

Thales delivers its newest generation of cryocoolers for the TRISHNA satellite mission dedicated to the monitoring of climate change

- Thales and Airbus Defence and Space have signed a contract for the delivery of cryocoolers for the TRISHNA (Thermal infraRed Imaging Satellite for High-resolution Natural resource Assessment) satellite.
- This is the first contract for the new LPT6510 cryocooler developed by Thales and Absolut system.
- Thales demonstrates its ability to meet the demand for affordable high-performance cryocooling in space instruments.



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Paris, 21 December – Thales has recently signed a contract with Airbus Defence and Space for the delivery of two cryocoolers dedicated to the TRISHNA (Thermal infraRed Imaging Satellite for High-resolution Natural resource Assessment) satellite. Thales Cryogenics, European leader in cryogenic technology and supplier of cryogenic coolers, demonstrates its ability to meet the demand for affordable high-performance cryocooling in space instruments.

The TRISHNA mission is a cooperation between the French (CNES) and Indian (ISRO) space agencies and includes a Thermal Infrared Imager (TIR instrument) to enhance our understanding of the Earth's water cycle. This mission will help to improve the management of the Earth's water resources and better understand the impact of climate change. The launch is expected by the end of 2024. TRISHNA will use ground-breaking technology in regards to resolution and refresh rate. For the first time, a mission will image the Earth every three days in the thermal infrared range, at 57m resolution, measuring a wide range of surfaces temperature, from approx. -20°C to +80°C, with high radiometric precision (0.2°C).

This is the first contract for the new LPT6510 cryocooler, the design of which has been self-funded by Thales Cryogenics and our partner Absolut System, a cryogenic technology company.

The LPT6510 cryocooler from Thales Cryogenics will be used to cool the infrared detector in the TRISHNA TIR instrument to a very low temperature to optimise its performance. The LPT6510 is a cost effective compact cryocooler targeting a wide range of applications from 60 to 150K with one design only. With the LPT6510 cryocooler, Thales meets the demand for high-performance cryocooling for space instruments, in alignment with Airbus' strategy for affordable high-performance infrared instruments.

"We are proud to take part in this ambitious project with Airbus Defence and Space dedicated to the monitoring of climate change. Thales is again proving its capability to provide high performing and cost-effective cryocoolers for a demanding market." **Hein Druncks, Head of Cryogenics, Thales.**

About Thales

Thales (Euronext Paris: HO) is a global high technology leader investing in digital and "deep tech" innovations – connectivity, big data, artificial intelligence, cybersecurity and quantum technology – to build a future we can all trust, which is vital to the development of our societies. The company provides solutions, services and products that help its customers – businesses, organisations and states – in the defence, aeronautics, space, transportation and digital identity and security markets to fulfil their critical missions, by placing humans at the heart of the decision-making process.

With 83,000 employees in 68 countries, Thales generated sales of €19 billion in 2019 (on a basis including Gemalto over 12 months).

Thales Cryogenics is a leading developer and manufacturer of miniature single-stage cryogenic coolers and cooler drive electronics. It has several decades of experience in delivering cryogenic technology for defence, space and civil markets. Its offices and manufacturing facilities are located in Eindhoven, the Netherlands. Thales Cryogenics employs state-of-the-art design software and can call on extensive production, measurement and test facilities.

PRESS CONTACTS

Thales, Land and Defence Press Officer

Camille Heck
+33 (0)1 57 77 91 11
camille.heck@thalesgroup.com

Thales, Netherlands

Karen Dikken
+31 (0)6 83 64 76 85
Karen.dikken@nl.thalesgroup.com

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