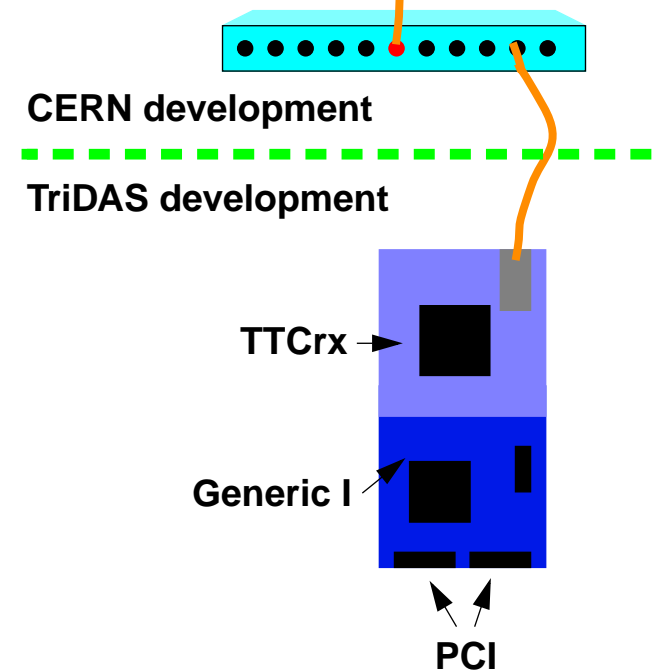
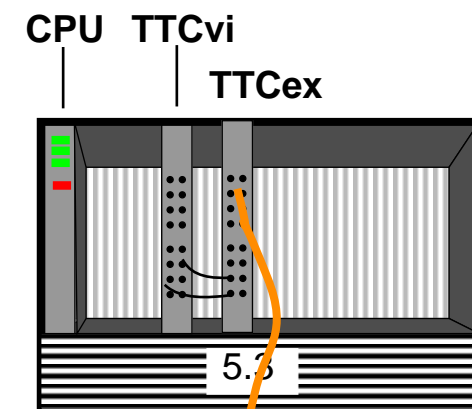
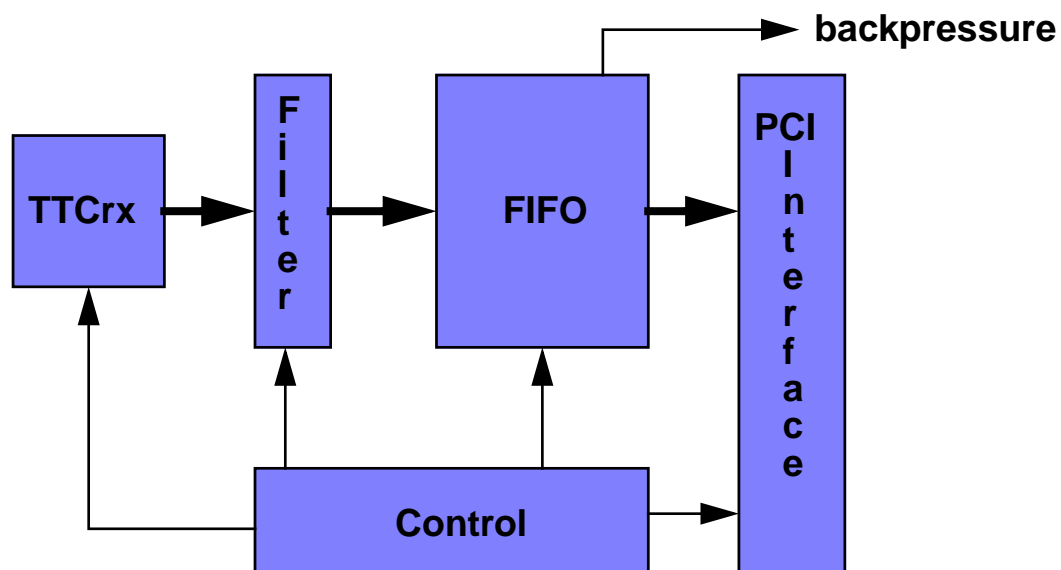


# TTC test setup: today and tomorrow

- The current setup
  - Architecture
  - User-Interface (Hardware and Software)
  - Use in DAQColumn
- The future setup
  - Improvements
  - Possible usage
  - Call for ideas of potential users

## Architecture of current TTC-test setup : Hardware

- Hardware Platform :
  - Sender: TTCvi + TTCex + FanOut
  - Receiver: Generic I + TTCrx extension card
- Functionality of receiver setup

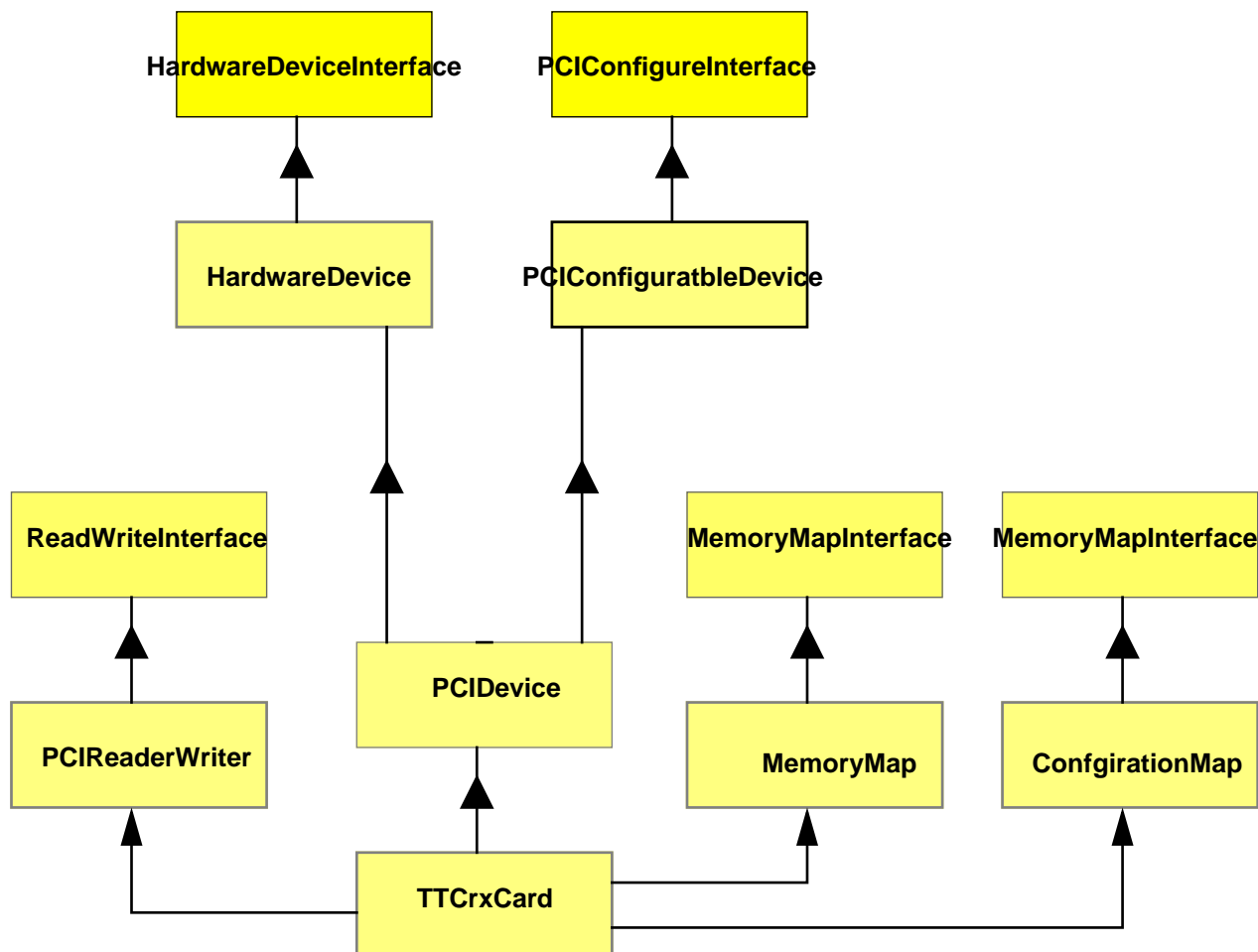


## User Interface

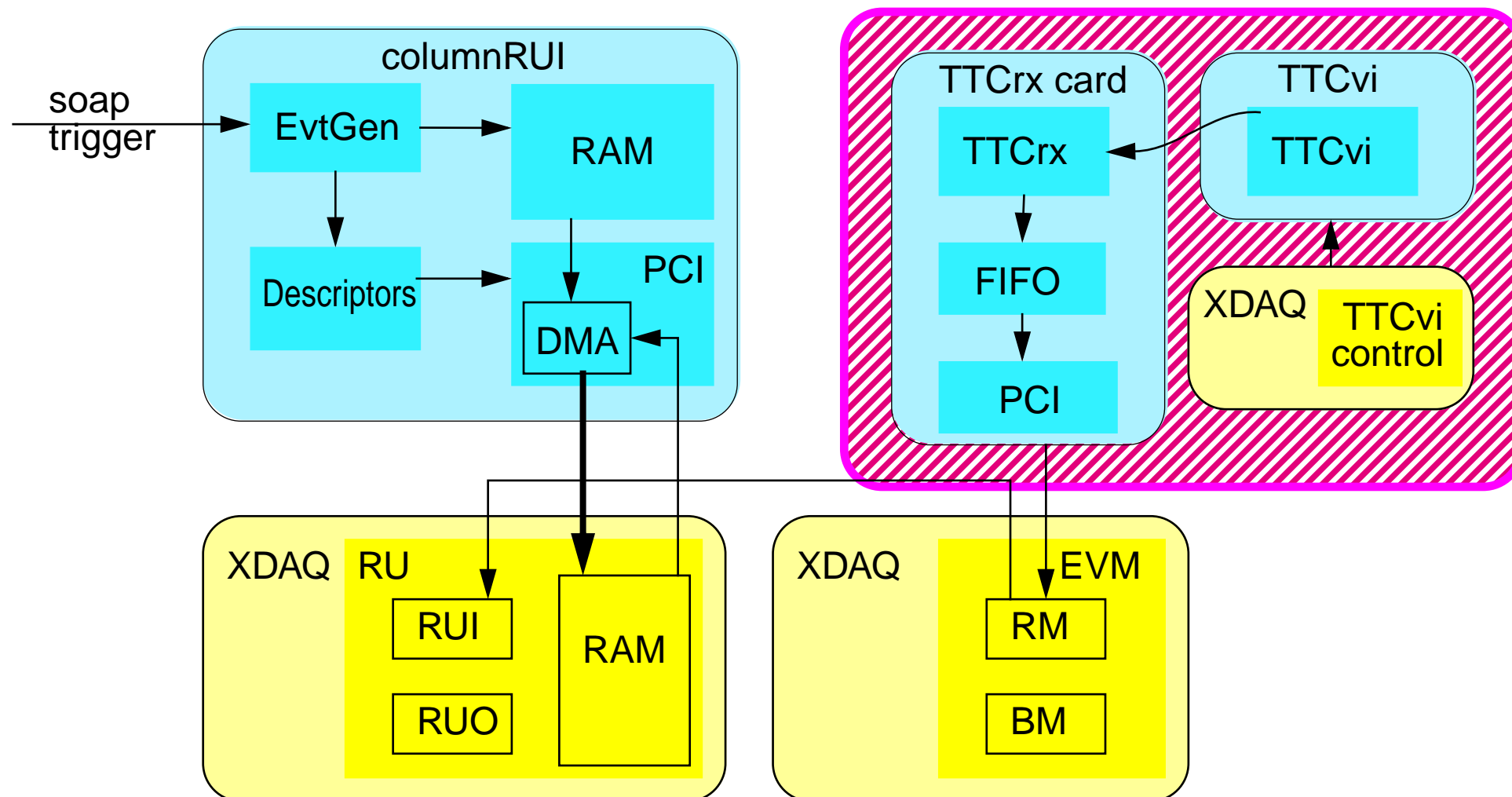
- Filter Information to be written into the Fifo
  - Trigger Information : bunch crossing number & event number
  - Broadcast Commands
  - individual addressing commands
- Programmable Backpressure Level
- Readout via PCI Interface:
  - Status :
    - number of words in Fifo
    - status of TTCrx
    - backpressure bit
  - Data :
    - readout Fifo

## Architecture of current TTC-test setup : Software

- OO code in C++
  - generic Hardware access library for PCI or VME cards
  - platform specific libraries for Hardware Access
  - hardware specific libraries with specific module functionalities (for TTCvi, TTCrx)
  - Design emphasis on “user friendly software”



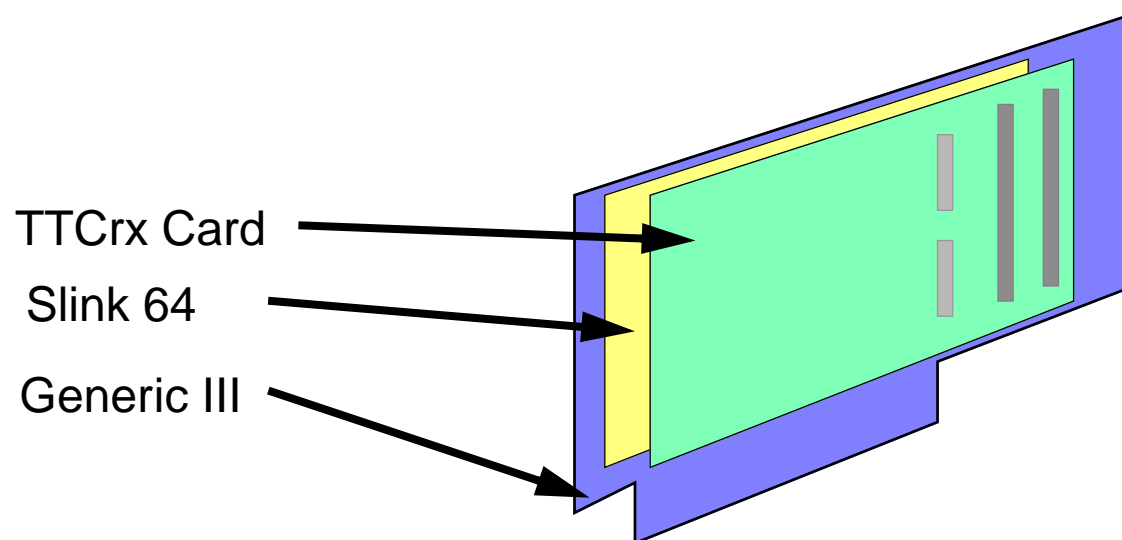
## Use in DAQ-Column



# The Future setup

- Suggested Improvements

- Change of Base platform : Generic I --> Generic III (PCI from factor)  
(faster & larger FPGA, more I/O, possibility to interface with SLINK (see later))
- Robust TTCrx hardware setup : TTCrx on PCB board
- A series of multi-purpose Front Panel connectors for different electrical levels  
(TTL, NIM; chosen with jumper)
- Implement PCI Interrupt on Fifo Almost Full



## Possible Usage

- **FED Tester**
  - Connect the FED via the SLINK with the Generic III
  - Readout the data of the SLINK with a PC
  - Cross check read data with Trigger Information from TTCrx Card
  - possibly use the front panel connectors of TTC Card to trigger your FED
- **FED Emulator**
  - Implement a complete FED in the Generic III  
(as above + a dummy data generator)

## Call for ideas

# Do you have other ideas

you want to have implemented in the setup GenericIII / TTCrx

???