ColibriDDC
HF/6M RECEIVER WITH LAN INTERFACE

Pure Sound

WWW.EESDR.COM
Software Defined Radio

The small size ColibriDDC SDR receiver has the power and functionality to serve in many different amateur radio applications. DDC, Direct Down Conversion technology, provides quality audio reception and a powerful spectral display of received bandwidth. Its powerful and easy to use software will appeal to new users as well as experienced operators who want to use DDC technology for DXing, contesting or general HF/VHF listening. The accessory connector allows for integration of the ColibriDDC in complex setups where it can control bandpass filters, antenna switches etc.

Modes.......................LSB/USB/DSB/CW/AM/SAM/NFM/WFM
Receiving bandwidth, MHz.......................0.01-55(0.01-62.5)
Receiving bandwidth in all Nyquist zones,MHz.........0.01-800
Spectrum scope bandwidth (up to), MHz 62.5
Amount of independent receiving channels......................2
Sensitivity, uV..0.3
Blocking Dynamic Range (BDR),dB 110
IMD3 Dynamic Range, dB..90
Image channel suppression, dB......................................>110

Supply voltage range, V................................4.5-5.5
Maximum consumption current, A..................0.64
RF ADC clock frequency, MHz..........................125
RF ADC resolution, bit..14
Local oscillator stability, ppm......................+/-0.5
Built-in attenuator, dB..............................0/-20
Built-in audio DAC resolution, bit........................24
Dimensions, mm......................................64x24x112
Weight, kg...0.2

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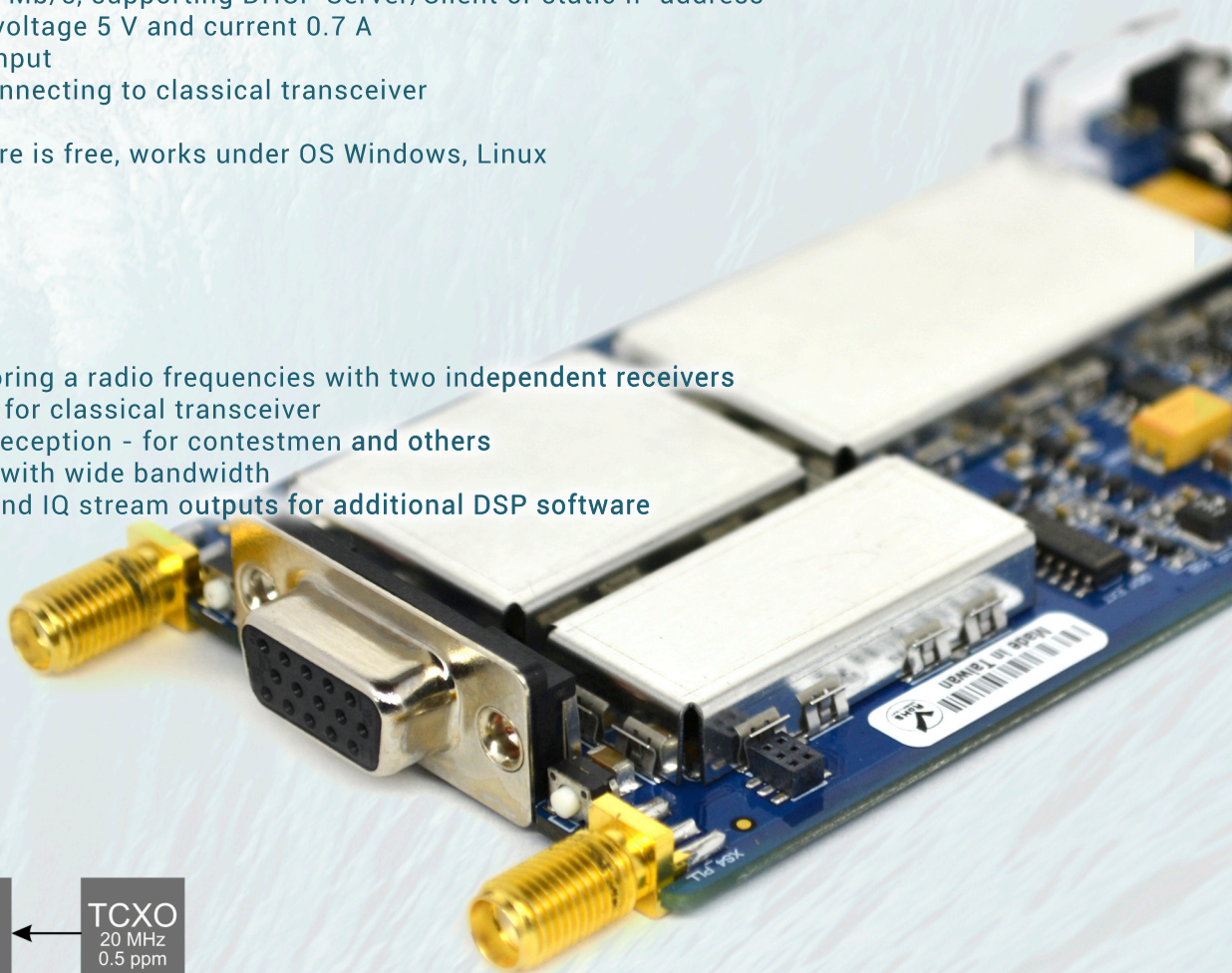info@sunsdr.com
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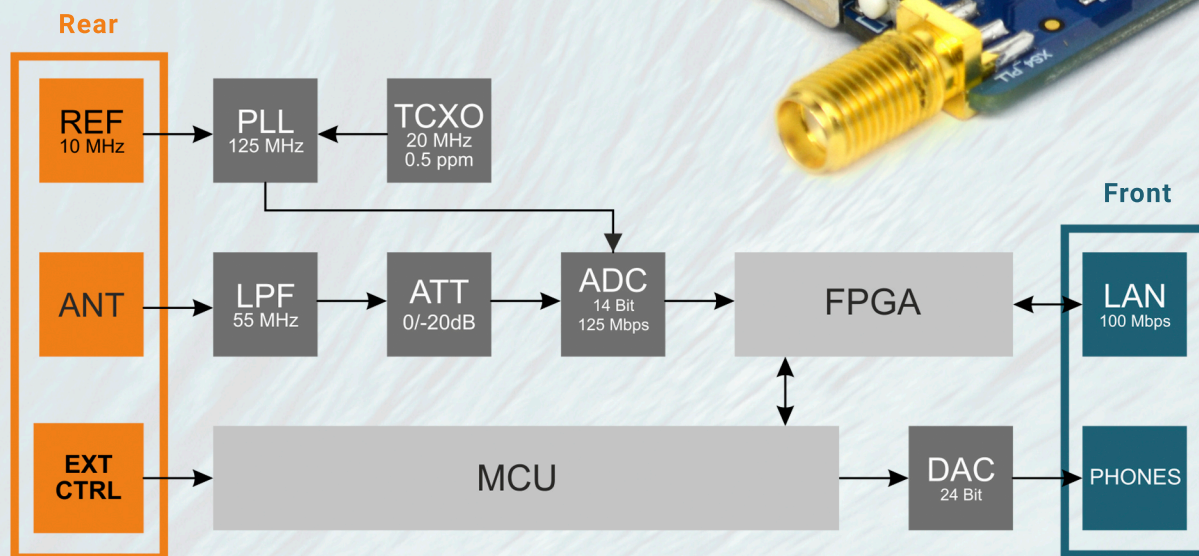
ColibriDDC

Features:

- For direct conversion is used a high speed ADC 125 MHz 14 bit
- Two independent receivers with 312 kHz bandwidth in 0.09-55 MHz frequency range
- Oversampling receiving up to 800 MHz
- Wide bandscope with bandwidth up to 60 MHz
- High quality 24 bit audio codec on board
- 7 programmable switches with open collector to control the external devices
- Interface to PC 100 Mb/s, supporting DHCP Server/Client or static IP address
- Low power supply voltage 5 V and current 0.7 A
- 10 MHz reference input
- Mute control for connecting to classical transceiver
- Small size
- ExpertSDR2 software is free, works under OS Windows, Linux

Applications:

- Receiver for monitoring a radio frequencies with two independent receivers
- Panoramic adapter for classical transceiver
- Remote station of reception - for contestmen and others
- Spectrum analyzer with wide bandwidth
- Receiving signals and IQ stream outputs for additional DSP software

Block diagram

Rear

REF
10 MHz

PLL
125 MHz

TCXO
20 MHz
0.5 ppm

ANT

LPF
55 MHz

ATT
0/-20dB

ADC
14 Bit
125 Mbps

FPGA

Front

LAN
100 Mbps

EXT
CTRL

MCU

DAC
24 Bit

PHONES