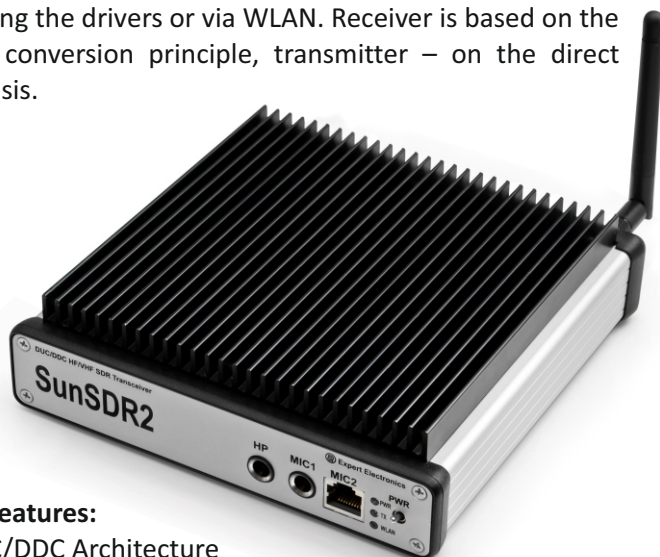


# SunSDR2

## DUC/DDC HF/6M/VHF TRANSCEIVER

SunSDR2 transceiver - is an up-to-date system of the amateur radio communication in the HF and VHF frequency bands with the digital signal processing. This device is considered to work with the PC via Ethernet (LAN) without installing the drivers or via WLAN. Receiver is based on the direct conversion principle, transmitter – on the direct synthesis.



This transceiver has been worked out subject to the long-standing work of the company on the issue of SDR-technical equipment. It combines advantages of direct conversion and direct synthesis of radio signals, namely: high image rejection for reception and transmission, high blocking dynamic range. Interface for connecting to the PC – local network (Ethernet LAN) allows the remote work with the transceiver, using local network. For instance, transceiver can be located in the radio shack along with noisy kilowatt amplifiers and operator can carry out connections at the PC, sitting in a quiet flat tens meters far.

### Key Features:

- DUC/DDC Architecture
- Quick hardware formed CW
- Two independent receiver channels
- I/Q stream up to 312 kHz
- Reception from 9 kHz
- Bandpass filters in receiver front end
- LAN interface for connection to PC
- Optional WLAN interface
- External devices control
- CAT and VAC interfaces for connections to third-party software like loggers and digital modes software
- Reception of Broadcast FM stations
- Contest special functions
- Small size

### PC system requirements:

- CPU Intel Core i3 1.6 GHz
- RAM 2 GB
- Ethernet adapter 10/100 BASE-T
- Video card, minimum resolution 1024x600, 128 MB, OpenGL 1.5 support and higher
- OS Windows XP or OS Windows 7 with the native drivers installed for all the devices
- CD-ROM for software installing

### Software:

- All the main transceiver capabilities are determined by ExpertSDR2 software which was developed by Expert Electronics
- This software has amiable and flexible user interface
- ExpertSDR2 has full set of functions and mode types of radio amateur transceiver
- ExpertSDR2 and all updates are free
- ExpertSDR2 software set of functions is constantly growing and optimizing, new versions appear

*\* Price for SunSDR2 with WLAN and PLL options*

## SunSDR2 Specification

Transmitter	
HF Output Power	15W (max 20W)
VHF Output Power	8W
Frequency range	All Ham radio bands (160M..6M, 2M)
DAC converter	14 bit 640 MSPS
Carrier Rejection in SSB mode	> 70 dB
I/Q Image Rejection	> 90 dB
IMD3	30 dB
Dynamic microphone impedance	600 Ohm (Yaesu MH-31 compatible)
Receiver	
Modes	AM/SAM/NFM/WFM/LSB/USB/DSB/CW
Frequency Range	10 kHz ... 65 MHz, 96 MHz ... 148 MHz
Oversampling Frequency Range	10 kHz ... 300 MHz
Wide bandscope	20 kHz ... 80 MHz
Output IQ Sam	39, 78, 156, 312 kHz
Independed receiver channels	2
Blocking Dynamic Range	120 dB
IMD3 Dynamic Range	100 dB
I/Q Image Rejection	>110dB
Sensitivity (Preamp on)	70 nV
ADC converter	160 Msps, 16 bit
Attenuators	-20, -10, 0, +10 dB
10 MHz reference input	Optional
WLAN Unit	Optional
LAN interface	100 Mbps
LAN protocols	ARP, ICMP, UDP
Onboard High Quality Audio Codec	24 bit
External Radio	8 programmable transistor switches
Power supply	+15V, 5A
Dimensions	165x165x30

## SunSDR2 Blok diagram

