CC-USB CAMAC Controller with USB interface

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The CCUSB is a full-featured CAMAC Crate controller with integrated high speed USB-2 interface and full CAMAC dataway display. It supports Master and Slave operations with complete CAMAC arbitration as well as auxiliary CAMAC controller operation.

For fast data acquisition applications the CCUSB has a built-in command list sequencer with data buffering in a 22kB size FIFO. Combined with the front panel I/O ports this allows CAMAC operation and data taking without any PC or USB activity.

The integrated CAMAC dataway display as well as additional LED's for the controller / USB mode provides all necessary system information.

A XILINX Spartan 3 family FPGA performs all CCUSB logic and functions. Upon power-up the FPGA firmware is loaded from a flash memory. The configuration flash memory can be reprogrammed via the USB port, allowing convenient updates of the firmware. Up to 4 different firmware versions can be stored and selected for boot.

Main Features

- high speed USB2 interface, auto-selecting USB2/USB1,
- 3 user-programmable NIM inputs (LEMO), 3 user-programmable NIM outputs (LEMO) with pre-defined functions as

trigger, counter, gate and delay generator, pulser, time stamp
- visual data and status display with 54 red/green/yellow LED's (N, F, A, R/W data, Q, X, C, Z, user defined)
- FASTCAMAC level 1 support
- Built in CAMAC list sequencer for DAQ readout mode, readout triggered either via USB link, LAM, or by a trigger signal into NIM input

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> DAQ readout modes:

  > Single word transfer (16- or 24- bit)
  > Q-stop (repeated readout of the same A and N until Q=0 is returned)
  > Q-scan (repeated readout with A and N increment until Q=0 is returned)
  > Autonomous (intelligent) readout pursuant to user-programmed stack, 1k of 16-bit stack memory
  > conditional readout gated by 16-bit hit register (quadruple OR of 16-fold ANDs of hit bits and programmable mask bits)
  > optional (slot-based) wait-for-LAM with programmable LAM timeout
  > optional (slot-based) skipping of S2 strobe (500ns cycles)
  > stack supports Q-stop and Q-scan mode entries
  > stack supports FASTCAMAC mode entries

> High data rate performance, up to 3MB/s (CAMAC) and 12MB/s (FASTCAMAC)
> 22-kByte data buffer (FIFO) with programmable level of transfer trigger
> Microsoft Windows (32-bit/64-bit) and Linux drivers and support, LabView VI's (version 7.1, 8.0 -8.6, 2009 -2012)
> supported by scientific data acquisition software packages:

  > K-Max by Sparrow Corp. (Mac OS-X and Linux)
  > MIDAS - TRIUMF and PSI (Linux)
  > MSU NSCL DAQ (Linux)

Package	Items
CC-USB	CC-USB, USB-2 interface cable, CD-ROM with manual and software

No further technical details available! Please see Features and documentation!

Product Data Sheet

CC-USB CAMAC Controller with USB interface:	Print Product Data Sheet

Documentation