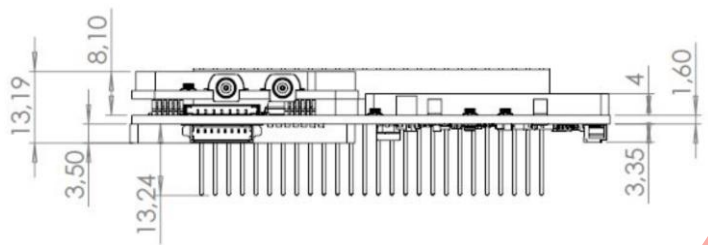
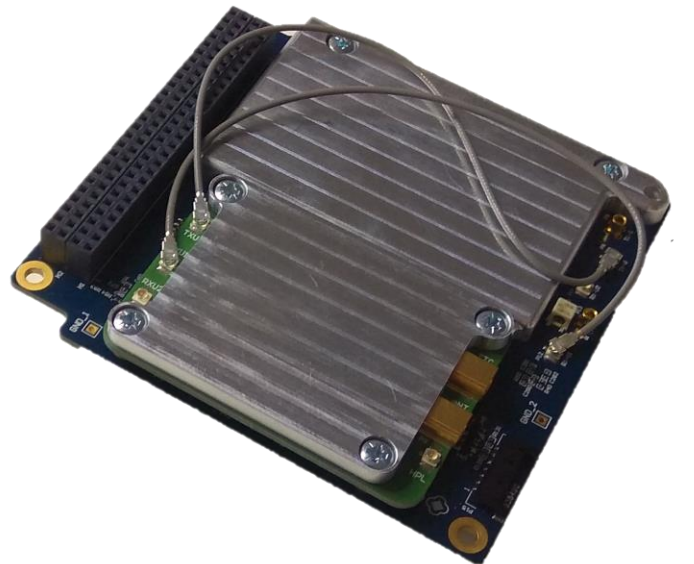


GENERAL DESCRIPTION

TOTEM is a high performance SDR platform designed for nanosatellites which includes a UHF front end. **TOTEM-Motherboard** is the control unit and the RF transceiver while **TOTEM-UHF-Frontend** is an external UHF front end piggyback board. An embedded Linux and a wide frequency range transceiver allow the user to fully cover most used nanosatellite frequency bands and quickly deploy multiple SDR applications.

MAIN FEATURES

- SDR + UHF front end platform
 - 5 W @ 30 dBm in 437 MHz
- SDR tunnable from 70 MHz to 6 GHz
- UHF front end as a piggyback board
 - Unregulated voltage supply from EPS and 3V3
 - Multiple GPIOs and DACs available
- Embedded Linux
- Multiple interfaces : CAN, UART, Ethernet
- PC/104 standard
- Physical properties
 - Mass : 131 g (shieldings included)
 - Dimensions : 89.3 mm x 93.3 x 13.9 mm
- Power consumption
 - ~ 5 W @ 30 dBm output power
 - < 2 W in RX mode
 - 1.36 W with front end OFF

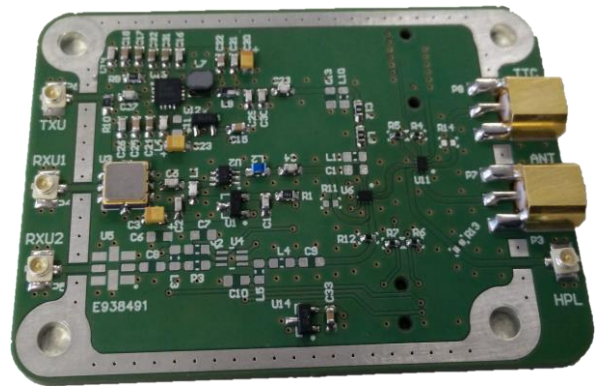


GENERAL DESCRIPTION

TOTEM-Motherboard is based on a Xilinx **Zynq-7000 SoC** and a **wide frequency range** RF transceiver. Any custom external RF front end can be easily attached as a piggyback board through the FSI connectors interface.



TOTEM-UHF-Frontend is a **UHF front end piggyback board**, with maximum output power of 30 dBm. It also behaves as an **antenna switch**, allowing you to share the UHF antenna with up to 2 more devices.



If you want **any other front end** (S-Band or L-Band) or a **third party application**, it will be installed ready to use.

MAIN FEATURES

- Wideband transceiver
 - 70 MHz - 6 GHz
 - Up to 56 MHz bandwidth
 - 2 x TX and 3 x RX channels
- Multiple Interface
 - CAN, Ethernet, UART, JTAG, I2C
- Physical properties
 - Dimensions : 89.3 mm x 93.3 mm
 - Mass : < 58 g
- Power consumption
 - ~ 2.1 W @ 7 dBm output power
- Zynq-7000 Soc
- 2x 4Gb DDR3L
- 8 Gb NAND Flash
- 4 Mb MRAM (SPI controlled)
- Front end as piggyback
- 1 x TX and 1 x RX
- Antenna switch up to 2 additional devices
- Power consumption
 - <3 W @ 30 dBm power output
 - ~ 160 mW in RX mode
- High efficiency
- Two compatible functionalities :
 - UHF front end
 - Antenna switch

