05 - CYBERSECURITY ASPECTS

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KOSMOS DAY 2025 - 15/09/2025

WHAT DO WE WANT TO COVER WITH CYBER ASPECTS ?
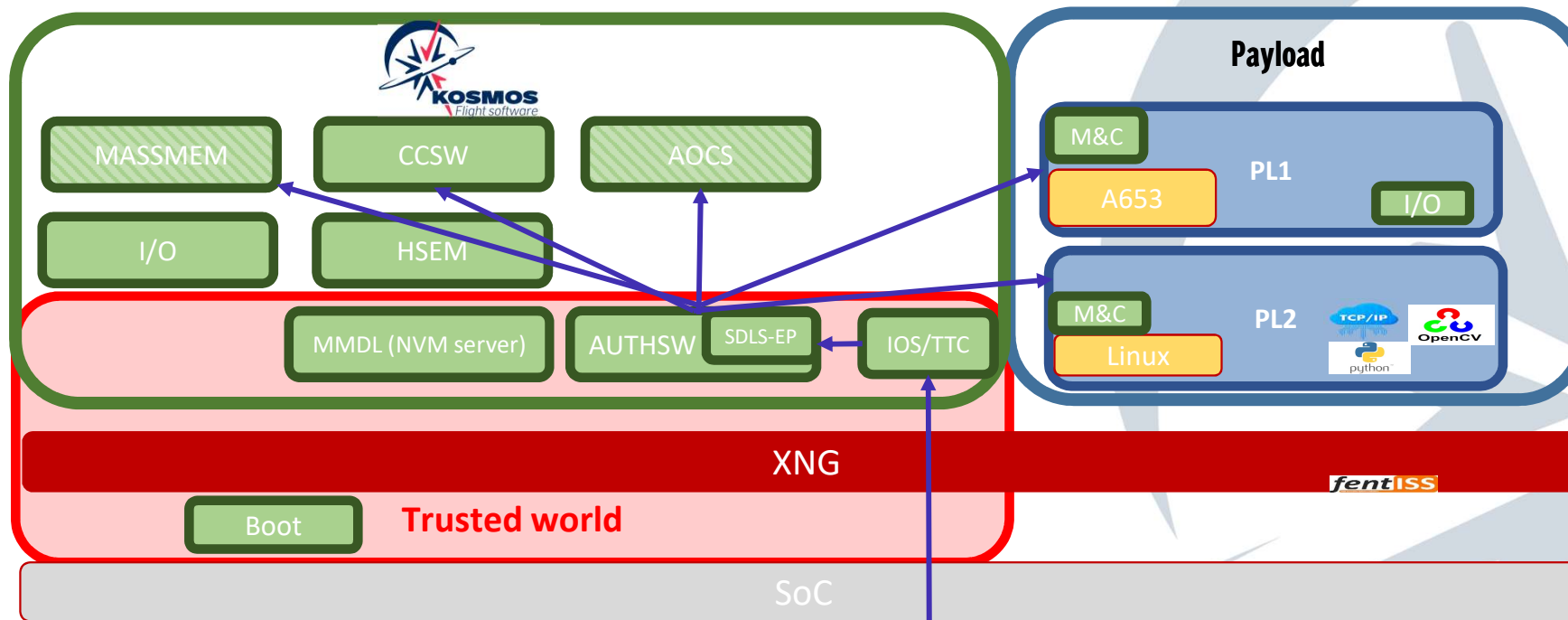
Prevent takeovers on some or all parts of the satellite

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HOW ?

- Secure design guarantees (different defense lines)

- Authentication and encryption at the bounds of the system

- Security certifications

- Testing through attacks

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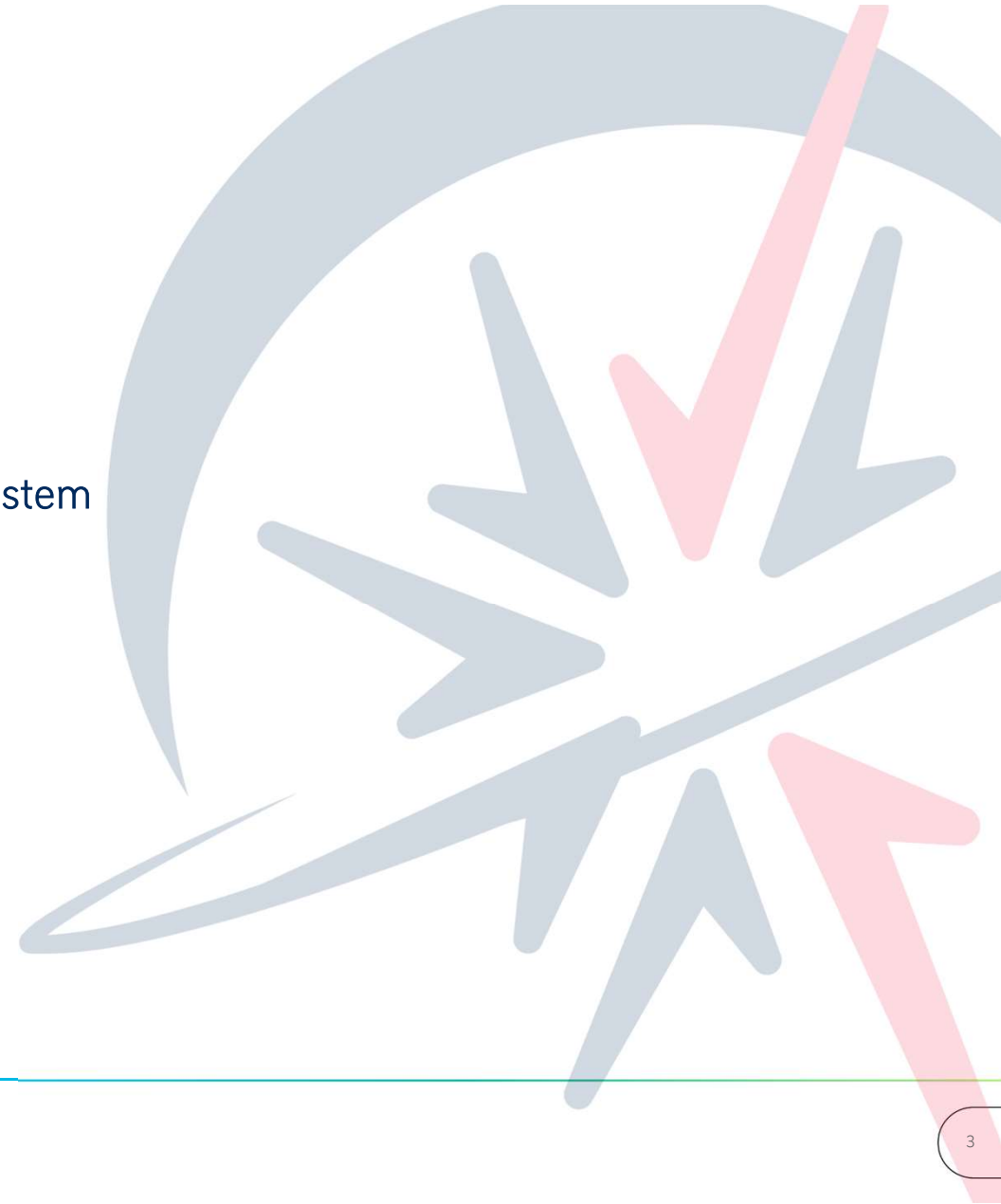
SECURE DESIGN

Capability to prevent PL partition from reading keys in memory

AUTHSW PARTITION

- No driver

- Relies on keys and status accessed in NVM (potentially shared) through MMDL and XNG restricted accesses

- Incoming TC frames supplied by an I/O partition specifics to the TTC equipment.

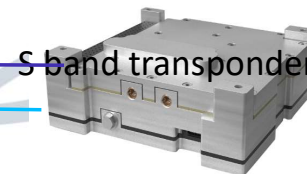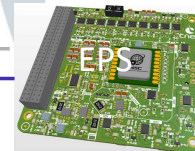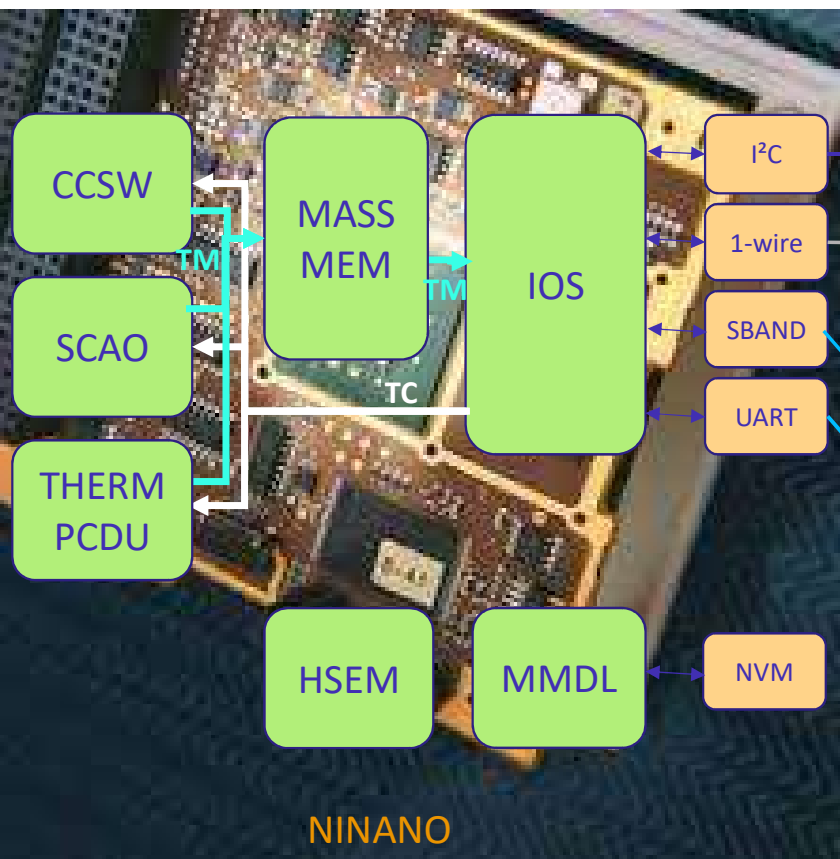- Authentication and decryption based on SDLS-EP

CERTIFICATION

- XNG certification EAL3+ to be launched (Zynq7x and NG-ULTRA)

- Trusted World certification EAL3+ to be launched

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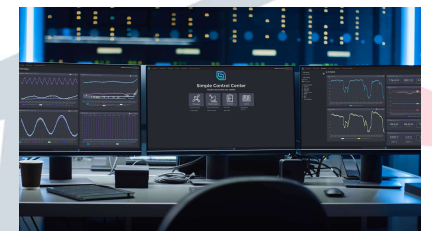FRANÇAISE
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CYBER TEST BENCH
BASED ON NANOLAB PF OBSW - KIT SEED
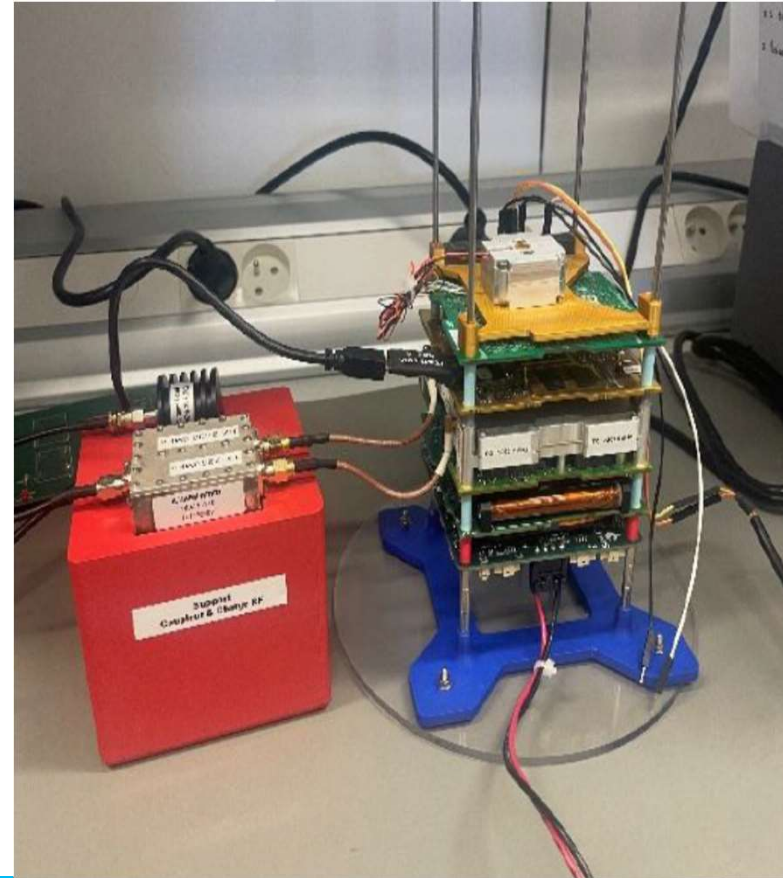
CYBER TEST BENCH – NANOLAB PF OBSW

CYBER TEST BENCH - NANOLAB AOCS CLOSED LOOP + SECURITY