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(54) **INTEGRATED CIRCUIT INCLUDING FLIP-FLOP AND COMPUTING SYSTEM FOR DESIGNING THE INTEGRATED CIRCUIT**

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(57) **ABSTRACT**

An integrated circuit includes a flip-flop configured to operate in synchronization with a clock signal. The flip-flop includes a multiplexer configured to output an inverted signal of a scan input signal to a first node based on a scan enable signal, or the multiplexer configured to output an inverted signal of a data input signal or a signal having a first level to a first node based on a reset input signal, a master latch configured to latch the signal output through the first node, and to output the latched signal, and a slave latch configured to latch an output signal of the master latch and to output the latched output signal of the master latch.