

# ListMode Data Acquisition

## The Solution – List Mode

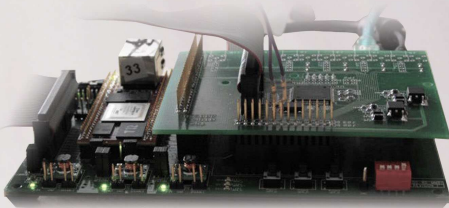
- Data gathering
- Series of Filters
- Histogram generation
- Events are recorded in lists
- Lists are processed into histograms
- Lists remain available for revisiting (reanalysis)

### LisTDC 3 specific products:

- With ACAM chip/a (serial/parallel)
- With ACAM chip/b (Time Stamp)
- Only FPGA (Isherd)

### LisToF (Similar to TDC)

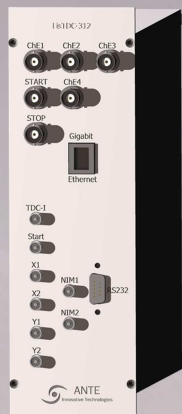
- Uses only General Events
- Measurement of a number of parallel events
- Synchronization of Units
- Customized connectors
- 30 up to 200 Channel Management (1 Device)



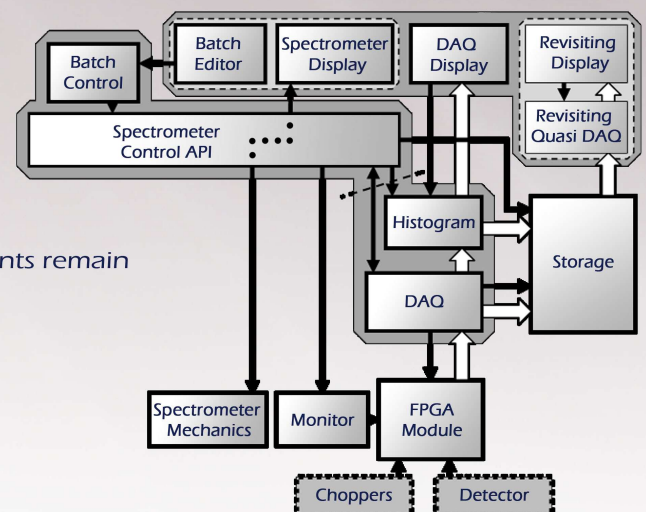
### LisMon

- Standard functionality Monitor (Inhibit)
- List Mode Monitor (Start/Stop)
- Advanced List Mode
- 9 - I/O connectors:
- Counter IN (NIM,TTL)
- Counter Out
- Start, Stop
- Inhibit, Inhibit (NIM, TTL)
- +Ethernet for programming

### 2D TDC



### Product Structure



Common 2D Event List
TS XY
TS Chopper
TS XY
TS XY
TS Chopper
TS XY
TS XY
TS Chopper
TS XY
TS XY
TS XY
TS Chopper
TS XY
TS XY
TS XY
TS Chopper
TS XY

### Common 2D Event List

- 2D information (X & Y) extracted from Stop signals
- Filtering: i.e. is X1+ X2 consistent?
- Only 'neutron hit' events and general (Chopper...) events remain

Spectral 2D Event List
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ
TS XYλ

### Spectral 2D Event List

- 2D plus wavelength information extracted from Chopper events
- Filtering: e.g. by wavelength intervals
- Only 'neutron hit' and general events remain