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ABSTRACT

A data error correction device which performs iterative decoding for data to which error-correcting codes are multiply added is provided with a means 14 for detecting the presence or absence of uncorrectable codewords in the present decoding, a means 15 containing the uncorrectability detection result, corresponding to the immediately preceding decoding, a means 12 for detecting that syndromes of all codewords in the present decoding are zero, and a means 16 for judging the termination of the correction processing to terminate the iterative decoding when no uncorrectable codeword is detected in the immediately preceding decoding and the syndromes of all codewords are zero in the present decoding. Therefore, when the iterative decoding for data to which the error-correcting codes are multiply added is performed, the number of times of the iterative decoding can be reduced with ensuring the reliability of data as in the case where the data are corrected the maximum number of times, thereby realizing the reduced power consumption in the error correction processing.