

Fiber Optic Sensor DVS Data Acquisition Card



Overview

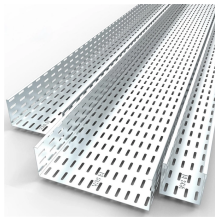
The acquisition card is customized for distributed fiber optic vibration DVS system, with dual-channel synchronous sampling, 100M sampling rate, 12-bit, with trigger output function, and built-in averaging and differential algorithms. The DVS-ETH-100-1 is a 12-bit dual-channel high-speed data. 100MSps dual-channel high-speed acquisition fiber optic sensing demodulation card, which is a PCIe x8 Lane, dual-channel, 14bits respectively rate fiber optic sensing demodulation card, sampling rate of 100MSps. Onboard high-performance FPGA chip with abundant multiplier and RAM resources. At present, this distributed sensing technology has been used in long-distance natural gas and oil. Zhongyao Luo, Hao Wu, Zhao Ge, and Ming Tang This work was supported in part by the National Key Research and Development Program of China under Grant 2021YFB2800902; in part by the National Natural Science Foundation of China under Grant 62225110; and in part by the innovation Fund of WNLO. In this paper, we propose a convolutional neural network (CNN) to analyze DVS data and achieve high-accuracy event recognition fully. We conducted experiments outdoors and collected more than 10,000 sets of vibration data. Through training, the CNN acquired the features of the raw

DVS data and.

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(2) Distributed measurement: Combined with the data acquisition card, it can realize distributed vibration monitoring of long-distance optical fibers, and obtain vibration information at various locations along ...



Ultra-high speed data acquisition and real-time automated processing simplifies operation, significantly reduces amount of data produced (KB/MB vs GB/TB) and enables more events to be simultaneously ...



Distributed optical fiber vibration sensing (DVS) technology, based on phase-sensitive optical time-domain reflectometry (phi-OTDR), uses optical fibers as sensing elements to provide ...



Featuring plug-and-play integration (no complex drivers) and industrial-grade stability, it is the ideal data acquisition solution for fiber optic vibration, and structural health monitoring applications.



The proposed scheme of the DVS is very simple and it does not need two acousto-optic modulators (AOMs) or electro-optic modulators (EOMs), or a narrow line width laser, or a high-speed ...



DAQ card for fiber optic sensing DVS 100MSps dual-channel high-speed acquisition fiber optic sensing demodulation card, which is a PCIe x8 Lane, dual-channel, 14bits respectively rate fiber optic ...



The DTS dedicated high-speed data acquisition card can accurately recover, detect and measure weak signals submerged by noise background, and is particularly suitable for distributed fiber optic sensing ...



Conventional DAQ for DVS systems often encounters a variety of signal problems, as well as the need for additional AWGs to get the job done. Therefore, we have developed a dedicated ...



We conducted experiments outdoors and collected more than 10,000 sets of vibration data. Through training, the CNN acquired the features of the raw DVS data and achieved the ...



Ideal-Photonics's DVS system uses the optical fiber itself as a sensor to feedback the vibration, temperature, stress and other variables at different positions, and achieve precise positioning.

Contact Us

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