ABSTRACT

MULTIPLY AND ACCUMULATION CIRCUITS AND FORWARD ERROR CORRECTION METHODS

A multiply and accumulation circuit comprises: a multiplication circuit configured to generate a multiplication output from at least two input signals; a main flip flop synchronized to a main clock signal and configured to receive the multiplication output as an input; an auxiliary flip flop synchronized to a relaxed clock signal which is delayed with respect to the main clock signal and configured to receive the multiplication output as an input; an accumulation adder configured to add an output of the multiply and accumulation circuit from a preceding clock cycle to the output of the main flip flop; a subtractor configured to determine a difference between an output of the main flip flop and an output of the auxiliary flip flop; an auxiliary adder configured to add the difference to a signal based on an output of the accumulation adder; and a multiplexer configured to generate an output of the multiply and accumulation circuit and modify the output of the multiply and accumulation circuit to compensate for the difference between the output of the main flip flop and the output of the auxiliary flip flop.

[FIG.5 to be printed with Abstract]