NitroPad

Secure Working in Insecure Environments Thanks to Unique Hardware Protection

Do you think your computer hardware is secure? Can you rule out that in your absence no one has manipulated your computer?

In a world, where most users do not have any real control over their hardware and have to blindly trust the security promises of vendors, NitroPad unlocks a refreshingly new security experience. NitroPad is significantly more secure than normal computers. With NitroPad, you'll have more control over your hardware than ever before while maintaining ease of use.

Nitrokey
secure your digital life

FEATURES

Tamper Detection Through Measured Boot

Thanks to the combination of the open source solutions Coreboot, Heads and Nitrokey USB hardware, you can verify that your laptop hardware has not been tampered with in transit or in your absence (so-called evil maid attack). The integrity of the TPM, the firmware and the operating system is effectively checked by a separate Nitrokey USB key. Simply connect your Nitrokey to the NitroPad while booting and a green LED on the Nitrokey will show that your NitroPad has not been tampered with. If the LED should turn red one day, it indicates a manipulation.

Deactivated Intel Management Engine

Vulnerable and proprietary low-level hardware parts are disabled to make the hardware more robust against advanced attacks.

The Intel Management Engine (ME) is some kind of separate computer within all modern Intel processors (CPU). The ME acts as a master controller for your CPU and has broad access to your computer (system memory, screen, keyboard, network). Intel controls the code of the ME and severe vulnerabilities have been found in the ME enabling local and remote attacks. Therefore ME can be considered as a backdoor and has been deactivated in NitroPad.

Preinstalled Ubuntu Linux With Full-Disk Encryption

NitroPad ships with a preinstalled Ubuntu Linux LTS with full-disk encryption. Ubuntu is one of the most popular, stable and easiest to use Linux distributions. Switching from Windows to Linux has never been easier.

Qubes certified*

Optional: Preinstalled Qubes OS For Highest Security Requirements

Instead of Ubuntu Linux, on request you can get your NitroPad with preinstalled Qubes OS and full-disk encryption.

Qubes OS enables highly isolated working by means of virtual machines (VM). A separate VM is started for each application or workspace. This approach isolates applications and processes much more than conventional operating systems. Qubes OS keeps your system secure, even if a vulnerability has been exploited in one of the software applications used. Example: If your PDF viewer or web browser has been successfully attacked, the attacker cannot compromise the rest of the system and will be locked out once the VM is closed.

In addition, separate virtual workspaces can be used, such as an offline workspace for secret data and an online workspace for communication. NitroPad with Qubes OS is technically similar to SINA clients (for governments), but remains transparent thanks to open source. Qubes OS is for users who want maximum security.

*for selected models

Nitrokey USB Key Included

The NitroPad comes with a Nitrokey. The security features of the Nitrokey 3 include passkeys for passwordless login, two-factor authentication (2FA) using FIDO2, and one-time passwords (OTP). Email encryption (PGP, S/MIME), secure server administration (SSH). The Nitrokey Storage 2 contains encrypted mass storage with hidden volumes.

⊕ Air Gap (X230, T430 only)

Flight mode switch enables air gap.

⊕ Keys Under Your Control

All individual cryptographic keys are generated directly on the NitroPad exclusively during installation and are not stored by us. However, all individual keys can be replaced by you. Unlike „Secure Boot“, the keys for securing the operating system remain under your control and do not depend on the consent of the vendor.

⊕ Security Conscious Shipping

To make it more difficult to intercept and manipulate your NitroPad, the NitroPad and the Nitrokey USB key can be shipped in two separate shipments if desired.

⊕ Out-of-the-Box User Experience

With NitroPad, you don‘t need to take care of opening the hardware casing to flash the BIOS chip, installing and configuring Linux, or pairing the Nitrokey. We do this work for you. The Nitrokey is already configured with your NitroPad so that it can be used for tamper detection without any further configuration effort.

⊕ Professional ThinkPad Hardware (X230, T430, T480 only)

Based on Lenovo ThinkPad, the hardware finish and robustness meet professional quality standards. The famous ThinkPad keyboard with background lighting (optional) and TrackPoint allows comfortable working. The used laptops have been refurbished.

USE CASES

For Everyone

NitroPad enables you to detect hardware tampering. For example, if your laptop is being inspected while crossing the border or if you leave your device unattended in a hotel or during travelling, you can check the integrity of your NitroPad with the help of the Nitrokey.

For Governments

Governments can use NitroPad to protect themselves against advanced persistent threats (APT) without relying on foreign proprietary technology.

For Enterprises

NitroPad can serve as a hardened workstation for certificate authorities and other use cases requiring high-security computers. On business trips, the NitroPad protects against evil maid attacks while the computer is unattended in a hotel or baggage.

For Journalists

If you as an investigative journalist are serious about protecting your confidential sources, NitroPad helps you getting there.

NITROKEY IS BETTER

Better Than Ordinary Laptops

Unlike ordinary laptops, NitroPads are equipped with tamper detection and deactivated Intel Management Engine. This makes the device much more resilient against advanced attacks.
The hardware processing and robustness meet professional quality standards.

Better Than Ordinary Operating Systems

Unlike Windows, macOS and most standard Linux installations, NitroPad is preinstalled with a hardened Linux or highly secure Qubes OS.

Better Than Secure Boot

Unlike „Secure Boot", Measured Boot keeps the keys for securing the operating system under your control and does not depend on the consent of the vendor.

Security Requires Open Source

The firmware (BIOS/UEFI), operating system and Nitrokey USB keys are open source and free software enabling independent security audits. Flexibly adaptable, no vendor lock-in, no security through obscurity, no hidden security flaws.

Made in Germany

Nitrokeys and NitroPads are produced in Germany. For the sake of higher quality and security, we do not use cheap overseas labour.

Sustainability

The refurbishing of used ThinkPads to NitroPads contributes to a sustainable environment and society. In case of defect, NitroPad can be easily repaired.

www.nitrokey.com

Our Customers

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