

Beyond Gravity: Powerful Lynx computer takes data processing to a new level

The Beyond Gravity Lynx computer for satellites is 250 times more powerful than regular onboard computers. The Lynx computer provides capability to process data already in orbit instead of processing it on earth – saving time, energy, and cost.

Satellites produce more and more data. The ability to send large satellite photos down to earth is becoming a critical bottleneck. Beyond Gravity's Lynx computer solves this problem. "With its unprecedented amount of processing power the Lynx computer is ideal for this kind of in-orbit processing", says Anders Linder, Executive Vice President Division Satellites at Beyond Gravity, a leading space supplier. For instance, the Lynx computer can process all images for suitability and only transmits valid images.

Lynx: a powerful and flexible computer

The Lynx computer is a high-performance single board computer, designed for critical tasks in a harsh radiation environment, with flexible communication, interface, and mass storage capabilities, all in 6U Space VPX form factor. The unprecedented processing capability is provided by the quad core ARM processor delivering more than 30.000 DMIPS, and onboard flash storage, rated for 15 years in low earth orbit and beyond. In addition, Lynx includes a powerful FPGA (field-programmable gate array) for flexibility in communication, interface, and processing capability. The Lynx's computer power and flexibility allow it to perform as both the primary satellite flight computer and/or payload computer solution.

"Lynx opens up world of AI opportunities"

Anders Linder: "We have a computer that perfectly matches the requirements for Artificial Intelligence and Machine Learning in space development programs. Our Lynx computer opens up a world of AI opportunities." To enable a large-scale use of Artificial Intelligence in orbit, Beyond Gravity partners with other companies. "Our flight computer is powerful enough to suit the most computationally demanding space applications," says Anders Linder.

Qualification before summer

Currently, the engineering qualification model of the Lynx computer is being developed at Beyond Gravity's site in Gothenburg, Sweden. It is scheduled to be successfully qualified before summer. Anders Linder: "We are also developing a unit that combines Lynx, power supplies and additional interface boards for a flexible, customer-based solution to reduce customer costs and complexity."

To learn more about the Lynx computer and the whole Beyond Gravity product portfolio, visit: <https://products.beyondgravity.com>

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Image 1: "Our flight computer is powerful enough to suit the most computationally demanding space applications," says Anders Linder. Copyright Beyond Gravity. [Download](#)

Image 2: The Lynx single board computer is designed for a long life in any satellite orbit (e.g. 15 years in geostationary earth orbit) or spacecraft trajectory. Copyright Beyond Gravity. [Download the image](#)

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Beyond Gravity, headquartered in Zurich, Switzerland, is the first startup to combine agility, speed, and innovation with decades of experience and proven quality. Approximately 1'600 employees at 12 locations in six countries (Switzerland, Sweden, Austria, Germany, USA, and Finland) develop and manufacture products for satellites, launch vehicles and the semiconductor industry with the goal of advancing humanity and enabling exploration of the world and beyond. In 2021, the company generated revenues of approximately CHF 319 million. More information at: www.beyondgravity.com.