

ABSTRACT

System for collecting at least one signal including an analog sampler, at least two digital frequency analyzers (DFAs) and a processor, the DFAs each coupled with the analog sampler, the processor coupled
5 with each of the DFAs, the analog sampler for receiving the signal as an analog electrical signal, for folding the analog electrical signal using at least two different frequencies simultaneously into at least two respective intermediate frequency (IF) signals respectively according to the different frequencies, the DFAs for digitally sampling a respective one of the IF
10 signals into at least one respective digital signal, the processor for determining a plurality of linear combinations of the IF signals with respect to the different frequencies used and for determining at least one frequency of the signal by evaluating the plurality of linear combinations of the IF signals, each DFA including a digital sampler, a logic layer and at
15 least one Fourier transformer.

Fig. 2