7sb3q-064g Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X300s Sd7sn3q-064g	-	All	All	All
Hardware	Westerndigital	Sandisk X300s Sd7sn3q-064g	-	All	All	All
Operating System	Westerndigital	Sandisk X300s Sd7sn3q-064g Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X300s Sd7sn3q-064g Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X300s Sd7ub2q-010t	-	All	All	All
Hardware	Westerndigital	Sandisk X300s Sd7ub2q-010t	-	All	All	All
Operating System	Westerndigital	Sandisk X300s Sd7ub2q-010t Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X300s Sd7ub2q-010t Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X300s Sd7ub2q-512g	-	All	All	All
Hardware	Westerndigital	Sandisk X300s Sd7ub2q-512g	-	All	All	All
Operating System	Westerndigital	Sandisk X300s Sd7ub2q-512g Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X300s Sd7ub2q-512g Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X300s Sd7ub3q-128g	-	All	All	All

Hardware	Westerndigital	Sandisk X300s Sd7ub3q-128g	-	All	All	All	
Operating System	Westerndigital	Sandisk X300s Sd7ub3q-128g Firmware	-	All	All	All	
Operating System	Westerndigital	Sandisk X300s Sd7ub3q-128g Firmware	-	All	All	All	
Hardware	Westerndigital	Sandisk X300s Sd7ub3q-256g	-	All	All	All	
Hardware	Westerndigital	Sandisk X300s Sd7ub3q-256g	-	All	All	All	
Operating System	Westerndigital	Sandisk X300s Sd7ub3q-256g Firmware	-	All	All	All	
Operating System	Westerndigital	Sandisk X300s Sd7ub3q-256g Firmware	-	All	All	All	
Hardware	Westerndigital	Sandisk X300s Sd7un3q-128g	-	All	All	All	
Hardware	Westerndigital	Sandisk X300s Sd7un3q-128g	-	All	All	All	
Operating System	Westerndigital	Sandisk X300s Sd7un3q-128g Firmware	-	All	All	All	
Operating System	Westerndigital	Sandisk X300s Sd7un3q-128g Firmware	-	All	All	All	
Hardware	Westerndigital	Sandisk X300s Sd7un3q-256g	-	All	All	All	
Hardware	Westerndigital	Sandisk X300s Sd7un3q-256g	-	All	All	All	
Operating System	Westerndigital	Sandisk X300s Sd7un3q-256g Firmware	-	All	All	All	
Operating System	Westerndigital	Sandisk X300s Sd7un3q-256g Firmware	-	All	All	All	
Hardware	Westerndigital	Sandisk X300s Sd7un3q-512g	-	All	All	All	
Hardware	Westerndigital	Sandisk X300s Sd7un3q-512g	-	All	All	All	
Operating System	Westerndigital	Sandisk X300s Sd7un3q-512g Firmware	-	All	All	All	
Operating System	Westerndigital	Sandisk X300s Sd7un3q-512g Firmware	-	All	All	All	
Hardware	Westerndigital	Sandisk X300 Sd7sb6s-128g	-	All	All	All	
Hardware	Westerndigital	Sandisk X300 Sd7sb6s-128g	-	All	All	All	
Operating System	Westerndigital	Sandisk X300 Sd7sb6s-128g Firmware	-	All	All	All	
Operating System	Westerndigital	Sandisk X300 Sd7sb6s-128g Firmware	-	All	All	All	
Hardware	Westerndigital	Sandisk X300 Sd7sb6s-256g	-	All	All	All	
Hardware	Westerndigital	Sandisk X300 Sd7sb6s-256g	-	All	All	All	
Operating System	Westerndigital	Sandisk X300 Sd7sb6s-256g Firmware	-	All	All	All	
Operating System	Westerndigital	Sandisk X300 Sd7sb6s-256g Firmware	-	All	All	All	
Hardware	Westerndigital	Sandisk X300 Sd7sb7s-010t	-	All	All	All	
Hardware	Westerndigital	Sandisk X300 Sd7sb7s-010t	-	All	All	All	
Operating System	Westerndigital	Sandisk X300 Sd7sb7s-010t Firmware	-	All	All	All	
Operating System	Westerndigital	Sandisk X300 Sd7sb7s-010t Firmware	-	All	All	All	
Hardware	Westerndigital	Sandisk X300 Sd7sb7s-512g	-	All	All	All	
Hardware	Westerndigital	Sandisk X300 Sd7sb7s-512g	-	All	All	All	
Operating System	Westerndigital	Sandisk X300 Sd7sb7s-512g Firmware	-	All	All	All	
Operating System	Westerndigital	Sandisk X300 Sd7sb7s-512g Firmware	-	All	All	All	

Hardware	Westerndigital	Sandisk X300 Sd7sf6s-128g	-	All	All	All
Hardware	Westerndigital	Sandisk X300 Sd7sf6s-128g	-	All	All	All
Operating System	Westerndigital	Sandisk X300 Sd7sf6s-128g Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X300 Sd7sf6s-128g Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X300 Sd7sf6s-256g	-	All	All	All
Hardware	Westerndigital	Sandisk X300 Sd7sf6s-256g	-	All	All	All
Operating System	Westerndigital	Sandisk X300 Sd7sf6s-256g Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X300 Sd7sf6s-256g Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X300 Sd7sf6s-512g	-	All	All	All
Hardware	Westerndigital	Sandisk X300 Sd7sf6s-512g	-	All	All	All
Operating System	Westerndigital	Sandisk X300 Sd7sf6s-512g Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X300 Sd7sf6s-512g Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X300 Sd7sn6s-128g	-	All	All	All
Hardware	Westerndigital	Sandisk X300 Sd7sn6s-128g	-	All	All	All
Operating System	Westerndigital	Sandisk X300 Sd7sn6s-128g Firmware	-	All	All	All
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Operating System	Westerndigital	Sandisk X300 Sd7sn6s-256g Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X300 Sd7sn6s-256g Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X300 Sd7sn6s-512g	-	All	All	All
Hardware	Westerndigital	Sandisk X300 Sd7sn6s-512g	-	All	All	All
Operating System	Westerndigital	Sandisk X300 Sd7sn6s-512g Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X300 Sd7sn6s-512g Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sb8u-128g	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sb8u-128g	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sb8u-128g-1122	-	All	All	All
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Operating System	Westerndigital	Sandisk X400 Sd8sb8u-128g-1122 Firmware	-	All	All	All
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Operating System	Westerndigital	Sandisk X400 Sd8sb8u-128g Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8sb8u-128g Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sb8u-1t00	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sb8u-1t00	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sb8u-1t00-1122	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sb8u-1t00-1122	-	All	All	All

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Operating System	Westerndigital	Sandisk X400 Sd8sn8u-1t00 Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sn8u-256g	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sn8u-256g	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sn8u-256g-1122	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sn8u-256g-1122	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8sn8u-256g-1122 Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8sn8u-256g-1122 Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8sn8u-256g Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8sn8u-256g Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sn8u-512g	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sn8u-512g	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sn8u-512g-1122	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8sn8u-512g-1122	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8sn8u-512g-1122 Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8sn8u-512g-1122 Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8sn8u-512g Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8sn8u-512g Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8tb8u-128g-1122	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8tb8u-128g-1122	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8tb8u-128g-1122 Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8tb8u-128g-1122 Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8tb8u-1t00-1122	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8tb8u-1t00-1122	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8tb8u-1t00-1122 Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8tb8u-1t00-1122 Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8tb8u-256g-1122	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8tb8u-256g-1122	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8tb8u-256g-1122 Firmware	-	All	All	All
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Hardware	Westerndigital	Sandisk X400 Sd8tb8u-512g-1122	-	All	All	All
Hardware	Westerndigital	Sandisk X400 Sd8tb8u-512g-1122	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8tb8u-512g-1122 Firmware	-	All	All	All
Operating System	Westerndigital	Sandisk X400 Sd8tb8u-512g-1122 Firmware	-	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9sb8w-128g	-	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9sb8w-128g	-	All	All	All

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Hardware	westerndigital	Sandisk X600 Sd9sn8w-512g	-	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9sn8w-512g Firmware	All	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9sn8w-512g Firmware	All	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tb8w-128g	-	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tb8w-128g	-	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tb8w-128g Firmware	All	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tb8w-128g Firmware	All	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tb8w-1t00	-	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tb8w-1t00	-	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tb8w-1t00 Firmware	All	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tb8w-1t00 Firmware	All	All	All	All
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Hardware	Westerndigital	Sandisk X600 Sd9tb8w-256g	-	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tb8w-256g Firmware	All	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tb8w-256g Firmware	All	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tb8w-2t00	-	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tb8w-2t00	-	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tb8w-2t00 Firmware	All	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tb8w-2t00 Firmware	All	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tb8w-512g	-	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tb8w-512g	-	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tb8w-512g Firmware	All	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tb8w-512g Firmware	All	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tn8w-128g	-	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tn8w-128g	-	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tn8w-128g Firmware	All	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tn8w-128g Firmware	All	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tn8w-1t00	-	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tn8w-1t00	-	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tn8w-1t00 Firmware	All	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tn8w-1t00 Firmware	All	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tn8w-256g	-	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tn8w-256g	-	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tn8w-256g Firmware	All	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tn8w-256g Firmware	All	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tn8w-2t00	-	All	All	All

Hardware	Westerndigital	Sandisk X600 Sd9tn8w-2t00	-	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tn8w-2t00 Firmware	All	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tn8w-2t00 Firmware	All	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tn8w-512g	-	All	All	All
Hardware	Westerndigital	Sandisk X600 Sd9tn8w-512g	-	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tn8w-512g Firmware	All	All	All	All
Operating System	Westerndigital	Sandisk X600 Sd9tn8w-512g Firmware	All	All	All	All

References			
Reference	Source	Link	Tags
WDC-19006 SanDisk X600 SATA SED SSD Western Digital	MISC	www.westerndigital.com	Vendor Advisory
WDC-19007 SanDisk X300, X300s, and X400 SATA SED SSD Western Digital	MISC	www.westerndigital.com	Vendor Advisory
Internal Drives, SSDs & Embedded Flash	MISC	support.wdc.com	Product
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.