LOW COST SDR RECEIVER IMPLEMENTATION USING RTL-SDR DONGLE

Volume 78, Issue 8, 2019, pp. 691-705
DOI: 10.1615/TelecomRadEng.v78.i8.50

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Reda Yagoub
Smart Structures Laboratory (SSL), University Center Belhadj Bouchaib of Ain Témouchent, Po Box 284, Ain Témouchent 46000, Algeria
B. Benadda
Abou Bekr Belkaid University of Tlemcen, PO BOX 119, Tlemcen 13000, Algeria
M. Benaissa
Information Processing and Telecommunications Laboratory (LTIT), Faculty of Technology, University of Bechar, Bechar, Algeria; Electrical Engineering Department, Abou Bekr Belkaid University of Tlemcen, Tlemcen, Algeria
A. Taleb-Ahmed
IEMN DOAE UMR CNRS 8520, Polytechnic University of Hauts-de-France, Valenciennes 59313, France
A. Lahouel
Smart Structures Laboratory (SSL), University Center Belhadj Bouchaib of Ain Témouchent, Po Box 284, Ain Témouchent 46000, Algeria
F. Zane
Smart Structures Laboratory (SSL), University Center Belhadj Bouchaib of Ain Témouchent, Po Box 284, Ain Témouchent 46000, Algeria

ABSTRACT
The advent of Software Defined Radio (SDR) has made it possible to replace large parts of classical radio communication equipment with digital and software components to easily achieve configurable and multiplatform communication systems. SDR provides many advantages for research and development. In this work, the low-cost Realtek Software Defined Radio (RTL-SDR) dongle can serve as a cheap SDR platform to receive and digitize exchanged RF signals. In case of RTL-SDR dongle, in-phase and quadrature samples (I/Q) are sent as a stream through simple Universal Serial Bus interface (USB)

to host computer. This paper describes a SDR application that can be used for many functionalities such as monitoring and scanning of frequency bands with RTL-SDR dongle.
KEY WORDS: software defined radio, RTL-SDR dongle, spectrum analyzer, canning, monitoring