



# PRESS RELEASE

## **Launched yesterday, the Cyclone Global Navigation Satellite System (CYGNSS) NASA mission will allow a better understanding of hurricanes formation.**

**BUC, France, December 16<sup>th</sup>, 2016** – Lead by the University of Michigan, CYGNSS is a mission in NASA's Earth Venture-class series (part of Earth System Science Pathfinder, ESSP) that includes rapidly developed and low-cost missions. CYGNSS should allow to get an extreme weather better understanding and prediction, while also improve hurricanes intensity forecasting by studying their genesis and intensification.

Built by SwRI (Southwest Research Institute), a constellation of eight micro-satellites, carried to orbit on a single launch vehicle, is used to measure wind speed over Earth's oceans. Once in orbit, the satellites will receive direct and reflected signals diffused by GPS satellites already orbiting the Earth.

CYGNSS' main science goal is to better understand the relationship between ocean surface properties, moist atmospheric thermodynamics, radiation and convective dynamics in the inner core of a Tropical Cyclone to determine how it forms.

3D PLUS is proud to announce that two types of its highly reliable and radiation tolerant memory modules are involved in the NASA hurricane prediction project: 32 Gb NAND Flash Memory and 32 Mb PROM Memory.

The 32 Mb PROM has a long and large Flight Heritage, it allows a higher memory density as an all-in-one module as well as 20 years Data retention. This is why it is used as an extremely secure configuration memory for storing the configuration bit stream of the high performance SRAM based FPGAs.

The 32 Gb NAND Flash, which provides the highest density in space industry, offers a 10 years guaranteed data retention. Therefore, it is used to store the high amount of data generated by the science payload of this application. Both are highly miniaturized and deliver high performance and radiation tolerance to meet the space CYGNSS missions' requirements.

### **About 3D PLUS:**

3D PLUS is a French SME, world leader in the design and manufacturing of high-performance and high reliability components miniaturized with its unique 3D vertical interconnect technology.

With more than 100,000 modules into space early 2016 and a production of about 20,000 space qualified modules per year in its facility nearby Paris, 3D PLUS provides all stakeholders of the global space industry for over 20 years for telecommunications applications, Earth observation, navigation, launchers and human spaceflight, science missions, small satellites and constellations.