



## **Orbex Unveils Prime Rocket at New Facility in Scotland**

*Reveals World's Largest 3-D Printed Rocket Engine and Confirms First Satellites to be Launched from Scotland*

**Forres, UK, February 7, 2019** – Orbex has publicly unveiled its Prime rocket for the first time at the opening of its new headquarters and rocket design facility in Forres in the Scottish Highlands. Designed to deliver small satellites into Earth's orbit, the rocket was unveiled at an opening ceremony attended by VIPs from the UK and European space community as well as local community stakeholders.

The completed engineering prototype of the Stage 2 rocket (the stage that will transit into orbital flight after launch) is made from a specially-formulated lightweight carbon fibre and aluminium composite and includes the world's largest 3-D printed rocket engine. Orbex Prime is a completely re-thought and re-engineered two-stage rocket, designed by Orbex aerospace engineers with professional experience from organisations including NASA, ESA and Ariane, as well as other commercial spaceflight companies. Thanks to its novel architecture, Prime launchers are up to 30% lighter and 20% more efficient than any other vehicle in the small launcher category, packing more power per cubic litre than many heavy launchers.

Seen for the first time, the 3-D printed rocket engine was uniquely manufactured in a single piece without joins in partnership with additive manufacturer SLM Solutions. Given the extreme temperature and pressure fluctuations involved in space flight, this gives the engine an advantage over other rocket engines, which can suffer from weaknesses associated with joining and welding. It is also the first commercial rocket engine designed to work with bio-propane, a clean-burning, renewable fuel source that cuts carbon emissions by 90% compared to fossil hydrocarbon fuels, supplied by Orbex's new exclusive BioLPG fuel partner Calor.

Orbex first came into the public eye in July of 2018, when the UK Space Agency announced that Orbex had been chosen to launch from the proposed spaceport in Sutherland in the Scottish Highlands, as part of the main consortium. At that time, the company announced that it had already won £30 million (\$40 million) in private and public backing for the project, making it Europe's best-funded private launch company, straight out of stealth mode.

The company revealed the identities of more customers that would be among the first to launch their satellites from the Sutherland spaceport. On Orbex Prime's maiden flight from Scotland in 2021, the rocket will carry an experimental payload from UK-based Surrey Satellite Technology Ltd. (SSTL), the world's leading manufacturer of small satellites. This launch will represent an important first for the UK commercial space industry, demonstrating the UK's end-to-end launch capability with a UK rocket launching a UK satellite from a UK spaceport.

Orbex also announced that Swiss-based Astrocast SA, has selected Orbex to launch multiple nanosatellites for the development of a planet-wide Internet of Things (IoT) network. Astrocast's satellite-based IoT network will eventually include 64 nanosatellites, spread across eight strata above the Earth to deliver IoT connectivity across the planet, including regions currently considered remote or inaccessible. One of the leading companies in the European

space sector and strategic investor in Orbex, Elecnor Deimos, has also confirmed that it has contracted with Orbex for up to twenty satellite launches.

The new Headquarters building at Forres is a 2,000 square metre facility. It will combine a rocket design and integration facility, an operations centre as well as executive offices. It is expected that the facility will help bring over 130 jobs to the Scottish Highlands region, with an intense recruitment drive for the company already underway.

Business Secretary Greg Clark said: “The plans for a spaceport in Sutherland have already attracted significant investment, and Orbex’s rocket design facility will bring more than 100 new jobs to the Scottish Highlands region – this is our modern Industrial Strategy in action. The space sector is a great British success story and we are working closely with industry to ensure we thrive in the commercial space age. New innovations, capabilities and expertise are driving significant growth, with the sector generating close to £15 billion in income each year.”

Graham Turnock, Chief Executive, UK Space Agency said: “Orbex’s new rocket design facility brings Britain one step closer to having its own domestic commercial launch capability and firmly positions the UK as Europe’s frontrunner for those looking to Earth’s orbit and beyond for new opportunities. The new facility and future spaceport operations will help unlock vast economic and societal benefits not just in Scotland but right across the UK.”

“Since the announcement in July 2018 that we had been chosen to launch from the Sutherland spaceport, Orbex has been on an incredible journey, largely behind-the scenes,” said Chris Larmour, Orbex CEO. “That is changing today, as we publicly reveal the company’s technical and commercial momentum. Not only do we have a full engineering prototype of the complete Stage 2 of the Prime rocket, but also a growing roster of customers hoping to be among the first to launch satellites from Scotland.”

Larmour continued: “Today Orbex has taken some big strides forward, creating something unique in Europe – a well-funded, private micro-launch solution supported by excellent facilities, strong industrial partners and an expanding line-up of commercial customers. There are only a handful of private launcher companies globally that have practical experience in the design and production of micro-launch vehicles, and even fewer that have combined those skills with sufficient funding and the commercial contracts to execute on their plans. We are looking forward to the next steps in our development from our new home in Scotland.”

### **Notes to Editors**

Royalty-free images and video are available to the media using this link:  
[www.orbex.space/orbexreveals](http://www.orbex.space/orbexreveals).

### **About Orbex**

Orbex is a UK-based spaceflight company, with subsidiaries and production facilities in Denmark and Germany. The company is constructing a completely re-thought and re-designed orbital launch vehicle, called Prime, to deliver small satellites into Earth’s orbit. Prime launchers are up to 30% lighter and 20% more efficient than any other vehicle in the small launcher category, packing more power per cubic litre than many heavy launchers. Orbex staff

members have professional backgrounds with NASA, ESA and several other commercial spaceflight organisations. The company is funded by two of Europe's largest venture capital funds, Sunstone Technology Ventures and the High-Tech Gründerfonds, as well as strategic investor Elecnor Deimos Space, the UK Space Agency (UKSA), the European Space Agency (ESA) and the European Commission Horizon 2020 programme.

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