



# CVE-2022-4574

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

## Summary

<b>CVE</b>	CVE-2022-4574
<b>State</b>	PUBLIC
<b>Assigner</b>	psirt@lenovo.com
<b>Source Priority</b>	CVE Program / NVD first with legacy fallback
<b>Published</b>	2023-10-30 15:15:00 UTC
<b>Updated</b>	2023-11-08 00:24:00 UTC
<b>Description</b>	An SMI handler input validation vulnerability in the BIOS of some ThinkPad models could allow an attacker with local access

## Risk And Classification

**Problem Types:** NVD-CWE-noinfo

## NVD Known Affected Configurations (CPE 2.3)

Type	Vendor	Product	Version	Update	Edition	Language
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad L14</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad L14 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad L14 Gen 2</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad L14 Gen 2 Firmware</a>	-	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad L15</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad L15 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad L15 Gen 2</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad L15 Gen 2 Firmware</a>	-	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad P14s Gen 1</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad P14s Gen 1 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad P14s Gen 2</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad P14s Gen 2 Firmware</a>	-	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad P14s Gen 3</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad P14s Gen 3 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad P15s Gen 1</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad P15s Gen 1 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad P15s Gen 2</a>	-	All	All	All

Operating System	Lenovo	Thinkpad P15s Gen 2 Firmware	-	All	All	All
Hardware	Lenovo	Thinkpad P15v Gen 1	-	All	All	All
Operating System	Lenovo	Thinkpad P15v Gen 1 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad P15v Gen 2	-	All	All	All
Operating System	Lenovo	Thinkpad P15v Gen 2 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad P15v Gen 3	-	All	All	All
Operating System	Lenovo	Thinkpad P15v Gen 3 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad P15 Gen 1	-	All	All	All
Operating System	Lenovo	Thinkpad P15 Gen 1 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad P15 Gen 2	-	All	All	All
Operating System	Lenovo	Thinkpad P15 Gen 2 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad P16s Gen 1	-	All	All	All
Operating System	Lenovo	Thinkpad P16s Gen 1 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad P16 Gen 1	-	All	All	All
Operating System	Lenovo	Thinkpad P16 Gen 1 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad P17 Gen 1	-	All	All	All
Operating System	Lenovo	Thinkpad P17 Gen 1 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad P17 Gen 2	-	All	All	All
Operating System	Lenovo	Thinkpad P17 Gen 2 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad P1 Gen 3	-	All	All	All
Operating System	Lenovo	Thinkpad P1 Gen 3 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad P1 Gen 4	-	All	All	All
Operating System	Lenovo	Thinkpad P1 Gen 4 Firmware	1.22	All	All	All
Hardware	Lenovo	Thinkpad P1 Gen 5	-	All	All	All
Operating System	Lenovo	Thinkpad P1 Gen 5 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad T14s	-	All	All	All
Operating System	Lenovo	Thinkpad T14s Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad T14s Gen 2	-	All	All	All
Operating System	Lenovo	Thinkpad T14s Gen 2 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad T14s Gen 3	-	All	All	All
Operating System	Lenovo	Thinkpad T14s Gen 3 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad T14 Gen 1	-	All	All	All
Operating System	Lenovo	Thinkpad T14 Gen 1 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad T14 Gen 2	-	All	All	All
Operating System	Lenovo	Thinkpad T14 Gen 2 Firmware	-	All	All	All

Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad T14 Gen 3</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad T14 Gen 3 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad T15g Gen 1</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad T15g Gen 1 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad T15g Gen 2</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad T15g Gen 2 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad T15p Gen 1</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad T15p Gen 1 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad T15p Gen 2</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad T15p Gen 2 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad T15p Gen 3</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad T15p Gen 3 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad T15 Gen 2</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad T15 Gen 2 Firmware</a>	-	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad T16 Gen 1</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad T16 Gen 1 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad X13</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad X13 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad X13 Gen 2</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad X13 Gen 2 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad X13 Gen 3</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad X13 Gen 3 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad X13 Yoga Gen 1</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad X13 Yoga Gen 1 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad X13 Yoga Gen 2</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad X13 Yoga Gen 2 Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad X1 Carbon 10th Gen</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad X1 Carbon 10th Gen Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad X1 Carbon 7th Gen</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad X1 Carbon 7th Gen Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad X1 Carbon 8th Gen</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad X1 Carbon 8th Gen Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad X1 Carbon 9th Gen</a>	-	All	All	All
Operating System	<a href="#">Lenovo</a>	<a href="#">Thinkpad X1 Carbon 9th Gen Firmware</a>	All	All	All	All
Hardware	<a href="#">Lenovo</a>	<a href="#">Thinkpad X1 Extreme 3rd Gen</a>	-	All	All	All

Operating System	Lenovo	Thinkpad X1 Extreme 3rd Gen Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad X1 Extreme 4th Gen	-	All	All	All
Operating System	Lenovo	Thinkpad X1 Extreme 4th Gen Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad X1 Extreme Gen 5	-	All	All	All
Operating System	Lenovo	Thinkpad X1 Extreme Gen 5 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad X1 Fold Gen 1	-	All	All	All
Operating System	Lenovo	Thinkpad X1 Fold Gen 1 Firmware	-	All	All	All
Hardware	Lenovo	Thinkpad X1 Nano Gen 1	-	All	All	All
Operating System	Lenovo	Thinkpad X1 Nano Gen 1 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad X1 Nano Gen 2	-	All	All	All
Operating System	Lenovo	Thinkpad X1 Nano Gen 2 Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad X1 Titanium	-	All	All	All
Operating System	Lenovo	Thinkpad X1 Titanium Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad X1 Yoga 4th Gen	-	All	All	All
Operating System	Lenovo	Thinkpad X1 Yoga 4th Gen Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad X1 Yoga 5th Gen	-	All	All	All
Operating System	Lenovo	Thinkpad X1 Yoga 5th Gen Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad X1 Yoga 6th Gen	-	All	All	All
Operating System	Lenovo	Thinkpad X1 Yoga 6th Gen Firmware	All	All	All	All
Hardware	Lenovo	Thinkpad X1 Yoga 7th Gen	-	All	All	All
Operating System	Lenovo	Thinkpad X1 Yoga 7th Gen Firmware	All	All	All	All

## References

Reference	Source	Link	Tags
ThinkPad BIOS Vulnerabilities - Lenovo Support US	MISC	<a href="https://support.lenovo.com">support.lenovo.com</a>	
CVE Program record	CVE.ORG	<a href="https://www.cve.org">www.cve.org</a>	canonical
NVD vulnerability detail	NVD	<a href="https://nvd.nist.gov">nvd.nist.gov</a>	canonical, analysis

No vendor comments have been submitted for this CVE.

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

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