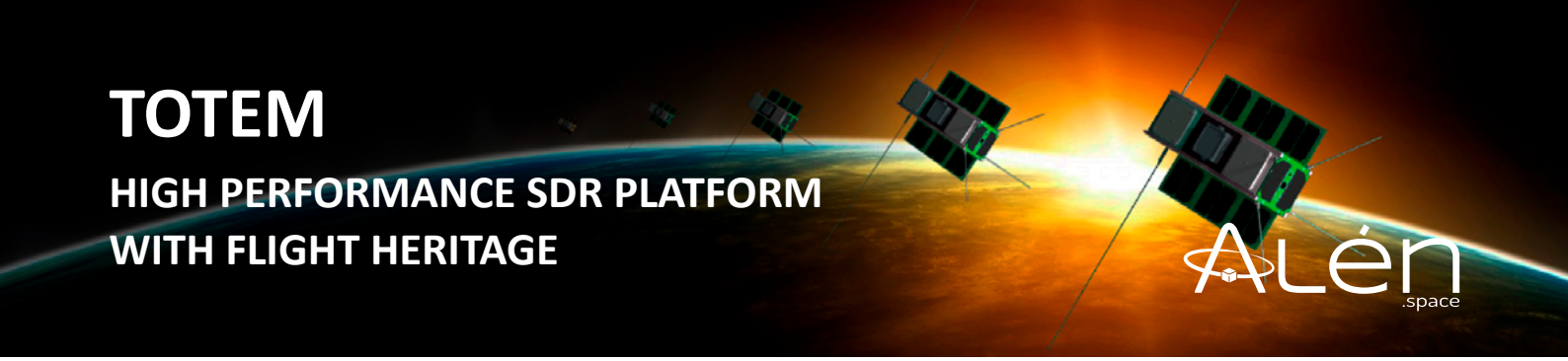
TOTEM

HIGH PERFORMANCE SDR PLATFORM WITH FLIGHT HERITAGE



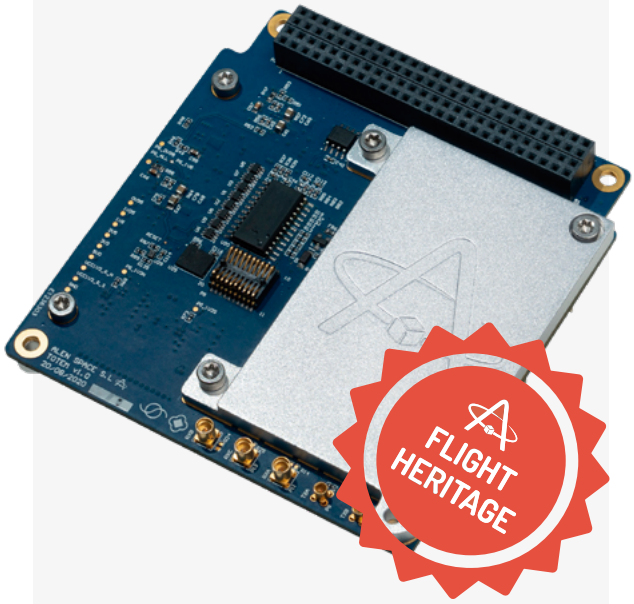
TOTEM is a flight proven high performance SDR platform designed for nanosatellites. A SoC with an embedded Linux and programmable logic plus a wide frequency range transceiver allow TOTEM to operate in the most used nanosatellite frequency bands.
Its **in-orbit reconfigurability** makes it very convenient for any communication nanosatellite.

Main Features

- PC/ 104 form factor
- Zynq-7000 SoC
- Wideband transceiver
  - **70 MHz - 6 GHz**
  - Up to 56 MHz bandwidth
  - 2 x TX and 3 x RX channels
- **1 GB DDR3L** (512 MB with ECC)
- **1GB NAND Flash**
- 4 Mb MRAM
- **Multiple Interfaces**
  - CAN, Ethernet, UART, JTAG, I2C
- Mass: < 130g
- 5V power supply
- Power consumption[1]
  - 2.65W in TX mode[2]
  - 2.25W in RX mode
  - 1.4W in stand - by mode
- **Fronted interface as piggyback board**

[1] Consumptions depend on application.
[2] 7dB m output ,BW = 56 MHz and 30 MSPS

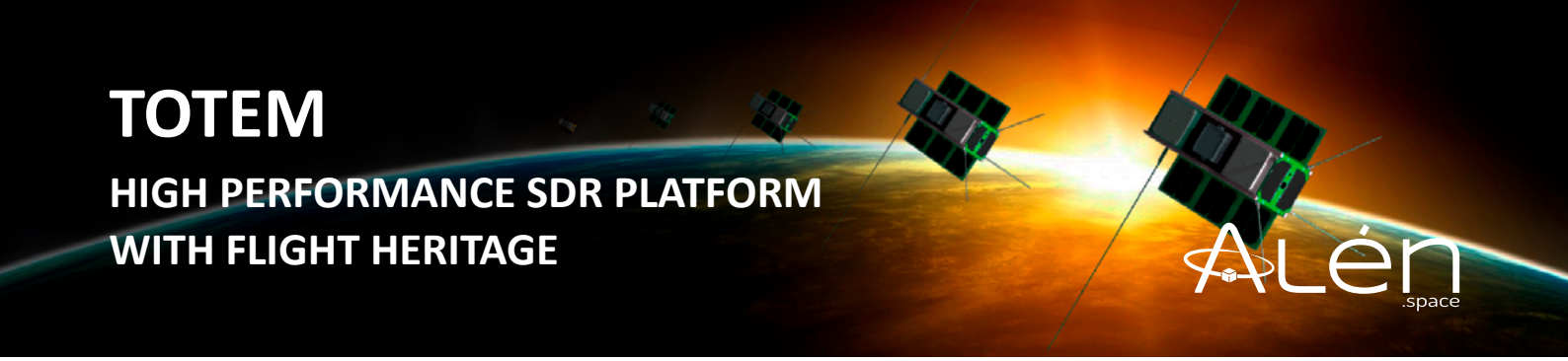
Easiest Way to Communicate in Space



www.alen.space
info@alen.space
+34 986 119 366

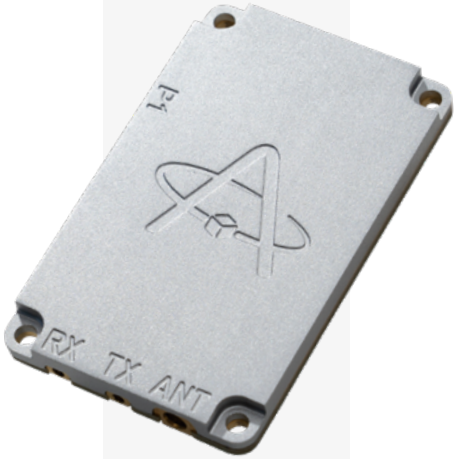
TOTEM

HIGH PERFORMANCE SDR PLATFORM WITH FLIGHT HERITAGE



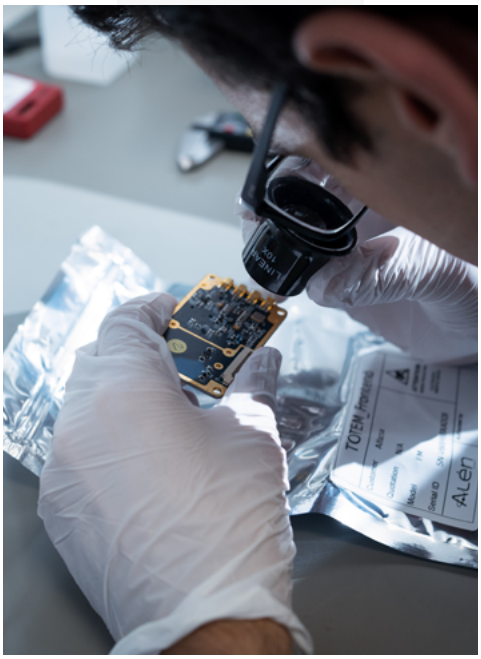
Software Highlights

- Embedded Linux
- Safe in-orbit updates
- TOTEM TMTC based on PUS (ESA)
  - HK, Event Report, TC execution verification, specific TOTEM services...
- Radio applications / waveforms development
  - SoapySDR driver provided
  - GNURadio support
  - Custom IP cores integration in FPGA



Customize TOTEM with External Frontends

Add an external RF frontend as piggyback board making it fully operational in the desired frequency band. Check our Plug&Play frontends!



Small Satellites: Turnkey Solutions for Space Business

www.alen.space
info@alen.space
+34 986 119 366