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HOW THE TRITON-X PLATFORMS WERE DESIGNED FOR "NEWSPACE"

Abstract

NewSpace is not (only) a modern buzzword. It is a change of paradigm in the Space sector re-orienting it definitely to more commercial objectives, mindsets, practices and processes. It is the future of Space!

Born and made in Grand-Duchy of Luxembourg, a small Nation recognised worldwide for its healthy and innovative (also Space -Resources-) economy, Triton-X is LuxSpace's latest platform for NewSpace micro- to mini- LEO satellites, also in small constellations.

The Triton-X platforms, developed in the three mass classes: Light/Medium/Heavy benefit from the largely positive heritage and Lessons Learned from the previous platforms Triton-1 (with 2 satellites launched at this date) and Triton-2 (with 1 satellite launched at this date).

Designed as "multipurpose" standard products, the Triton-X platform(s) are adaptable for various typologies of LEO missions and payloads. Indeed, since its inception the Triton-X design was chosen to be modular and scalable thanks to the recurrent sets of Customer selectable/implementable Triton-X's "Quantas" of onboard resources and/or dependability levels. Most of this flexibility being provided by the central Integrated Avionics Unit (IAU) designed with the latest and most advanced data processing electronic components.

As requested for this IAC-22 Small Satellite Missions Global Technical Session (GTS) the paper will start by describing the specific needs emanating from NewSpace for future Smallsats space systems and the benefits of this paradigm. By detailing our offer, the paper will then present the LuxSpace's Triton-X approach that addresses this need and why/when small satellites like those based on Triton-X platform(s) together with other/complementary space technologies will reach the NewSpace objectives for the benefits of Space and Earth.