New Efficient Reverse Converters for 8n-bit Dynamic Range Moduli Set

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Abstract

This paper proposes two efficient residue to binary converters on a new three-moduli set \{2^{2n-1},2^{4n},2^{2n+1}\} using the Chinese Remainder Theorem. The proposed reverse converters are adder based and memoryless. In comparison with other moduli sets with similar dynamic range, the new schemes out-perform the existing schemes in terms of both hardware cost and relative performance.

References


Index Terms

Computer Science Circuits and Systems

Keywords

Residue to binary converter, reverse converter, residue number system (RNS), Chinese remainder theorem, moduli set.