

# A Novel Reconfigurable Architecture for Generic OFDM Modulator Based on FPGA

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**Abstract**—OFDM is a special case of multi-carrier modulations, which is of great use in various wireless communications, such as DAB, DVB, HDTV, CMMB, TMMB, 802.11a. The OFDM frame structure is similar to each other. It consists of a number of OFDM symbols following the synchronizing signal with different cyclic prefix and guard interval. In this case, it is significant for researchers to implement OFDM modulator through a novel reconfigurable architecture to meet different communication standards. This paper shows how the architecture is realized on FPGA.

**Keyword**—FPGA, multicarrier, OFDM, reconfiguration, SDR



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