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(54) Title: A FULLY DIGITAL PULSE WIDTH MODULATION MODULE

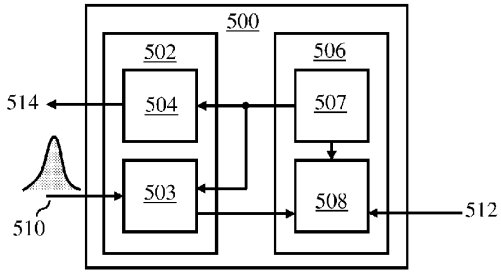


FIGURE 5

(57) Abstract: The invention relates to a fully digital pulse width modulation module for generating sub-nanosecond pulses in a linear manner and within a wide dynamic range. The module comprises a PWM signal generator module which is configured to generate an output pulse signal having a predetermined width in response to receiving an input pulse signal through an edge detector and a coarse delay module. A digital calibrator is coupled to the PWM signal generator module and configured to adjust a frequency of the signal generated by the coarse delay module based on a target frequency, a reference clock frequency and a predetermined threshold of clock cycles.

WO 2025/174323 A1