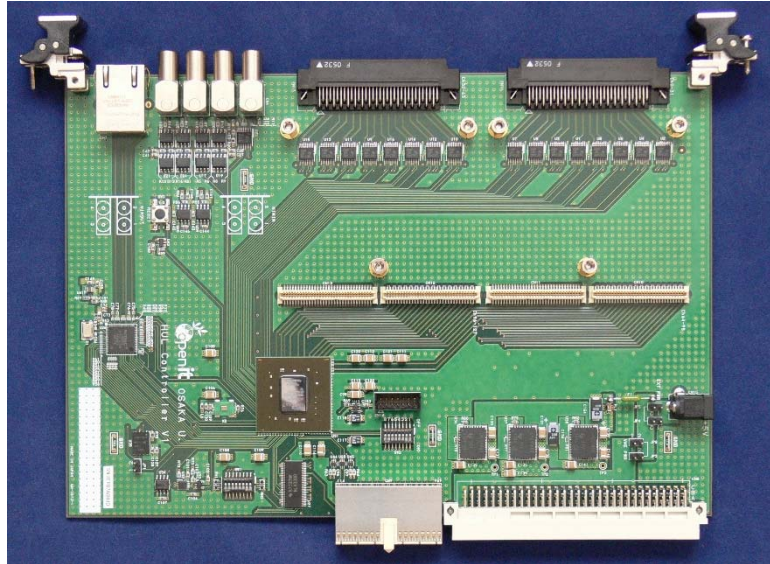

GN-1573-1 Hadron Universal Logic (HUL) controller module

Introduction

This module is a next generation universal logic module with the KEK-VME 6U standard. It aims to handle a lot of input signals using FPGA. This module is a low-cost universal logic module having one Kintex7 FPGA and adopting SiTCP as a data interface.



Features

The HUL controller has 64ch differential signal input ports and two mezzanine slots. By mounting the mezzanine cards, direct connection of 128ch inputs to FPGA can be achieved. The mezzanine cards are connected to FPGA by bi-directional LVDS. Then, the role of the mezzanine cards is not only a simple input device but also a signal output device, a signal digitizer by ADC, and so on.

The data interface is GbE SiTCP. In addition, this module supports the KEK-VME J0 backplane trigger. Thus, this module can be used as not only a trigger logic module but also a DAQ scaler and multihit TDC. As this module is powered by DC +5V from the J1 connector or from the AC/DC adaptor, the VME crate is not necessary.

Specification

Specification

- PCB standard : VME 6U
- Input
 - 64ch differential (ECL/LVDS) (Fixed ports on HUL controller)
 - 4ch NIM
- Output
 - 4ch NIM
- Mezzanine slots
 - 2
- Data interface
 - RJ45 (GbE)
- Power supply
 - DC +5V (J1 connector or AC/DC adaptor)
- Other interfaces
 - KEK VME J0 bus (Optional. Removal.)