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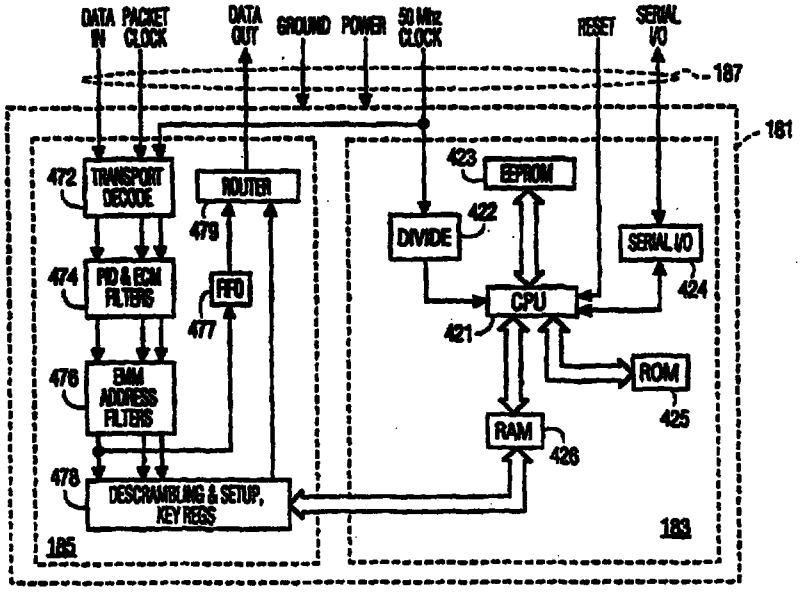
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(54) Title: SMART-CARD BASED ACCESS CONTROL SYSTEM WITH IMPROVED SECURITY



(57) Abstract

A smart card that includes a descrambler for descrambling entitlement information and data provides improved access control by controlling the manner in which the entitlement information portion of the data stream is passed through the smart card. Entitlement data that is descrambled and used in the smart card for functions such as key generation is re-inserted in scrambled form in the high speed output data signal from the smart card. A variable delay device is included in the smart card for controlling when scrambled entitlement data is re-inserted into the data stream. Varying the delay permits establishing a desired timing relationship between the re-inserted data and other data in the data stream that is output from the smart card. For example, scrambled entitlement data in the output data stream can be made to exhibit substantially the same timing relationship to other data that exists in the input data stream.

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