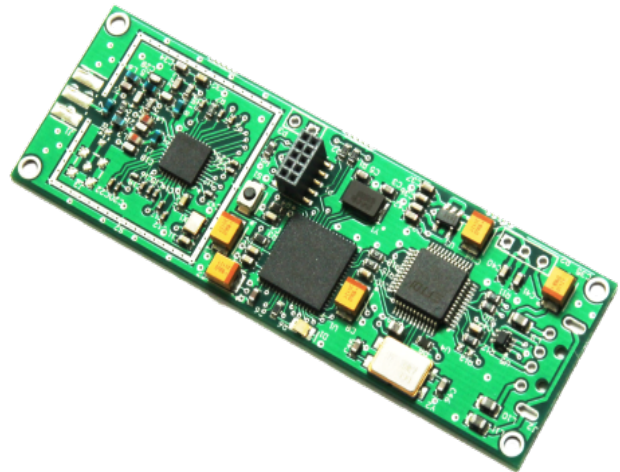




RADIO – AEROSPACE INNOVATIVE TOOL ONBOARD RADIO

GAUSS has designed a UHF transceiver – with COTS components – for nano and microsatellites, benefiting from the experience gained on orbit during several missions. This radio has as key points reliability and simplicity and it is designed to be easy to integrate on a satellite with the minimum effort. To smooth the testing during the development and the integration of the satellite, it has been created a specific “GAUSS Ground Dongle” with the purpose of easing the communication with the satellite from any environment. Moreover, test ground equipment, software configuration and libraries for its use with the ABACUS OBC are included.



Radio UHF

Our state-of-the-art radio has an output power of 36dBm and speeds from 1200bps to 200kbps. As a result of its dimensions two radios can be stacked in the same PC104 for redundancy purposes.

In particular, GAUSS radio features:

- Up to 4w output power
- Data rates from 0 to 200kbps
- Very low power consumption during reception
- Various modulation formats
- It supports X.25 and FEC protocols
- It can be used with I2C, UART and CAN bus
- All configurations can be updated once in orbit
- Its firmware can be upgraded once in orbit without using any other subsystem
- Two radios can be stacked on the same board

The UHF GAUSS Radio will be flying on the next Italian satellite that will be launched in 2017. It will have the role of main link for Telemetry and Command with the Ground Station, while a S-Band GAUSS transmitter will be used for the transmission of payload data