

## SunSDR-MB1

The HF/6M/VHF SunSDR-MB1 transceiver is a new ultra modern concept of HAM standalone radio based on new DUC/DDC Software Defined Radio technologies with embedded PC, comfortable and easy operation of a traditional transceiver.

One box contains: full PC (Micro-ITX PC, Intel Core i5 CPU, full-blown Windows 8 or Linux Ubuntu), transceiver's hardware core based on high performance HF/6M/VHF DUC/DDC transceiver, 125W PA, PA LPF, ATU (optional), Antenna switch, WLAN (optional) for wireless connections, 7" high quality IPS display, fully reprogrammable front panel(buttons and all knobs), also additional HDMI connector for external big display etc.

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

User can push one button (20 sec start time/ 5 sec finish time) and can work in radio air without keyboard and mouse. If customer wants he can use mouse and keyboard for extended transceiver's control and for working with loggers, DIGI software etc., which are installed on the transceiver.

Special for SunSDR-MB1 was developed an ExpertSDR2 software version with adapted GUI. It is more than classical transceiver, it is more than monoblock (PC+SDR), it is a new generation in HAM transceivers - fully DUC/DDC Software Defined Radio, fully Software Defined Front control panel.



Design and manufacture of SDR transceivers  
www.sunsdr.com  
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### Key features:

- In the one box we have: Full PC(Mini ITX, Intel Core i7 CPU, full-blown Windows 8 or Linux, 7" display, touch panel, with all the attendant features
- Installing digital communications software
- Contest loggers
- Internet browsing, internet clusters and other opportunities (e-mail, Skype, ICQ, TV... ) associated with internet
- Viewing and listening audio files
- Watching TV via USB-TV receivers
- And a lot of others, everything just limited by your fantasy

SunSDR2-MB1 Specification

	ExpertSDR2 (own software)
Supported OS	Windows All versions, Linux
Conversion	Direct in RX/TX mode, in HF/VHF bands
Frequency range	0-75MHz, 95-155MHz
Wide band spectrum panadapter	up to 80MHz
Two independent receivers	Present
Full duplex mode	Depends on software, will available in a new versions of software ExpertSDR2
High dynamic range of receiver	Up to 120dB in the HF, and up to 116dB in the VHF
Sensitivity, uV	0.07 (Preamp on)/0.13 (Preamp off)
Output power	125W (HF), 60W (VHF)
IMD3 DR of transmitter	-35dB...-30dB (can be improved by software up to -60dB)
Predistortion of TX signal	will available later (depends on software)
ATU	Available as option.
Reference input	10 MHz
Very small CW delay	10ms
ADC sample rate	160MHz
ADC resolution	16 bit
IMD3 DR, in-band	100 dB
DUC sample rate	640MHz
DUC resolution	14 bit
Audio	High performance 24 bit Codec on board
Power supply	AC 110...220V 50...60Hz, 1A (RX)/2A (TX)
Size	320x240x140mm
Weight	9 Kg

Inputs/outputs:

VHF antenna connector	SO239
Two HF antenna connectors	SO239
Wide RF input port direct connect to high speed ADC (for XVTRX, measurement etc.)	SMA
Wide RF output port direct connect to DUC (for XVTRX, measurement etc.)	SMA
Reference 10MHz input connector	SMA
ALC input port	RCA
PTT input port	JACK 6.3mm
CW Key input port	JACK 6.3mm
External Control port with 8 power switch and RS-485 interface	D-SUB-15
External control 2 port for Stealth Antenna 9310	Mobile connector
PTT output ports for external PA control	RCA x4
Electret Microphone input(line in)	JACK 6.3mm
Dynamic Microphone input with PTT switch for MH-31	RJ-45
Headphones output(line out)	JACK 6.3mm
Ethernet connector for LAN.	RJ-45
USB 3.0 connectors	x4 + x2 on front panel
Speaker/headphones connector from embedded PC's sound card (listening audio, video, skype etc.)	3.5 mm Jack
Microphone connector from embedded PC's sound card (listening audio, video, skype etc.)	3.5 mm Jack
Display port connector	Present
HDMI connector	Present
Power supply connector	
Ground connector	Clamp

SunSDR2-MB1 Rear panel



SunSDR2-MB1 Blok diagram

