Introduction to Hardware Security Modules

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Who the hell am I?

- Wrote software and firmware for nCipher 2005-2012.

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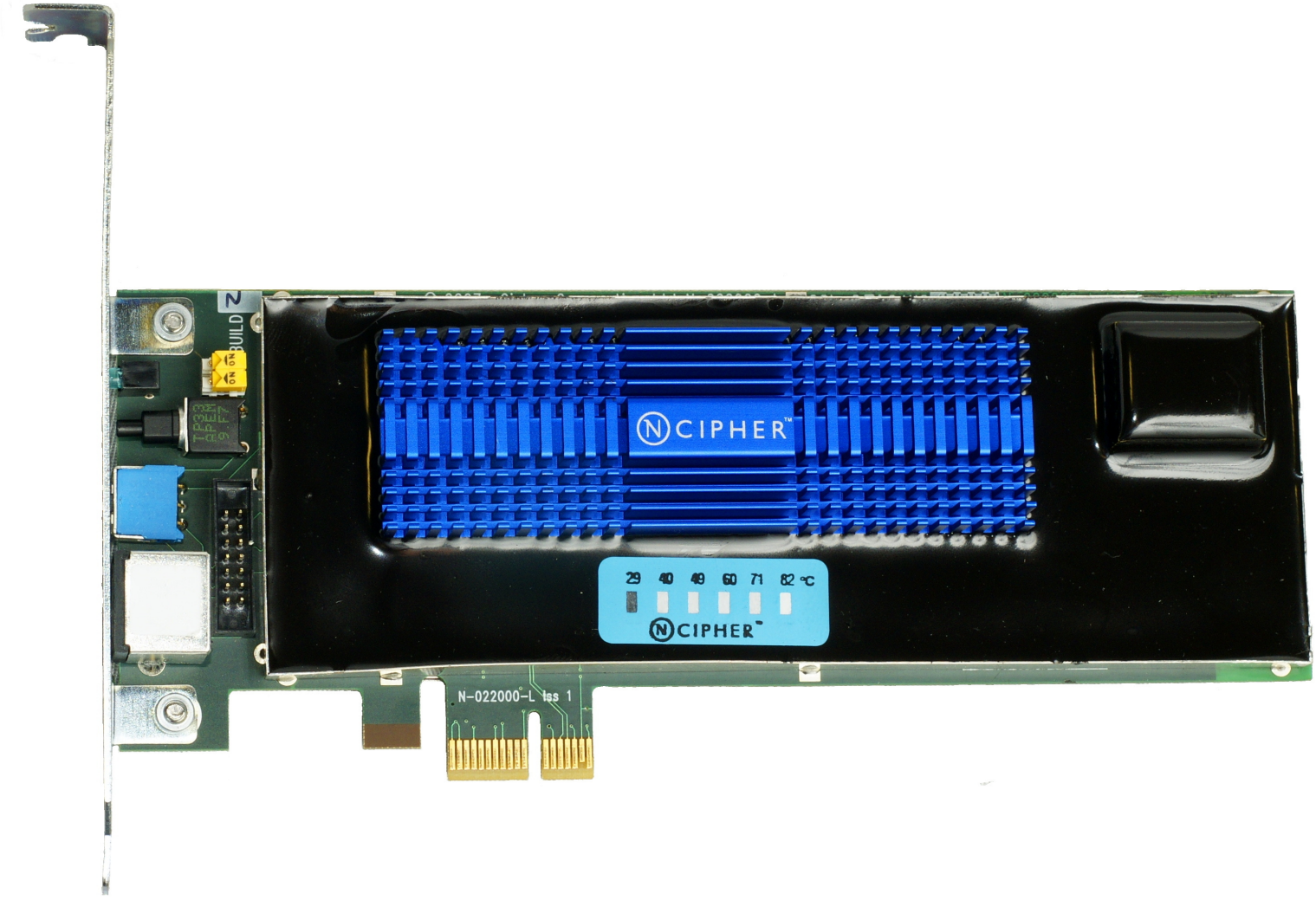
- Wrote software and firmware for nCipher 2005-2012.
- nCipher acquired by Thales 2008.

WTF is an HSM?



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- Tamper reactive hardware rare in HSMs; more common in things in adversarial environments like credit card terminals.

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- But mainly: key management. Like:
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  - Complex key policies: 'this RSA key can only decrypt using OAEP'
  - Allowing backup of key material (two main approaches...)

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  - Understanding and expressing the policy you want is an ongoing problem.

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- FIPS 140-2 is the main standard for HSMs (and software crypto modules).
- Implemented crypto standards come from NIST, IEEE, ANSI, KISA, etc. usually at request of customers.

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Questions?