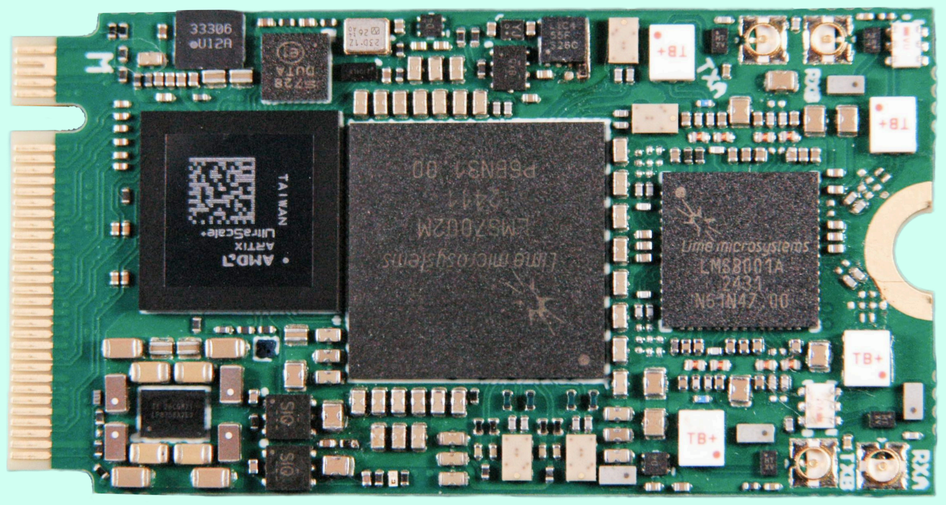
WVLT

2 RX/TX channels **M.2** single side components and extended frequency range SDR

sSDR superior REV3



The sSDR is a compact M.2 software-defined radio card with an expansive RF range from **30 MHz to 11 GHz**, covering **5G** (7.125) the latest 5G, WiFi, radio links, and many more. Paired with wsdr.io and various host devices, it enables the rapid development of custom RF solutions.

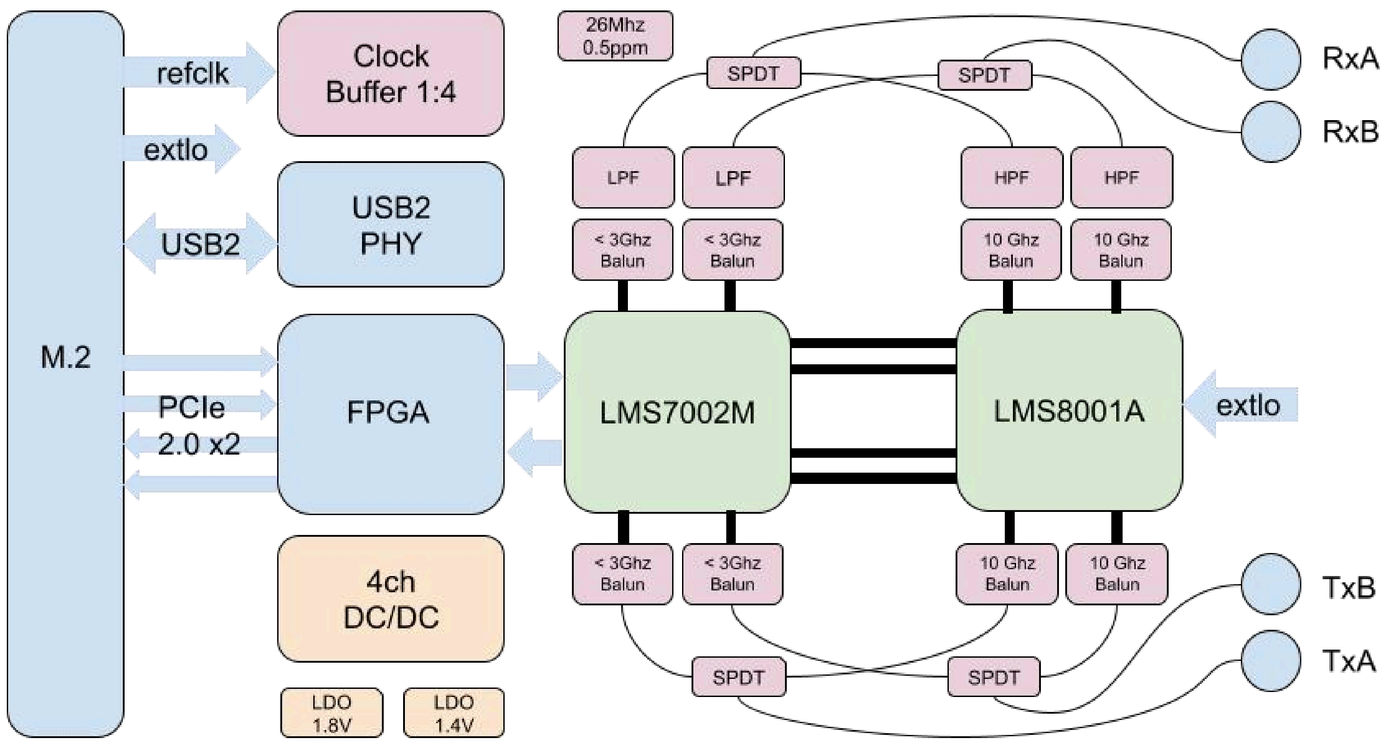
FPGA
AMD Artix UltraScale+ XCAU7P
Ability to offload IQ processing (60-70% resources available)

INTERFACE
M.2 2242 M key
PCIe 3.0 x4 + USB2.0*

EXTENDED POWER SUPPLY RANGE
2.85 - 5.5 V

EXTERNAL CLOCK SYNCHRONIZATION
Synchronize multiple boards for a multi-channel array, external LNB synchronization

POWER CONSUMPTION
2.9W Typical
4.9W Max



* – requires special M.2 Key M to USB2 adapter or Wavelet Labs FE/Breakout board

RF SPECIFICATION

RFIC
LMS7002M + LMS8001 (bypass option)

FREQUENCY RANGE
30 MHz to 11 GHz

CHANNEL BANDWITH
0.5Mhz - 120 MHz

SAMPLE RATE
0.1MSps - 86 MSps (MIMO)
122.88MSps (SISO)

FRONTEND
Integrated high-pass and low-pass filters for Hi / Lo RX bands

TARGET APPLICATIONS

CELLULAR COMMUNICATION
Establish dedicated wireless networks by implementing eNodeB, or gNodeB systems via open-source solutions like srsRAN 4G/5G or Amarisoft. Building a dedicated high-frequency radio link

X-BAND
X-band at ~10.5 GHz occupies a “sweet spot” in the RF spectrum, offering an optimal balance of physical and practical advantages. It is widely used in radar, remote sensing, communications, instrumentation, and advanced radiolocation systems, providing excellent resolution and performance.

EMBEDDED
Develop compact and high-performance frequency analysis devices

DATA LINK
Build a communication channel between points worldwide via a web platform

LEGACY SOFTWARE
GNU Radio, srsRAN, and many more through SoapySDR

WVLT
Digital Signal Processing • Full-cycle HW & SW • Embedded & FPGA Engineering
wavelet-lab.com | contact@wavelet-lab.com