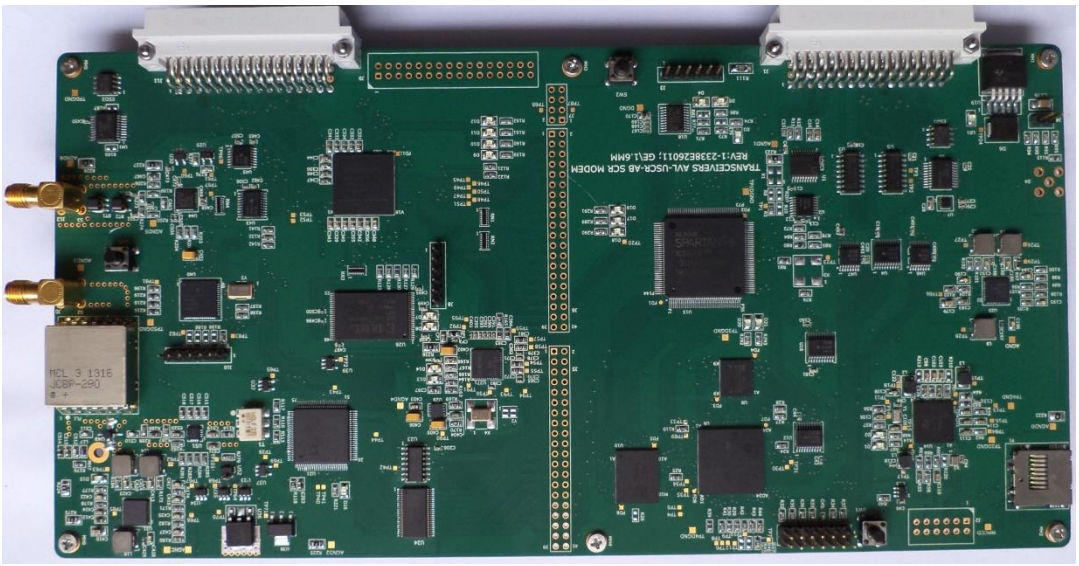
Software Defined Radio Platform



- Baseband modem
  - BPSK, QPSK, FM waveforms
  - Continuous mode data rates (bps)
    - BPSK: 300,600,1200,2400,2700,2880,4800,5400,9600,10800,19200,36000, 72000,144000,288000,360000
    - QPSK: 1200,2400,2700,2880,3600,4800,9600,10800,19200,38400,72000, 144000,288000,576000,720000
  - Burst mode data rates (bps)
    - BPSK: 300,600,1200,2400,2700,2880,4800,5400
    - QPSK: 300,600,1200,2400,2700,2880,3600,4800
  - FM: Narrowband (3kHz deviation) and Wideband (3kHz to 25kHz selectable deviation)
  - Rate ½ convolutional FEC for BPSK/ QPSK waveforms
  - Zero IF
  - TI DM3725 (DaVinci) based demodulator
  - Xilinx Spartan6 XC6SLX9 FPGA based configurable modulator
- Digital up/down converter
  - 100MHz – 400MHz frequency range at the RF port
  - AD9957 based digital up-converter
  - Xilinx Spartan-6 XC6SLX45 FPGA based digital down converter
- Continuous mode acquisition
  - BPSK: ±2.5kHz for 300bps and ±5kHz for other data rates
  - QPSK: ±1.25kHz for 1200bps, ±2.5kHz for other data rates
- Burst mode acquisition
  - BPSK: ±4.7kHz for 300/ 600bps and ±5kHz for other data rates
  - QPSK: ±2.3kHz for 300bps, ±4.7kHz for 600/ 1200bps and ±5kHz for other data rates
- Low power, ~1.2A from 5V supply
- Single board solution