

This is how fentISS contributes to build the satellites of one of the major Space-based Internet Service Providers

On December 18th, OneWeb will launch its 4th batch of 36 satellites with XtratuM hypervisor in all of them.



OneWeb logo - OneWeb

Valencia, December 17, 2020

[OneWeb](#) is positioning as one of the main Internet providers from space in the forthcoming years. The company is rapidly moving forward building its satellite network, and it will [launch 36 satellites aboard a Soyuz](#) from the Vostochny spaceport in Siberia, joining the 74 already in orbit. With this constellation planned for 648 satellites in the next few years, OneWeb will provide Internet access in remote areas where cable connection does not reach, offering high speed connections everywhere for everyone.

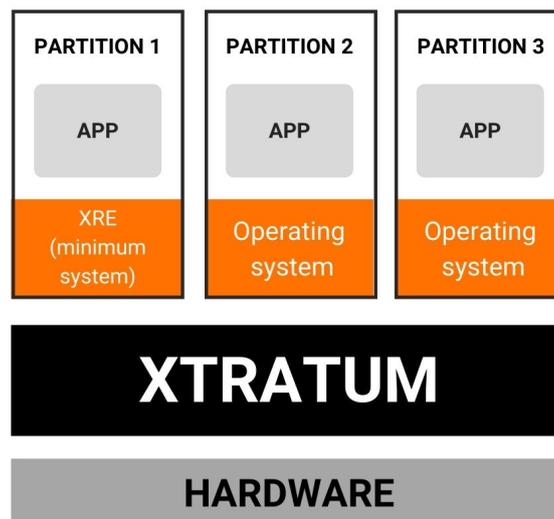
Seems like the “New Space” has come to stay and small satellite constellations like OneWeb have a bright future. However, the need to reduce size, weight and energy consumption in smaller satellites calls for solutions in which a single on-board computer could run different applications without interfering with one another. Hypervisors are the mechanisms guaranteeing the non-interference of the satellite applications with different criticality levels when they run on the same on-board computer.



Preparation of Launch #4 - OneWeb

The satellite constellation currently owned by the UK Government and Bharti Global has trusted on the [XtratuM Hypervisor](#) as the basis for its on-board software. XtratuM, developed by [fentISS](#), a Spanish software company, provides a robust environment for on-board computers to run several real-time operating systems on different partitions and still guaranteeing their temporal and spatial isolation.

XtratuM has shown that it is especially suitable for safety-critical applications in the aerospace market and proof of it are the missions which have selected it as a basis for their on-board computers. Orbiting satellites like [ANGELS](#) or [EyeSat](#) also prevent time and spatial interference through XtratuM. Other missions like [JUICE](#) or the [Martian Moons Exploration](#) have also selected XtratuM for use on-board.



Partitions in XtratuM - fentISS

“OneWeb has a valuable global spectrum and great potential to connect people worldwide. XtratuM is the main result of intense years of research with the [Automatics and Industrial Computing Institute \(ai2\)](#) of the [Technical University of Valencia \(UPV\)](#) and it constitutes a suitable solution for satellite constellations to

build secure, reliable and efficient on-board partitioned systems. We cannot wait for the launches throughout 2021 and 2022!” says Paco Gómez, CEO of fentISS.

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