# Lynx – High Performance Single Board Computer

The Lynx PPC SBC is a high performance general purpose single board computer with flexible communication and interface capabilities. The processing capability is provided by a dual core PowerPC processor delivering more than 5.000 DMIPS. The IO capability is implemented in a reprogrammable FPGA allowing late tailoring to a specific programme need without hardware redesign.

Applications include

-     Artificial Intelligence
-     Software Defined Radio
-     Image Processing and Compression

-     Visual Navigation & Autonomous Control
-     Payload Computer
-     Manned space, LEO, GEO & Deep space
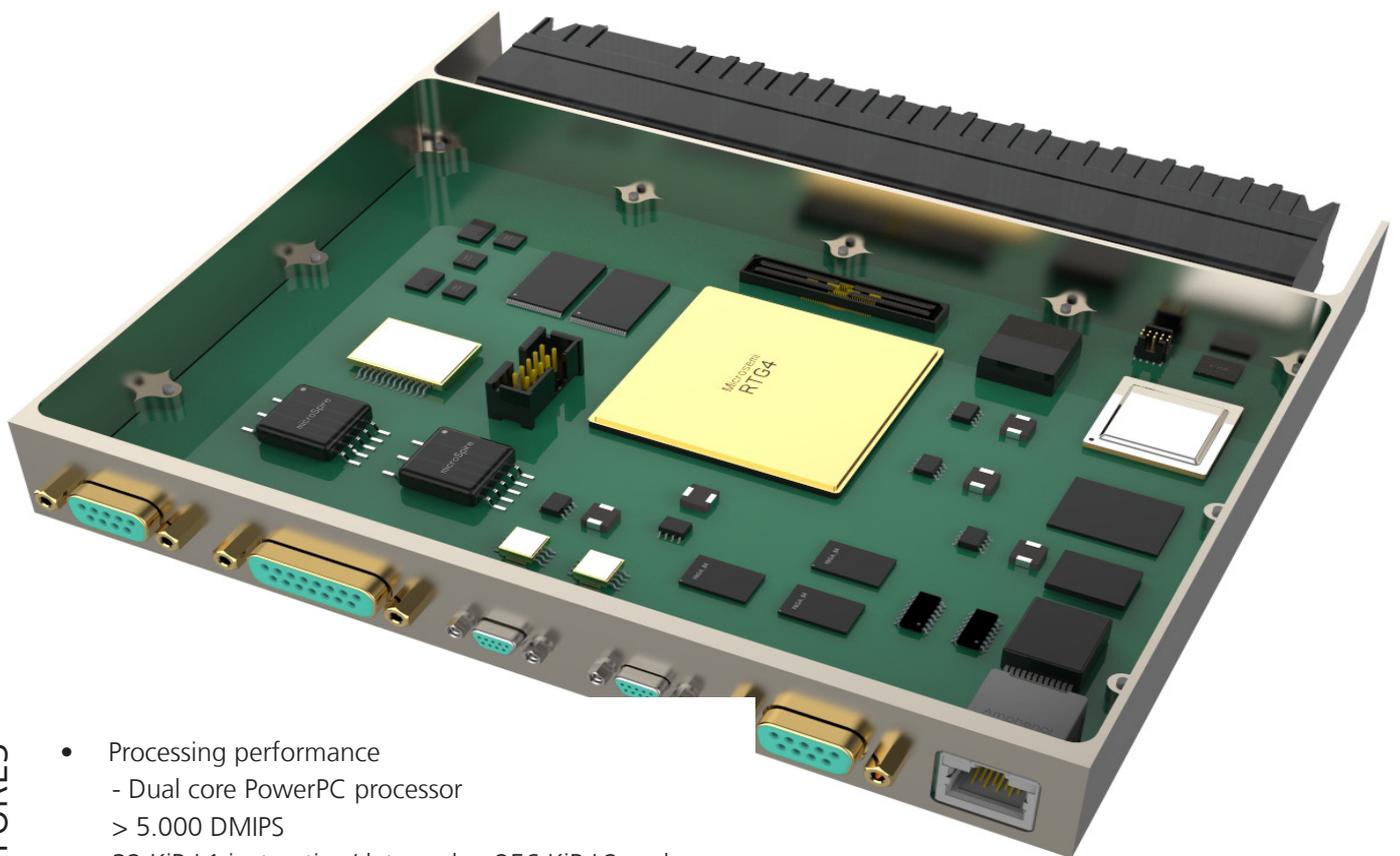
KEY FEATURES

- Processing performance
  - Dual core PowerPC processor
  - \> 5.000 DMIPS
  - 32 KiB L1 instruction/data cache, 256 KiB L2 cache
  - 1/2/4 GiByte DDR3 processing memory with ECC
  - 4/8/16 GiByte Flash memory with ECC
  - 512 MiByte DDR2 FPGA memory with ECC
- Standard Form Factor: 6U SpaceVPX Serial (optional)
- Flexibility
  - Mezzanine board (optional)
  - FPGA with standad IPs and framework for additions
- Mature Software Development Environment
- Qualified 2020; Flight proven in orbit 2021
- Designed for 15 years in GEO orbit.

INTERFACES

Front
- 3 x SpaceWire
- 2 x UART
- 2 x MIL-STD-1553B (optional)
- 2 x CAN
- 16 x GPIO
- Test & debug
  - Gigabit Ethernet
  - UART

Backplane
- 8 x HSSL (SERDES Rx/Tx) @ 3 Gbps
- PCI express
  - 4 Lanes End Point
  - 1 Lane Root Complex
- 10 x SpaceWire
- 2 x I2C
- 6 x SPI
- 2 x UART
- 32 x GPIO
- Lynx cross-strapping
- Power supply

OPTIONS

- Front-panel interface configuration
- Backplane connector
  - VPX ANSI VITA 46
  - VPX ANSI VITA 63.0
  - Compact PCI
  - Compact PCI serial
- Custom module frame
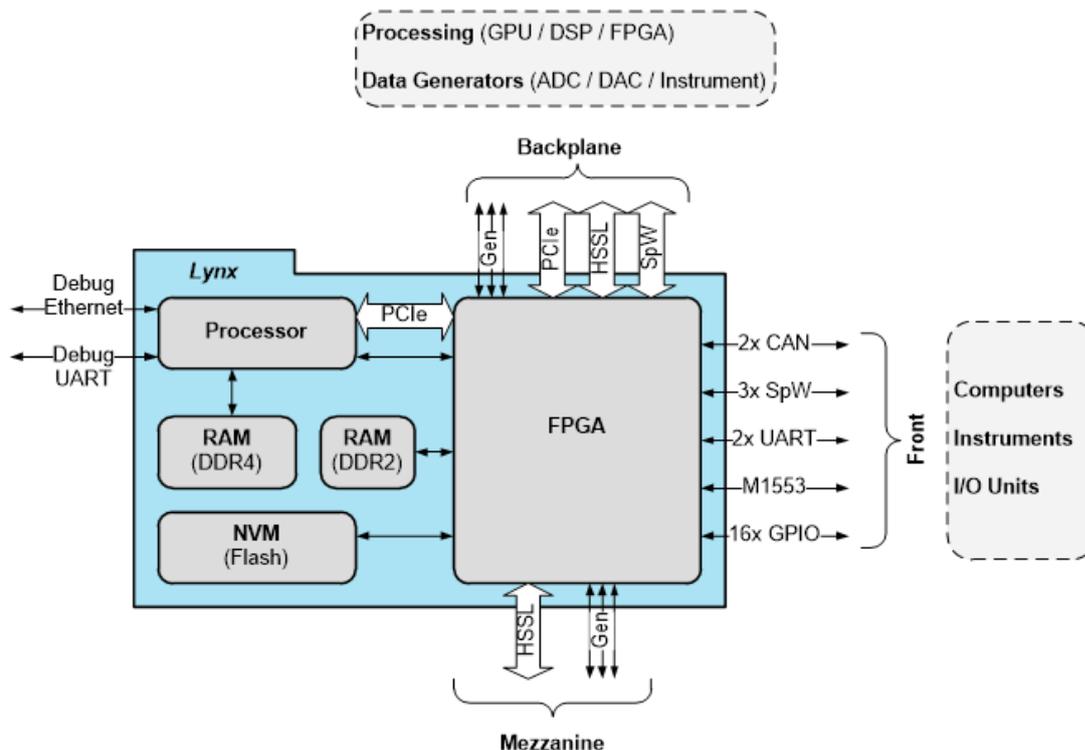- Mezzanine board

SOFTWARE

- Integrated development environment
- Operating system independent boot and driver software
- Cross compiler suite
- Board support packages for operating systems and hypervisors, including VxWorks, PikeOS and Linux
- Advanced software debug tool chain with real-time trace support (option)

BUDGETS

Form factor	6U-160, 5 HP
	234 x 160 x 25.4 mm
Power consumption	10-15 W
Mass	1 kg incl. frame
In-orbit life time	15 years

HERITAGE

>3000 failure free equipment years in orbit
>300 Launcher On-Board Computers

Together ahead. RUAG