

## **Digital Radio Receiver for an UHF RFID System with an Undersampling Digitalization Scheme**

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### *Summary*

This paper describes a digital radio receiver for UHF-RFID systems based on an undersampling scheme for the signal digitalization. The original UHF signal is transferred into a digital intermediate frequency by means of undersampling. The sampled signal is transferred to an FPGA where it is decimated by a CIC filter, and demodulated using a digital I-Q demodulator. The base band signal is obtained after the low-pass filtering. The details of the system are presented as well as some measurements.