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CMS Level-1 Upgrade Calorimeter Trigger Prototype Development

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As the LHC increases luminosity and energy, it will become increasingly difficult to select interesting physics events and remain within the readout bandwidth limitations. An upgrade to the CMS Calorimeter Trigger implementing more complex algorithms is proposed. It utilizes AMC cards with Xilinx FPGAs running in micro-TCA crate with card interconnections via crate backplanes and optical links operating at up to 10 Gbps. Prototype cards with Virtex-6 and Virtex-7 FPGAs have been built and software frameworks for operation and monitoring developed. The physics goals, hardware architectures, and software will be described in this talk. More details can be found in a separate poster at this conference.

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