

STEEL
électronique
AN ACTIA AEROSPACE COMPANY

COMODO

a new approach for OBC

STEEL Electronique background information

Space Electronics Equipment supplier

Subsidiary of Actia Aerospace

Based in Martres-Tolosane, Toulouse area

70 employees

Turnover : 7M€

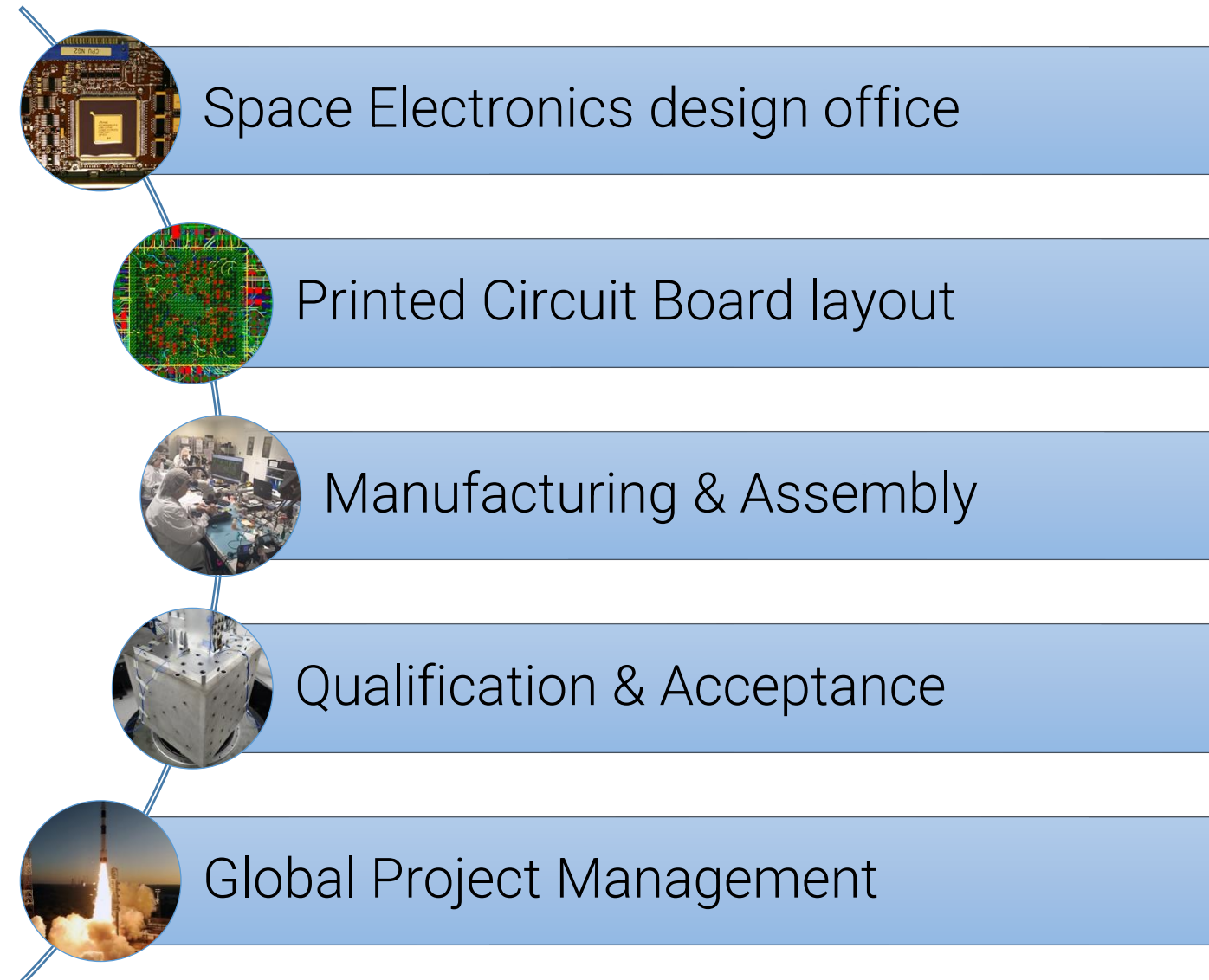
POC

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Multidisciplinary team

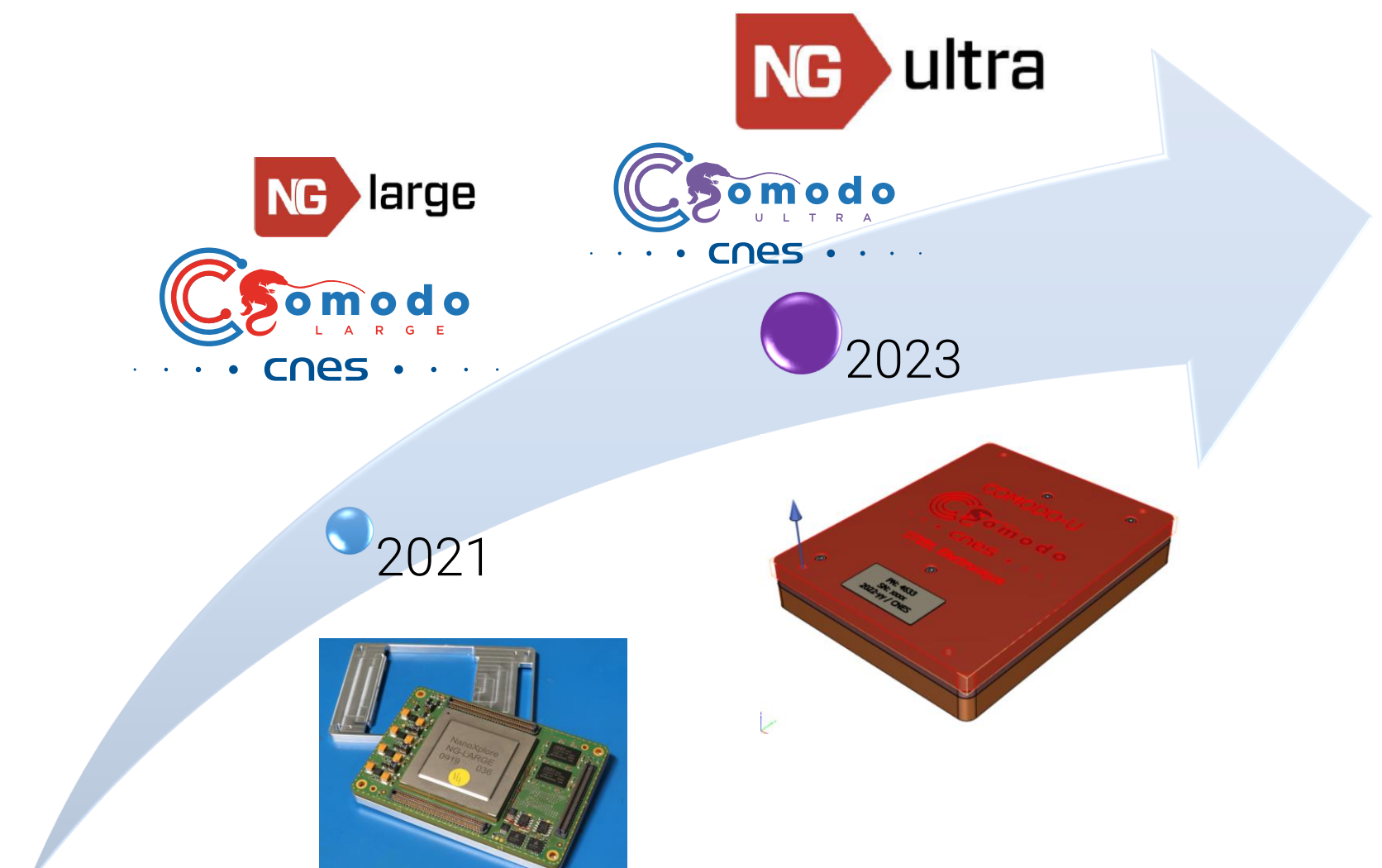
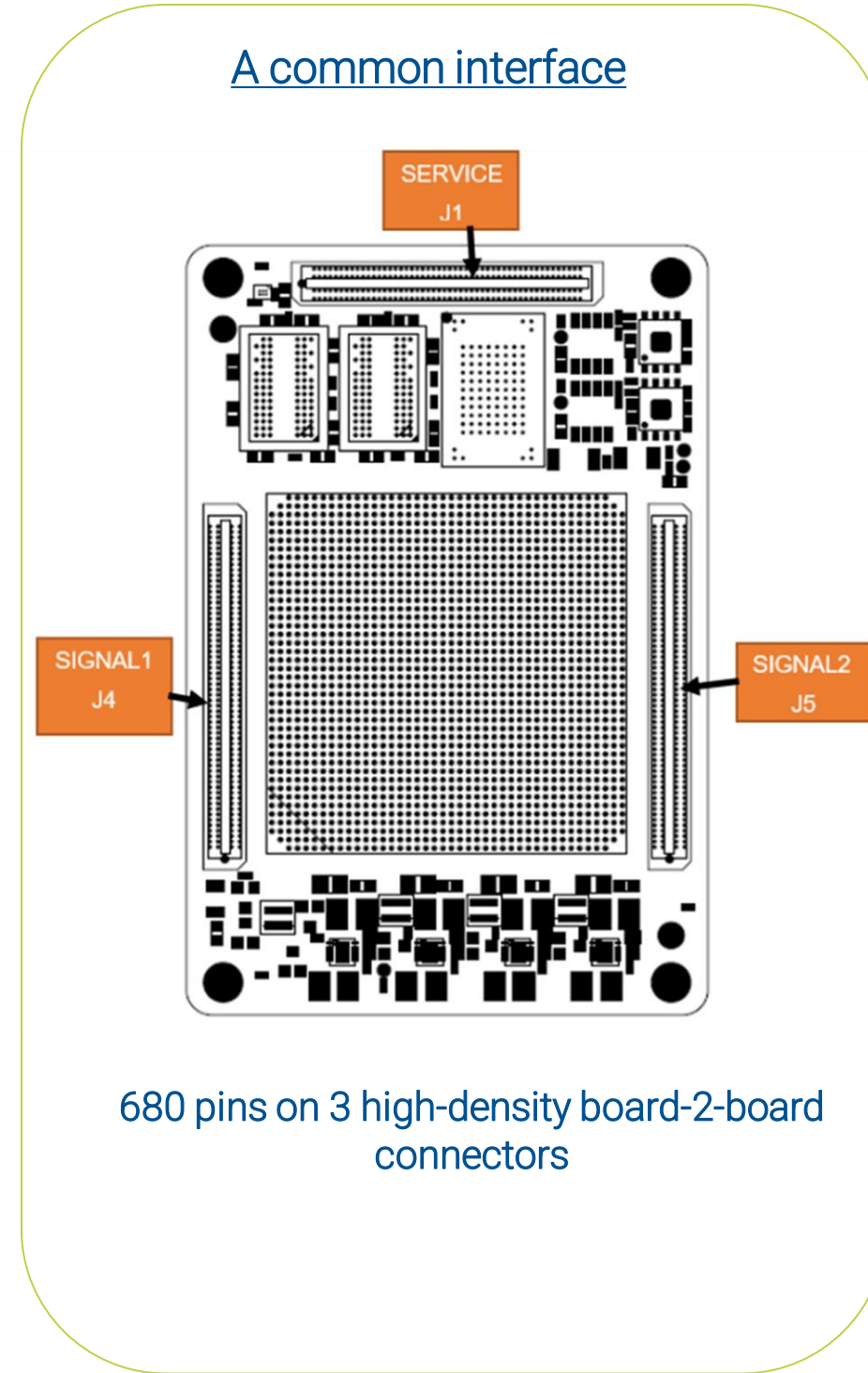
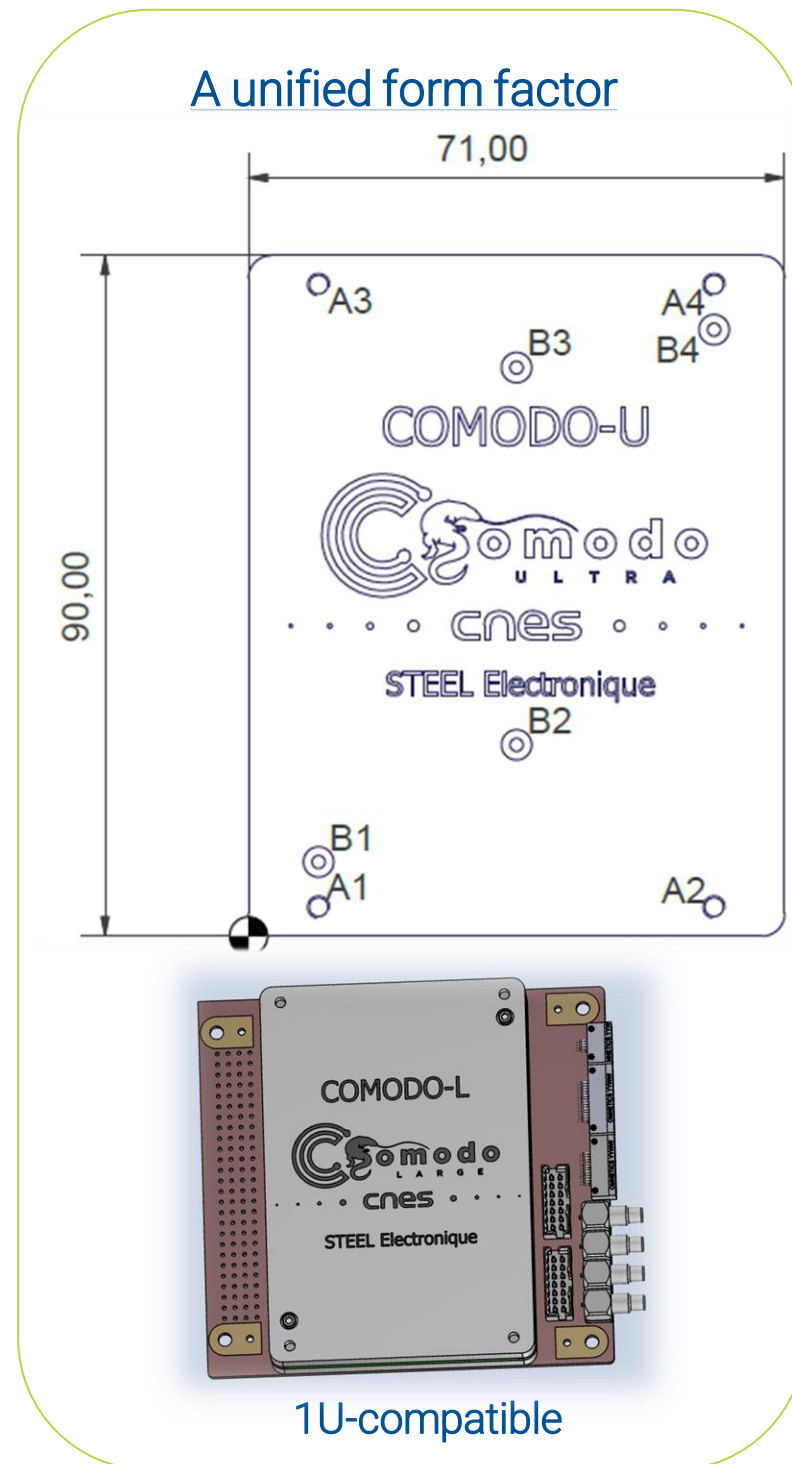
- **Electrical Engineering (Digital, Analog, Power)**
- FPGA Design
- Software Engineering (ARM, LEON, AVR, ...)
- Mechanical Engineering
- EEE parts / Radiations Engineering

Core Skills and Product approach

- Good knowledge of satellite avionics
- Design to cost-effective approach
- Modular units (scalability)
- Hi-rel rad-hard or COTS approach
- Building blocks to reduce NRE
- Space qualified manufacturing

What's COMODO ?

- A System-On-Module family
- To use with custom motherboard
- European owned design



COMODO-L

- Key features :

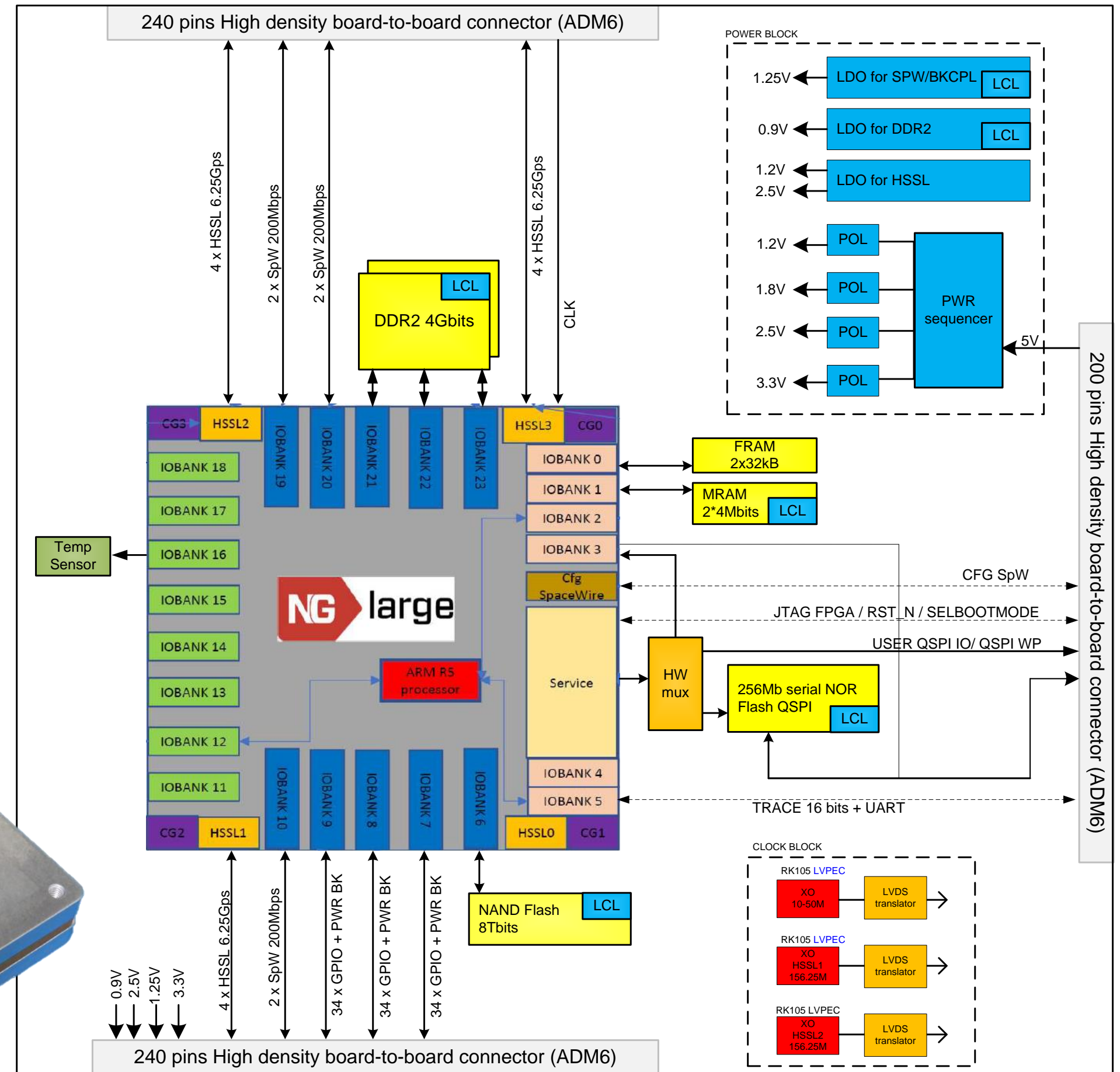
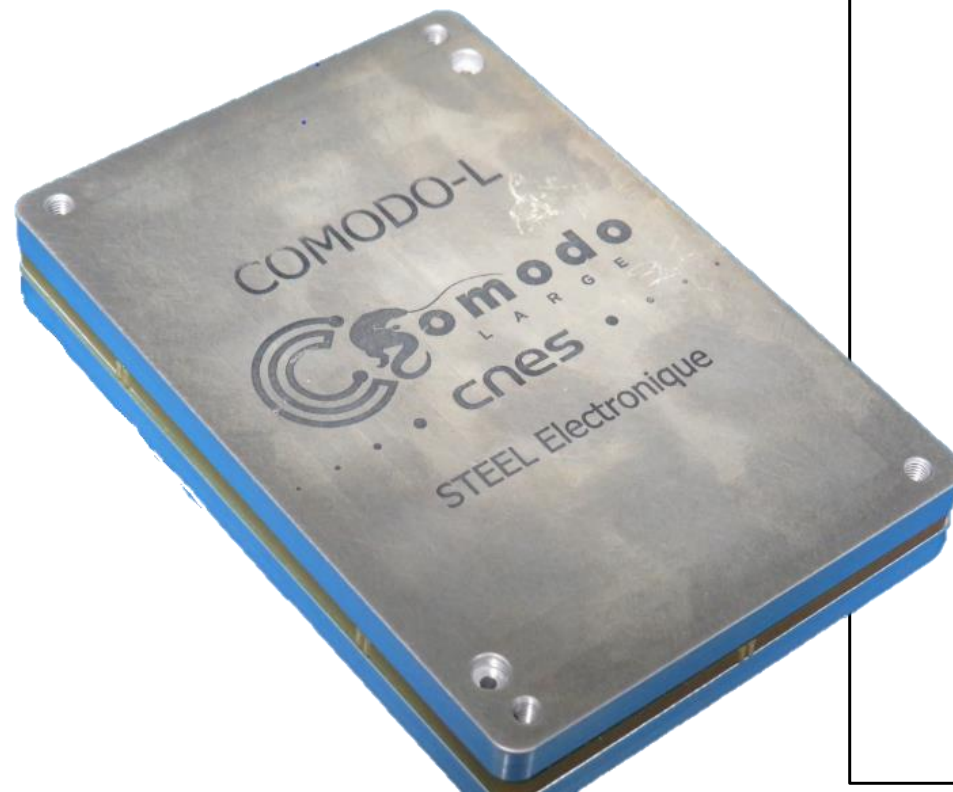
- Based on NanoXplore rad-hard NG-Large
- 4 Gb DDR2 SD-RAM
- 2 x 32 Kb FRAM
- 4 x 4 Mb MRAM
- 256 Mb NOR Flash
- 256 Gb NAND Flash
- 12 x 6.25 Gbps HSSL
- 102 external IOs (single-ended or differential)
- 6 SpaceWire links

- Power :

- Power consumption : $\approx 5\text{ W}$

- Mechanical :

- Size : 90 x 62 x 12.6 mm
- Weight : 120 g



COMODO-U

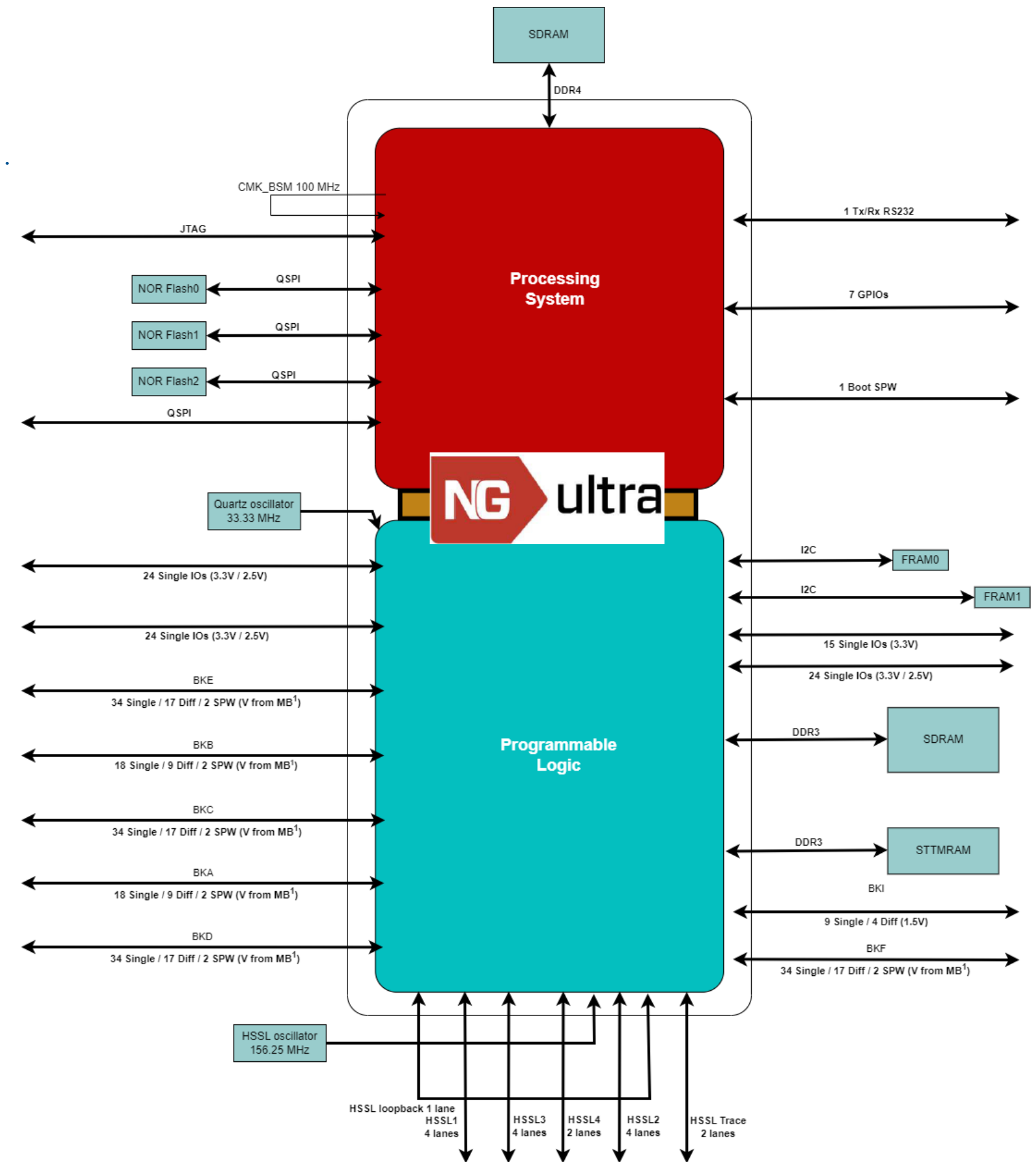


- Key features :
 - Based on NanoXplore rad-hard NG-Ultra
 - 16 Gb DDR4 SD-RAM
 - 8 Gb DDR3 SD-RAM
 - 2 Gb Non-Volatile Memory
 - 2 x 32 Kb FRAM
 - 3 x 512 Mb NOR Flash
 - 14 x 6.25 Gbps HSSL
 - 7 SpaceWire links
 - I2C interface
 - 299 external IOs (single-ended or differential)

• Max Power ≈ 30 W

• Mechanical :

- Size : 90 x 71 x 14.9 mm
- Weight : 160 g





Thanks for your attention

www.steel-electronique.fr

