

SOFTWARE-DEFINED RADIO

SDR-1001



A high-performance, compact software-defined radio designed to operate in Low Earth Orbit (LEO) environments.

The Cesium SDR-1001 includes four receive channels, four transmit channels, and a state-of-the-art FPGA in a credit-card-sized footprint. The module is suitable for demanding digital signal processing and communications applications.

Use as a stand-alone Software-Defined Radio or combine with other Cesium modules for a complete bits-to-photons solution.

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1. KEY FEATURES:

- Compact 50mm x 84mm x 13mm packaged form-factor
- 4x 100MHz receive channels
- 4x 100MHz transmit channels
- Customizable FPGA fabric enables user-defined comms system
- Supports DVB-S2X, LTE-grade waveforms, and other high-order modulations
- Transmit and receive frequencies adjustable 300MHz-6GHz
- Optional RF observation ports
- Field-updatable, redundant boot flash with automatic failover
- Data interfaces: SpaceWire and UART (10GBASE-KR & 1000BASE-X - option)
- On-board telemetry: temperature, power consumption, rail voltages, error reporting
- Suitable for both military and commercial applications on LEO satellites and airborne platforms
- Thermal pillars bring heat to flat surface

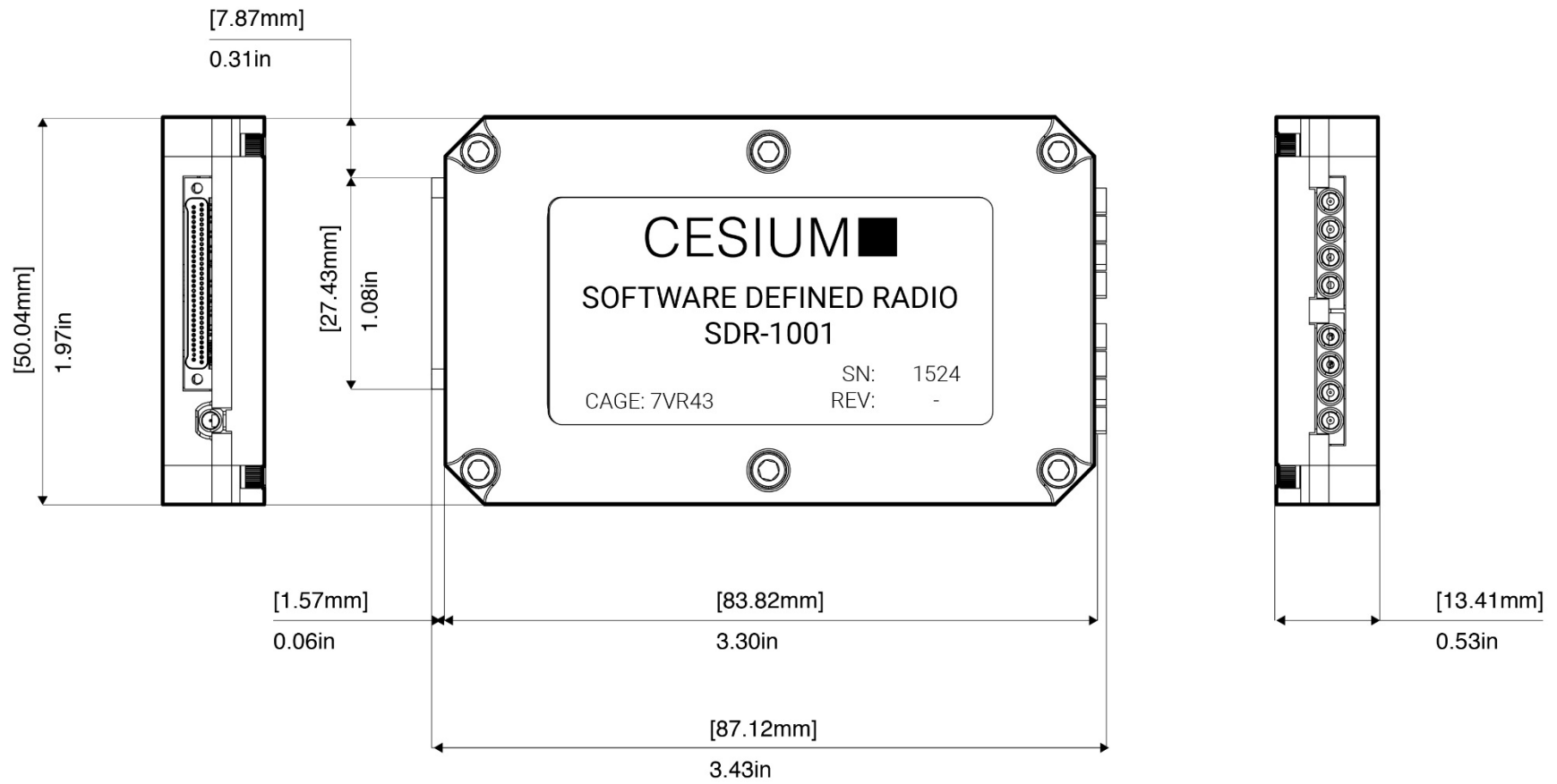
2. CESIUM GENERAL-PURPOSE MODEM:

- A pre-loaded comms solution that works out of the box
- Selectable Data Rate up to 62.5 MSym/s
- BPSK/QPSK
- Forward Error Correction
- Burst Mode
- SpaceWire and UART interfaces

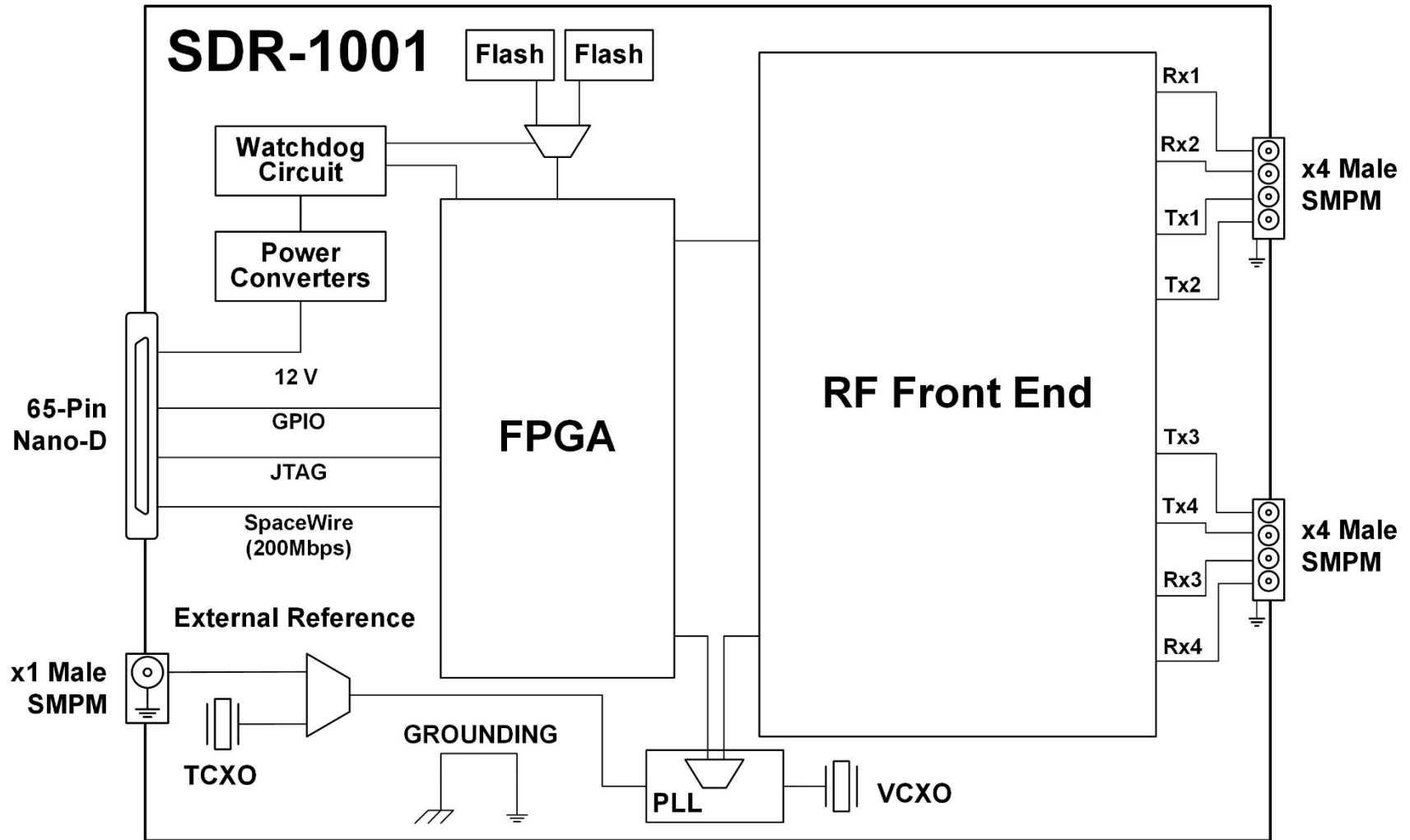
3. PRODUCT SPECIFICATIONS:

DC Input Voltage:	9 to 13 V
Baseplate Operating Temperature:	-24 to +61 °C
Mass:	100 g

4. MECHANICAL VIEW:



5. SYSTEM BLOCK DIAGRAM:



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