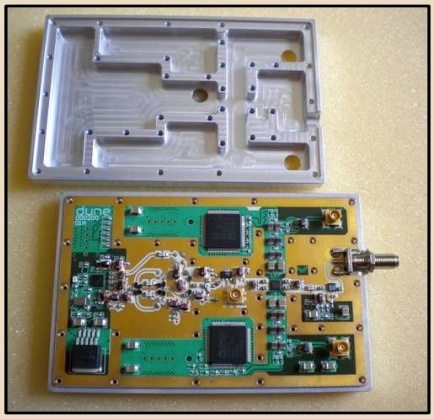
RF demodulator and processing



This device comprises two proprietary products: a RF demodulator (D00200-01A) and a processing board (D00200-02A).
The processing board drives the RF demodulator and implements digital algorithms, such as:

- Communication (e.g. equalization, decoding),
- Radar processing in the 400–4500 MHz band
- Direction finding.

Technical data

RF demodulator (D00200-01A)

Input in 400–4500 MHz range, directly converted to baseband with a programmable local oscillator (LO).

Baseband I/Q components, filtered with two matched Chebyshev filters (corner frequency of 50 MHz) and sent to two 16 bits ADC with programmable sampling frequency.

Input level: 0 dBm to – 60 dBm (1 dB compression point: -2 dBm).

Processing board (D00200-02A)

The processing board comprises a FPGA VIRTEX VI (XC5VFX30T) and a Power PC Freescale communicator (MPC8349). The communication processor links the FPGA to an external computer by using a fast connection (Gbit Ethernet).