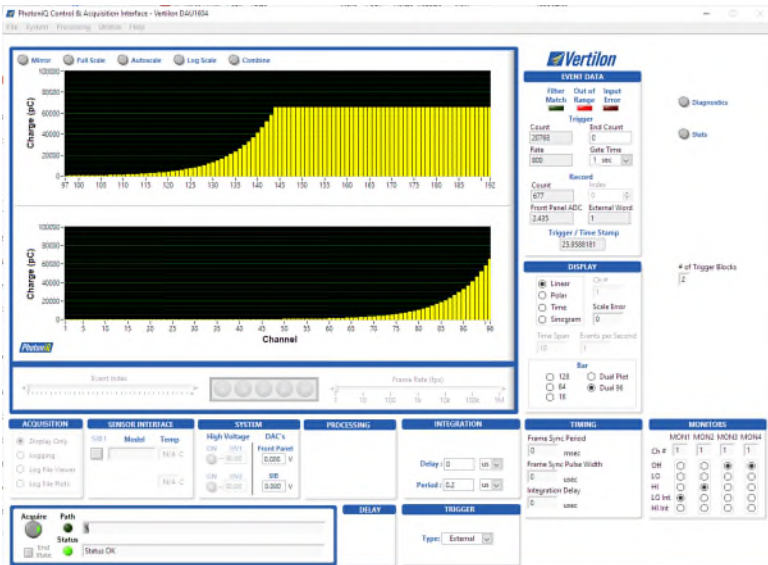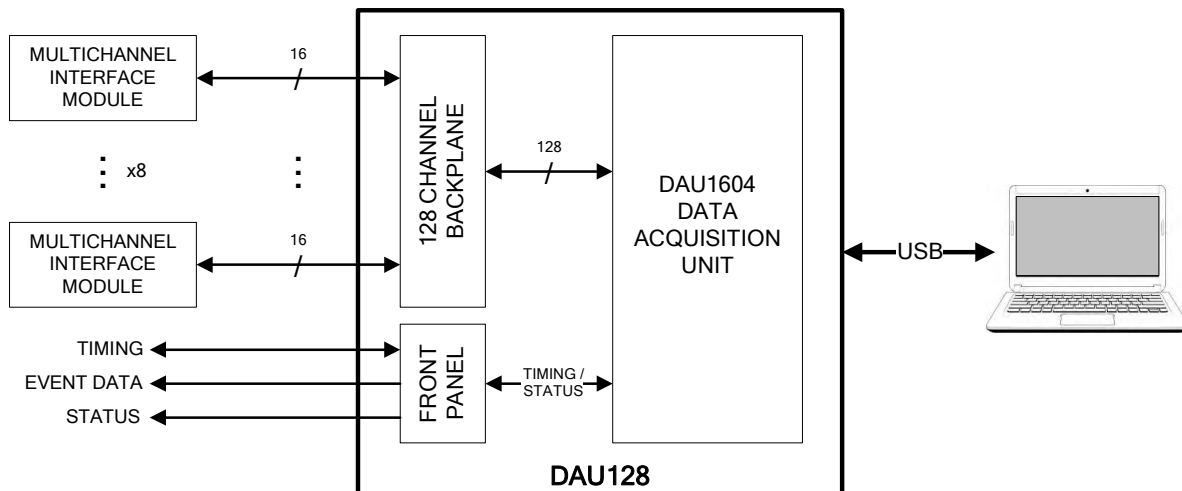## Description

- **High Speed Digital Data Acquisition System**
- **Optimized for Charge & Timing from SiPMs & PMTs**
- **Modular Design Simplifies Expansion**
- **Supports Different Front End Architectures**
- **Acquisition from over 1000 Data Channels**
- **USB Interface to Computer**
- **Configurable by a Graphical User Interface**
- **Real-Time Display and Logging**
- **Log File Playback**



## Applications

- **X-ray Inspection Systems**
- **Muon Tomography Imaging**
- **Non-Destructive Testing & Analysis**
- **PET Imaging Systems**
- **Fast Neutron Counting / Integration**
- **High Energy Physics Experiments**
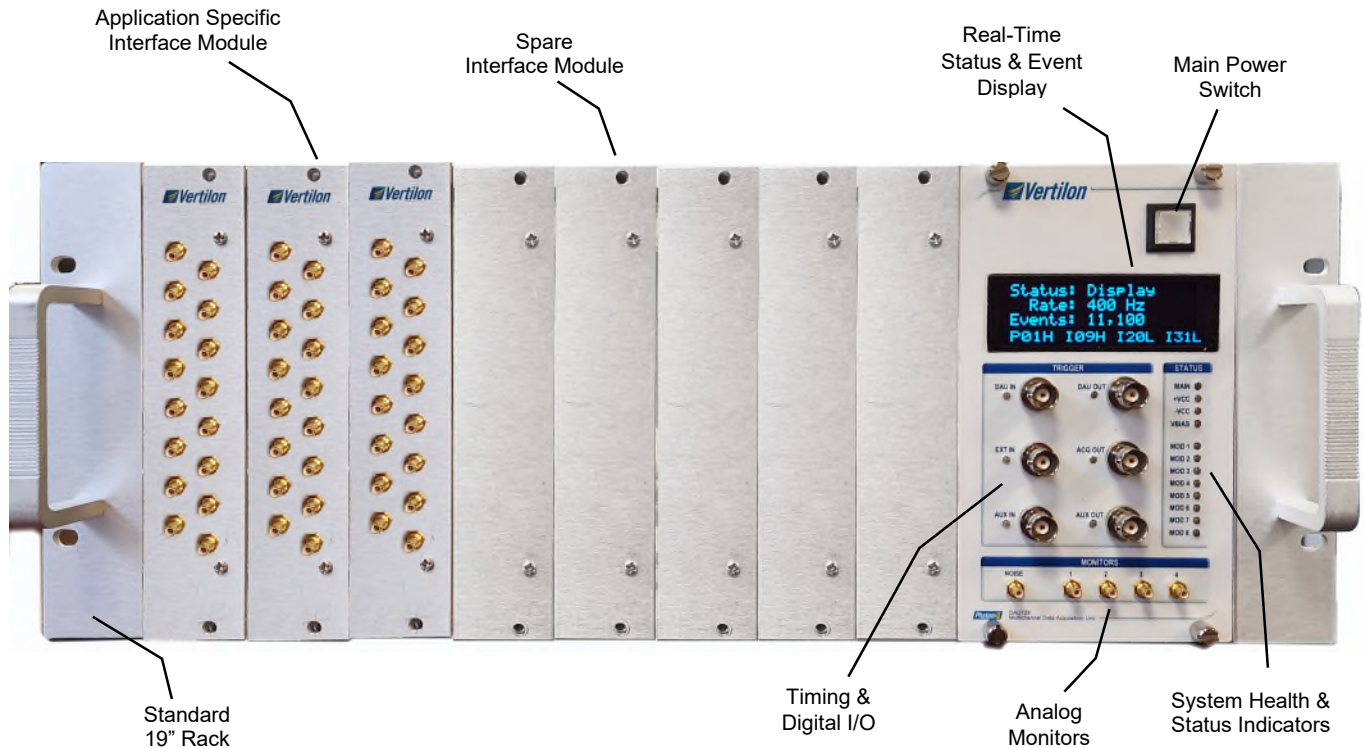
## Typical System Configuration

## Description

The DAU128 is a modular, fully customizable data acquisition hardware / software engine optimized for high channel count high performance data acquisition applications. It is designed to handle applications requiring hundreds of channels at high peak data rates such as high energy X-ray CAT inspection systems and muon tomography imaging systems. The unit contains eight slots in which custom-designed interface modules can be inserted. The interface modules can contain application-specific circuitry such as preamps, integrators, time delay, signal shaping, discriminators, digitizers, and other functionality. The backplane of the DAU128 consists of a data bus supporting sixteen parallel digital data channels from each interface module slot for a total of 128 parallel data channels. The channel count can be further expanded by sequentially transferring blocks of sixteen channel data from each interface module up to a practical limit of 1024 channels.

Vertilon customizes the DAU128 to meet the user's specific requirements. This includes the interface module configuration as well as the features and functionality of its graphical user interface. The application-specific interface modules are designed to comply with the DAU128's standard control and data transfer protocols. Vertilon works closely with the customer to define the system level specifications, software requirements, and interface module functionality. These modules are then designed and developed by Vertilon utilizing our proven library of signal processing modules, circuit functions, and firmware from our standard products for SiPMs and PMTs. Vertilon handles all development including circuit and software design, interface module assembly, and system testing. The result is a fully operational application specific DAQ system developed in the most cost effective and timely manner.

## Front & Rear Views

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