



Together
ahead. **RUAG**

RUAG Space and SWISSto12 partner to supply advanced active antenna solutions for high throughput satellites

The two companies partner to supply active phased array antenna products which are the backbone for future high throughput satellites from low-earth to geostationary orbit

Paris, 14 September 2018 - RUAG Space, the leading supplier to the European and US space industry, and **SWISSto12**, the leading aerospace supplier of novel antenna solutions based on additive manufacturing, have signed a partnership agreement at the World Satellite Business Week in Paris, France. Both partners are committed to supply future satellites missions, including constellations of telecommunication satellites with crucial antenna solutions. The collaboration will focus on the development, design and manufacturing of phased array antenna products that leverage the unique and complimentary offerings of both companies.

Critical sub-systems for next generation telecommunication satellites

Active phased array antennas are a critical element of advanced telecommunication satellites, also known as high throughput satellites. Their increased performance is provided through electronically steered multiple beams (allowing for an optimal adjustable allocation of the satellite bandwidth to multiple users). This functionality requires a new type of antenna to provide the necessary earth coverage. Instead of the conventional fixed beam antennas, the active phased array antennas allow for wide area coverage with multiple simultaneous beams. These active antennas have the ability to change coverage in orbit with beam scanning capabilities within microseconds.

High performance at minimal cost and lead time

As part of this Partnership, RUAG will contribute their expertise in active microwave modules, which the company develops and manufactures in the United States and Europe. SWISSto12, with their patented 3D printing technology, will provide innovative antenna system designs along with a manufacturing solution to 3D print the antenna in one highly integrated part combining, RF, mechanical and thermal functions. This approach allows for a high performance – at minimal cost and lead time for manufacturing and integration.

Peter Guggenbach, CEO of RUAG Space, said: “We will offer upcoming constellation programs an antenna solution that is state-of-art, both in performance and price. We are excited to partner with SWISSto12 - and incubate this progress in our industry.”

Emile de Rijk, CEO SWISSto12, adds: “SWISSto12 is very happy to collaborate with RUAG Space on bringing this disruptive active antenna product to the market. Both companies combining their expertise to offer a joint integrated product solution shows a perfect example of valuable collaboration in the satellite manufacturing value chain.”

The first engineering model of the antenna for 20 GHz applications will be built this year.



Photo: RUAG Space and SWISStO12 partner to supply active phased array antenna products – the backbone for satellites in future low-earth orbit constellations. Yesterday Peter Guggenbach, CEO, RUAG Space, and Emile de Rijk, CEO SWISStO12, signed the agreement. Copyright: © RUAG Space.

ABOUT RUAG SPACE

RUAG Space is the leading supplier to the space industry in Europe, with a growing presence in the United States. With around 1,300 staff across six countries, it develops and manufactures products for satellites and launch vehicles – playing a key role both in the institutional and commercial space market. RUAG Space is a division of the international technology Group RUAG. RUAG develops and markets internationally sought-after technology applications in the fields of aerospace and defense for use on land, in the air and in space. 56 percent of RUAG's products and services are destined for the civil market and 44% for the military market. The Group is headquartered in Bern (Switzerland). It has production sites in Switzerland and in 15 other countries in Europe, the United States and Asia-Pacific. RUAG generates sales of approximately CHF 1.96 billion and has over 9,200 employees – 400 of whom are trainees. Visit www.ruag.com.



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ABOUT SWISSto12

SWISSto12 SA is an innovative technology company that spun off from the Swiss Federal Institute of Technology in Lausanne (Switzerland). The company pioneers the development and industrial supply of Radio-Frequency (RF) antenna, waveguide and filter solutions based on Additive Manufacturing (also known as 3D printing). The company's current focus is on the aerospace market where the performance, lead-time and weight advantages of its technology are paramount.

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