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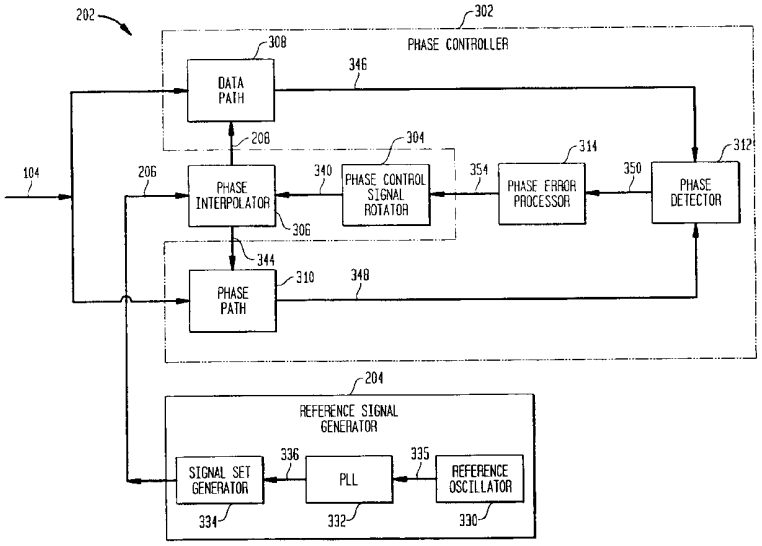
(54) Title: HIGH-SPEED SERIAL DATA TRANSCEIVER SYSTEMS AND RELATED METHODS



(57) Abstract: A high-speed serial data transceiver includes multiple receivers and transmitters for receiving and transmitting multiple analog, serial data signals at multi-gigabit-per-second data rates. Each receiver includes a timing recovery system for tracking a phase and a frequency of the serial data signal associated with the receiver. The timing recovery system includes a phase interpolator responsive to phase control signals and a set of reference signals having different predetermined phases. The phase interpolator derives a sampling signal, having an interpolated phase, to sample the serial data signal. The timing recovery system in each receiver independently phase-aligns and frequency synchronizes the sampling signal to the serial data signal associated with the receiver. A receiver can include multiple paths for sampling a received, serial data signal in accordance with multiple time-staggered sampling signals, each having an interpolated phase.

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L7/033 H03K5/13

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data

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Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 515 074 A (NAT SEMICONDUCTOR CORP) 25 November 1992 (1992-11-25) page 3, line 26 - line 42 page 4, line 12 - line 36 figures 2-6 ---	1-19,21, 23, 25-42, 44-47, 49-94
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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Name and mailing address of the ISA	Authorized officer
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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