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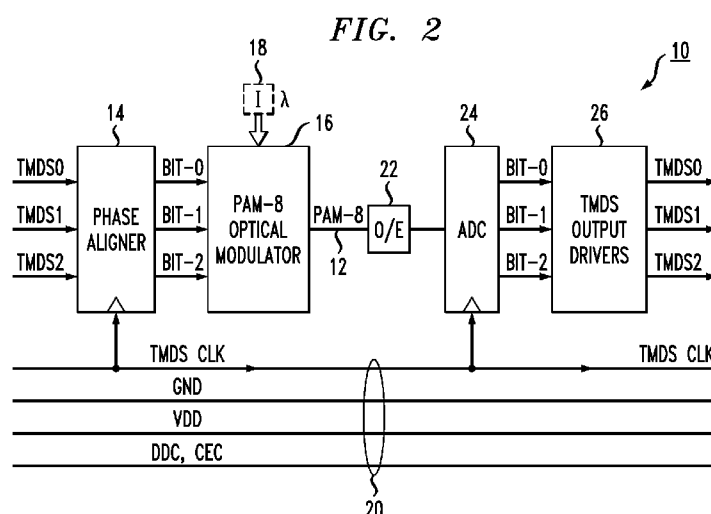
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(54) Title: HDMI TMDS OPTICAL SIGNAL TRANSMISSION USING PAM TECHNIQUE



(57) Abstract: An HDMI interconnect arrangement is presented that performs a pulse-amplitude modulation (PAM) conversion of the TMDS audio/video signals in order to simultaneously transmit all three channels over a single optical fiber. The set of three audio/video TMDS channels is applied as an input to a PAM-8 optical modulator, which functions to encode the set of three channels onto an optically-modulated output signal. The modulated optical signal is thereafter coupled into an optical fiber within an active HDMI cable and transmitted to an HDMI receiver (sink). The TMDS CLK signal is not included in this conversion into the optical domain, but remains as a separate electrical signal to be transmitted along a copper signal path within the active HDMI cable.