



Press release

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ÅAC Microtec receives contract to develop advanced miniaturized motion controller for space rovers and robots

The European Space Agency ESA has awarded Uppsala-based ÅAC Microtec the contract to develop an advanced miniaturized motion controller for future robotic exploration missions to Mars and the Moon.

The contract for the Miniaturized Motion Controller for Robotic Exploration (MCC-X) is worth EUR 1,950,000. The project will be started immediately and run to the end of 2019.



The environments at Mars and the Moon are extreme. The fact that temperatures constantly shift between very hot and extremely cold pose special problems related to the expansion and contraction of materials. Different materials expand at different rates, which causes wear at the joints between them. To avoid this you may have to use energy to warm the components in order to maintain a steady temperature, which poses problems especially during long and cold Mars and Lunar nights. As ÅAC Microtec has expertise and experience of miniature electronic components and systems for spacecraft operating in the most extreme environments, the company is well positioned to meet these challenges.

“ÅAC Microtec’s technology makes it possible to construct very homogeneous circuits using only a few materials with similar characteristics, thereby minimizing the need for spending energy on

temperature control. ÅAC Microtec's miniaturization technique is another key factor in developing a motion controller suitable for our future Mars and lunar missions," says Gianfranco Visentin, Head of ESA's Automation & Robotics Section.

"ÅAC Microtec is a leading supplier of miniature electronic components and systems for spacecraft operating in the most extreme environments and this project adds further to the impressive list of solutions that we develop for our global customers." says Mikael Andersson, CEO at ÅAC Microtec.



The MCC-X project will also involve the Swiss Center for Electronics and Microtechnology (CSEM) and Maxon Motor, which have both been subcontracted by ÅAC Microtec. The goal is to develop a miniaturized motion controller with a modular approach in terms of the subsystems, e.g. power electronics subsystem for driving the motors, on-board computing system for implementing the control algorithms, etc. This will allow the customization of the design according to various application needs.

"We are very happy to get this contract from ESA. This once again shows the confidence that ESA has in our miniaturization technology and we are confident that future interplanetary missions will benefit from the results of the MCC-X project", says Johan Bäckström, Vice President Sales & Marketing at ÅAC Microtec.

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About ÅAC Microtec:

ÅAC Microtec globally provides high value space solutions and systems for commercial and governmental customers through its partner network and offices in Uppsala, Sweden, and Moffett

Field, CA, USA. AAC has a unique competence and capacity to develop and manufacture robust, miniaturized electronics systems. The company is today a core development partner in leading programs to launch new, smaller satellites for the new space market. Based on its advanced position in these programs, AAC's ambition is to further strengthen its position as a strategic supplier for the growing aerospace industry.

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