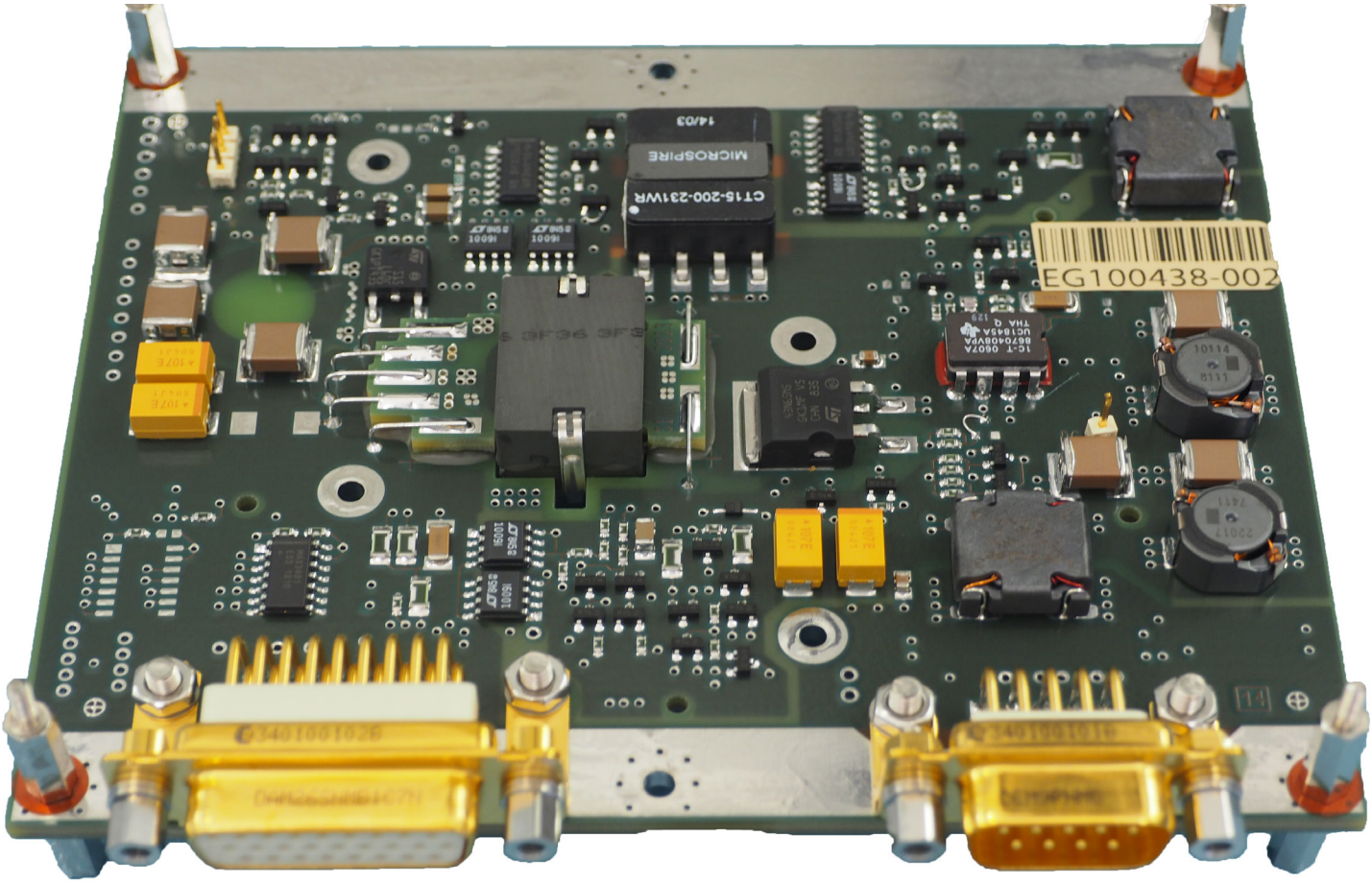
New Space Low Power DC/DC Converter Module

This DC/DC converter is RUAG's new-space power converter module in the 10W regime offering high performance and maximum reliability at minimum costs. The converter topology and control electronics have been carefully designed in order to ensure maximum immunity against radiation effects, while implementing costeffective automotive-grade components for almost all parts. The converter features galvanic isolation of the power bus interface and a true closed loop control of the output voltage. The first flight module has been acceptance tested and shipped to the customer.



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Together ahead. RUAG

KEY FEATURES

- Galvanic isolated primary power bus
- Power bus common mode and differential mode filter
- True closed loop control of the main output without opto-couplers
- Maximum SEE-immunity by design
- Overvoltage, short circuit and input under-voltage protection
- Optional auxiliary supplies
- Optional high-level on/off command interface

INTERFACES

- Unregulated 22V-38V input voltage
- Main output 5V, 0.5 to 2.5A
- — efficiency up to 80%
- — max fault output voltage <6.0V
- — optional 3.3V to 12V linear regulated auxiliary output
- — optional on/off command compliant to ECSS HV-HPC
- — operating PCB temperature -25°C to +85°C
- — Size: 120x100x20 mm incl. D-Sub connectors

HERITAGE

The DC/DC converter will be part of an experimental RUAG payload in the frame of the STRIVING Maiden Mission within the ESA ARTES initiative PIONEER.
The goal for RUAG in the STRIVING Mission is to launch a payload that can be used successfully in the areas.
— Radio Occultation
— GNSS Receivers
— On Board Computers and Electronics

The DC/DC converter is an enabling item for stand-alone COTS based GNSS receivers or other COTS based space and launcher applications.