



GAUSS Radio UHF 5W



Description

The **High Power** GAUSS Radio UHF 5W has been designed keeping in mind its high output power and low mass and envelope.

This radio is able to output up to 5W of power with a 45% efficiency.

The uplink and downlink are totally independent, meaning that they can be configured with different frequencies, modulations and protocols.

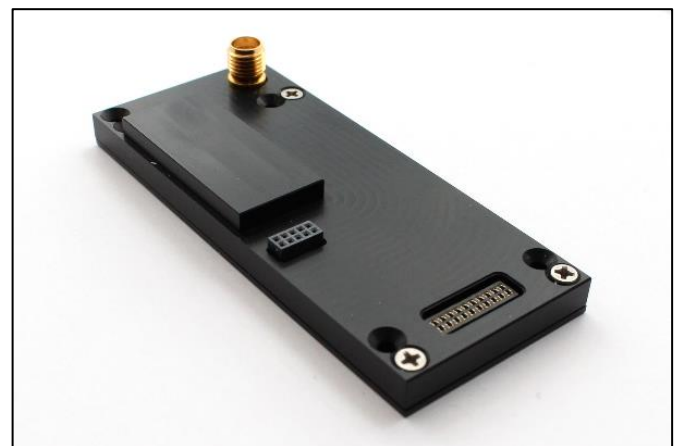
The radio can be reconfigured via software, changing dynamically also the output power.

Thanks to its dimensions, two radios can be stacked on the same PCB/104 using them in parallel or for redundancy.

Together with the radio, an adapter board for testing and a computer software interface are included.

Primary Features

- Up to 37dBm of output power;
- 40% to 50% efficiency;
- Powered by a 3.3V for the logic and 7 to 12V for the amplifier;
- UHF frequency band for TT&C;
- AX.25 protocol supported;
- FEC Viterbi k4 supported;
- Integrated TNC, radio can be interfaced using KISS;
- Transparent mode supported (radio behaves like the analog fronted and the user implements its own protocols);
- Data-rate: 300bps to 100kbps;
- Sensitivity: -122dBm @1.2kbps, -119dBm @9.6kbps, -109dBm @50kbps;
- Configurable autonomous beacon;
- GPIOs available that can be commanded from ground;
- Configurable output power and frequencies in orbit;
- Firmware can be updated while in orbit;
- I2C, UART, SPI and CAN-bus interface support;
- FSK/MSK/GFSK/GMSK modulations;





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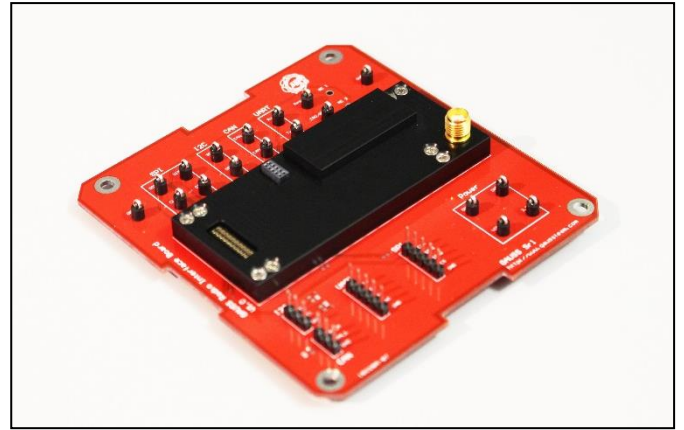
Group of Astrodynamics for the Use of Space Systems

- Off the shelf industrial grade / automotive components;
- Operating temperature range -40°C to $+110^{\circ}\text{C}$;
- Kits for PC/104 CubeSat form factor compatibility;
- Full Compatibility with USB Mini Ground Dongle;
- Radio Self protects itself when temperatures are beyond specification;
- SMA and MCX connectors available.

Features on Request

- FEC Viterbi k7 & Reed-Solomon;
- Speeds up to 250kbps (with 4GFSK);
- PCB/104 to stack two radios in parallel;
- SDR compatible software modules.

Radio with the Test board



Two radios stacked on the same PCB/104

