



SPACE SERVICES  
Space is in everybody's life

DA  
GROUP



# Sustainable solutions to challenging space technology problems

## GO FURTHER WITH DA-GROUP IN SPACE COLLABORATION

### More accurate and reliable data from space

Space is present in our daily lives now and in the future, even if we don't always necessarily realize it. How easy it is to find your way around a foreign city with the help of satellite navigation. Among other things, this is made possible by satellite positioning systems, such as Galileo in Europe and GPS in the United States.

Global warming, increasing frequency of extreme weather conditions, natural disasters, and scarcity of clean food and water are just some of the challenges that space-based information is helping to solve. We need more reliable and accurate weather data, global network connections, uninterrupted data transfer and accurate 3D imagery.



### Our services cover the whole supply chain, from R&D, product development, manufacturing and testing to lifecycle management

DA-Group has been working with the European Space Agency (ESA) and global satellite manufacturers for several decades. We deliver sustainable solutions to challenging space technology problems based on our vast experience in radars, radiometers and space situational awareness. Our services cover the whole supply chain, from R&D, product development, manufacturing and testing to lifecycle management. Space and satellite technology programs are long-term projects that create new solutions and products through international cooperation and continuous knowledge development. The exploitation of research results in product development and later in finished products requires both deep knowledge and strong project skills.

### Professional specialists on several space projects

DA-Group's staff has become professional project specialists thanks to the learning and working on several space projects. Over the last few years, DA-Group has delivered key systems and subsystems in flying satellites, such as Sentinel-1 A, B, C and D as well as MetOp-SG 89 GHz receiver. The combined expertise and the overall mastering of services from prototyping to equipment manufacturing support successful deliveries from start to finish on schedule.

## SOLUTIONS FOR SATELLITES

### Radar Systems

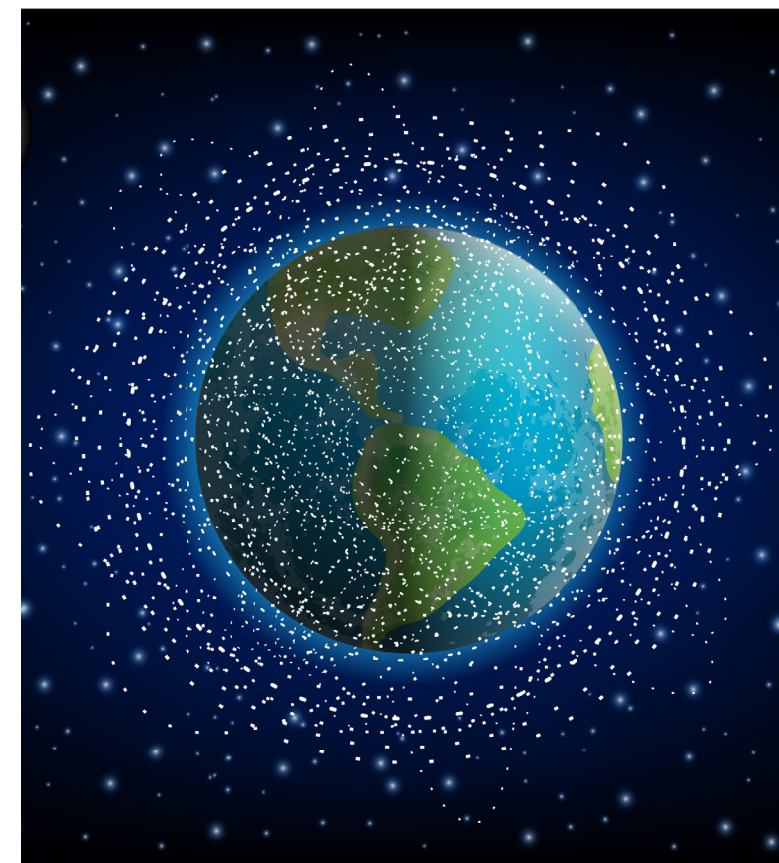
High-performance system components and equipment are used both in satellites launched into space and in applications on ground. DA-Group experts have developed microwave and RF systems for space projects, including radar altimeters, SAR assemblies, radiometer receivers and calibration subsystems, microwave transmitters and receivers.

### Radiometers

DA-Group designs & develops, manufactures and delivers radiometers and radiometer calibration systems. The calibration equipment electrically generates the desired thermal radiation with high accuracy, which is used as a reference for measurements. The radiometer calibration system we have developed ensures even more accurate and reliable measurement data.

### RF Solutions

As an RF technology expert, DA-Group designs and manufactures solutions for demanding environments utilizing radio wave, microwave and millimetre wave technologies. We have been working in the field of RF solutions since the 1970s. Our experience covers a wide range of applications.



## SITUATIONAL AWARENESS

### Building a snapshot of space

For military and defence applications utilizing space, our expertise covers the development, delivery and maintenance of systems and equipment. In the field of situational awareness solutions, DA-Group is the first Finnish company to be authorized to manufacture Galileo PRS receivers.

### National security

The deliveries and products to our customers must cover security, performance, and reliability criteria in all circumstances. Our operations fulfil the criteria for national security (Katakri 2015) and we have dedicated and audited security-classified spaces. DA-Group also is authorized to work in international programs, which require Facility Security Clearance (FSC).



## **TURNING TECHNICAL PROBLEMS INTO SIMPLE EVERYDAY SOLUTIONS**

DA-Group is a provider of advanced electronics and high technology solutions and products. We serve industrial, defence and space industry customers on a global scale. We are experts in RF, microwave and millimeter wave engineering, embedded software solutions, FPGA designs, electronics and mechanics.

DA-Group offers a complete range of services from research, product development and design, testing and manufacturing to product life-cycle management. We deliver systems, subsystems and equipment, including all phases of development design, manufacturing and testing, for both spaceflight and ground based applications, in-house.

Our operations are based on a customer-oriented approach and proactive problem solving. We turn challenging technical problems into functional solutions and products.

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