

networks to analyze the communication efficiency through measuring performance of AES-128 CBC algorithm which is selected by default in sensor networks by plaintext size and cost of operation per hop according to the network scale.

22. DESIGNING A QPSK MODULATOR USING FPGA'S FOR BIO MEDICAL APPLICATION

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Abstract:

We proposed a new simple design for a Quadrature Phase shift Keying (QPSK) modulator applied for implantable telemetry applications as demonstrated. VHDL programming code is used to generate QPSK digital signal. The input test signals data and carrier are interfaced to the CPLD and FPGAs board from Agilent function generator E8408A). We used the local clock oscillator for test, which is operating at 25.175 MHz and 12.5 MHz for the carrier and 2 Mbps reduced for data source. The modeled Modulator has been designed and simulated and performance was evaluated by measurements. The design has low power consumption and size for biomedical applications.

Furthermore, the advantages of this modulator are it can be reconfigured and upgraded to enhance the data rate.

23. NOISE PSD TRACKING WITH LOW COMPLEXITY USING MMSE ESTIMATOR

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Abstract:

Most speech enhancement algorithms heavily depend on the noise power spectral density (PSD). Because this quantity is unknown in practice, estimation from the noisy data is necessary. We present a low complexity method for noise PSD estimation. The algorithm is based on a minimum mean-squared error estimator of the noise magnitude-squared DFT coefficients. Compared to minimum statistics based noise tracking, segmental SNR and PESQ are improved for non-stationary noise sources with 1 dB and 0.25 MOS points, respectively. Compared to recently published algorithms, similar good noise tracking performance is obtained, but at a computational complexity that is in the order of a factor 40 lower.