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Abstract

Synthetic aperture radar (SAR) is an imaging technique, which provides high-resolution images. The high resolution in the range direction is achieved by using large bandwidth signals and that in the azimuth direction is achieved by synthesizing a large aperture antenna using platform motion. The unique data collection geometry of SAR system requires that huge amounts of raw data be processed before obtaining a viewable image. Therefore, performing some form of compression on SAR raw data provides an attractive option for SAR systems. Block Adaptive Quantizer (BAQ) has been a very attractive method for compression due to simplicity in its on-board implementation and less hardware complexity. Analog-to Digital

Converter (ADC) is an integral part in this compression process. Since the SAR raw data has very wide dynamic range, the ADC gets saturated at higher average value of the input signal . The higher value saturates ADC causing loss of power. In the present paper we have suggested a technique to compensate this power loss and restoring the Gaussian nature of the SAR data.

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Index Terms

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Key words

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