



The set ETD 411 xxx modules is specifically designed to permit a thorough survey of analog telecommunications, with coaxial digital wireless transmission, HF and VHF. They use the "SDR Software Defined Radio" method.

Each module is equipped with an HDMI connector, this connector is connected to the master module ETD 410 000, it ensures the "transposition" frequency from HF or VHF bands to Intermediate Frequency (0-96 kHz) in reception and conversely from Intermediate frequency (0-96 kHz) to the RF frequency for transmission.

The study and synthesis of different types of analog/digital modulations/demodulations is done through the graphic blocks programming software "FibulaG" (see detailed documentation of the DSP board ETD 410 000).

## ETD 411 100: SDR transmission transposition 27 MHz RF module

Transmission Transposition module HF 27 MHz

Frequency range: from 27.000 to 27.400 MHz

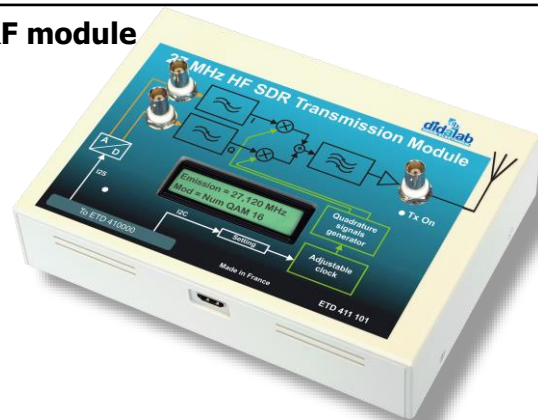
Transmitting power (max) : 10 mW

IQ modulation by DSP with *FibulaG* graphic software

- Analog: AM, FM, SSB.
- Digital: ASK, PSK, FSK, QPSK, QAM...

Coding: AMI, RZ, NRZ, Manchester...

Conversion with 24-bit 192-kHz CODECS



LF/HF Transposition by « perfect mixer »,



## ETD 411 200: SDR reception transposition module, VLF, LF and HF to Intermediate Frequency IQ of 0-96 kHz

HF/LF transposition by « perfect mixer »

Frequency range:

- LF: 150 to 280 kHz.
- MF: 3 500 to 3 800 kHz.
- HF: 27.000 to 27.400 MHz.

Transmitting power (max) : 10 mW

IQ demodulation by DSP with *FibulaG* graphic software

- Analog: AM, FM, SSB.
- Digital : ASK, PSK, FSK, QPSK, QAM...

Coding: AMI, RZ, NRZ, Manchester...

Conversion with 24-bit 192-kHz CODECS

## ETD 411 300: SDR Reception Module VHF 88/108 MHz, to the Intermediate Frequency IQ of 0-96 kHz

HF/BF transposition by « perfect mixer »

IQ demodulation by DSP with *FibulaG* graphic software

- Analog: FM, mono, stereo.
- Digital: RDS

