

Title: Design of a Multiband Full-Rate Ultra-Wideband Receiver in FPGA

Author(s): Vestias, Mario ^[1]; Neto, Horacio; Sarmiento, Helena

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Abstract: MultiBand OFDM (MB-OFDM) UWB [1] is a short-range promising wireless technology for high data rate communications up to 480 Mbps. In this paper, we have designed and implemented in an Virtex-6 FPGA an MB-OFDM UWB receiver for the highest data rate of 480 Mbps. To test the system, we have also implemented an MB-OFDM transmitter and an AWGN generator in VHDL and determined the bit error rates at the receiver running in an FPGA.

Author Keywords: UWB; MB-OFDM; Receiver; FPGA

Reprint Address: Vestias, M (reprint author) - INESC ID ISEL IPL, Lisbon, Portugal.

Addresses:

[1] INESC ID ISEL IPL, Lisbon, Portugal

E-mail Addresses: mvestias@deetc.isel.pt; hcn@inesc-id.pt; hsarmiento@inesc-id.pt

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