

# ELAD FDM-DUO

## HF/50 MHz SDR TRANSCEIVER



The ELAD FDM-DUO is a SDR transceiver that offers the possibility to operate Stand-Alone like traditional radio or attached to a Personal Computer discovering the possibilities offered by the SDR technologies.

### Specifications Stand-Alone

#### Receiver

- Frequency range: 10KHz - 54MHz (RX unlock to 165 MHz possible)
- Direct sampling receiver operating @ 122.88MHz ADC: LTC2165 16bit
- DDC (Digital Down Converter) FPGA Xilinx Spartan.6 family down to 192Ksps
- DDC, Filter & Demodulator ARM STM32F429 floating point microcontroller
- Demodulation CW, LSB, USB, AM
- LSB,USB Filters selectable 1600-3100Hz Bandwidth with 100Hz step plus 4000-5000-6000 Hz Bandwidth
- AM Filter selectable from 2500 to 6000Hz with 500Hz step
- CW Filters 2600Hz-1500-1000-500-300-100Hz Bw plus 4 Cw peak filters applied after 100Hz Bw to obtain an overall filter of 20Hz Bw
- Noise Reduction 10 levels
- Noise Blanker 10 levels
- VFO A, VFO B, 199 MEMORIES with Frequency/ Alphanumeric label visualization, programmable by FDM-SW2 memory manager
- Programmable BAND selections: selectable up to 20 quick recallable memories from 180 to 199

#### Transmitter

TX frequency ranges : 1810-2000 kHz, 3500-3800 kHz, 5350-5450 kHz, 7000-7200 kHz, 10100-10150 kHz, 14000-14350 kHz, 18068-18168 kHz, 24890-24990 kHz, 28000-29700 kHz, 50000-51000 kHz

- DDS AD9957 with 368.64 MHz clock
- Microphone input ADC 48KHz @ 16bit selectable gain -12dB to +12dB (RJ45 pinning ICOM compatible !)
- Key and Paddle input for CW operation (Iambic A e Iambic B selectable)
- 5W min power output from 160m to 6m, 8 W typ output @14MHz
- PTT Output connector to drive external amplifiers
- Microphone included (RJ45 connection ICOM compatible)

#### General

- : All programmable components (ARM RX, ARM TX, Flash for FPGA, User Interface microcontroller and USB controller) are firmware upgradable
- : CAT input USB control interface with FTDI controller
- Antenna connectors : RTX SO-239, RX SO-239
- Monitor output : 0dBm SMA to be used as test equipment allow the use as a Digital RF Generator
- LCD Backlight : RGB programmable, depending on function can change the colour (RX, TX , PC remote control)



Article id: **ELAD FDM-DUO**

Price: **€ 1175,00**

ex VAT € 971,07

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## HF/50 MHZ SDR TRANSCEIVER

10MHz Reference input connector : SMA

Power supply : 2.1mm DC Plug 13.8VDC RX consumption 500mA typ (13.8V) TX: tbd

Size : Width 180mm (7.00") x Depth 155mm (6.10") including Knob and connectors or 130mm (5.10") only enclosure x Height 70mm (2.75")

Weight : 1.2Kg (2.4 lb), boxed 2.2Kg (4.85 lb)

Specifications PC mode operation with FDM-SW2 software

- : Up to 9 simultaneous receivers combination ( 1 on center frequency stand alone, 4 FDM-SW2 in first 192kHz channel and 4 in the second 192kHz channel
- : Each receiver on FDM-SW2 have a dedicated Audio Channel and a dedicated CAT to be usable from external application with Virtual serial ports and Virtual Audio Cables
- : Selectable Band configuration from 192kHz to 6MHz DDC bandwidth (192,384,768,1546,3072,6144Ksps) 2 channel 192Ksps, 2 channels 384Ksps
- : RX and TX SPLIT mode operation: VFO A for RX while VFO B used for TX (with FDM-SW2 simple click operation to change TX frequency)
- : CW skimmer integration management (DX Spot visualization & tuning capability)
- : Direct digital Modulation using USB soundcard based on CMedia chipset digitally interfaced with ARM floating point microcontroller and DDS

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