

# Slow controls

based on ALICE DCS card  
(Heidelberg KIP)

How does it work

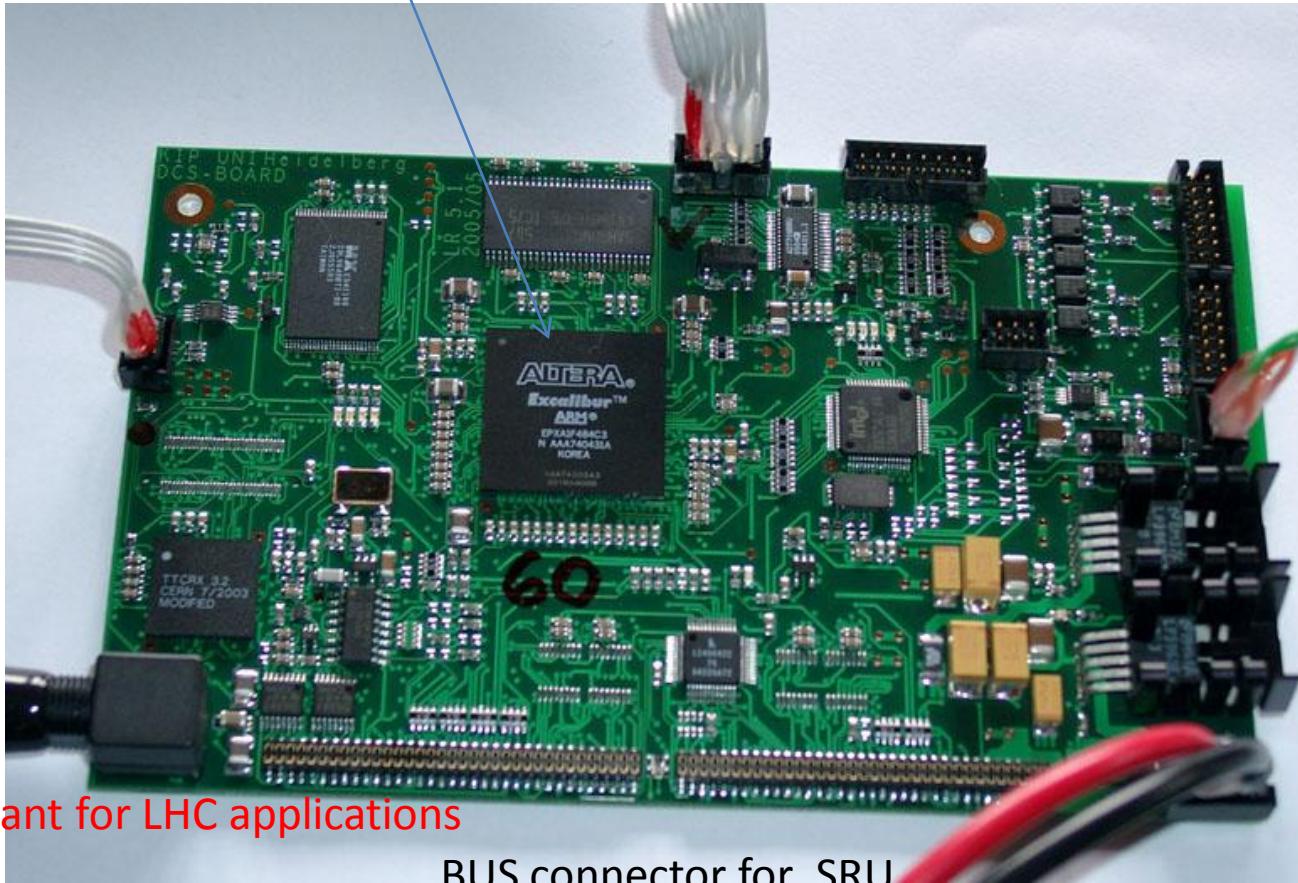
# DCS mezzanine

Micro-Linux in Altera FPGA

RS232

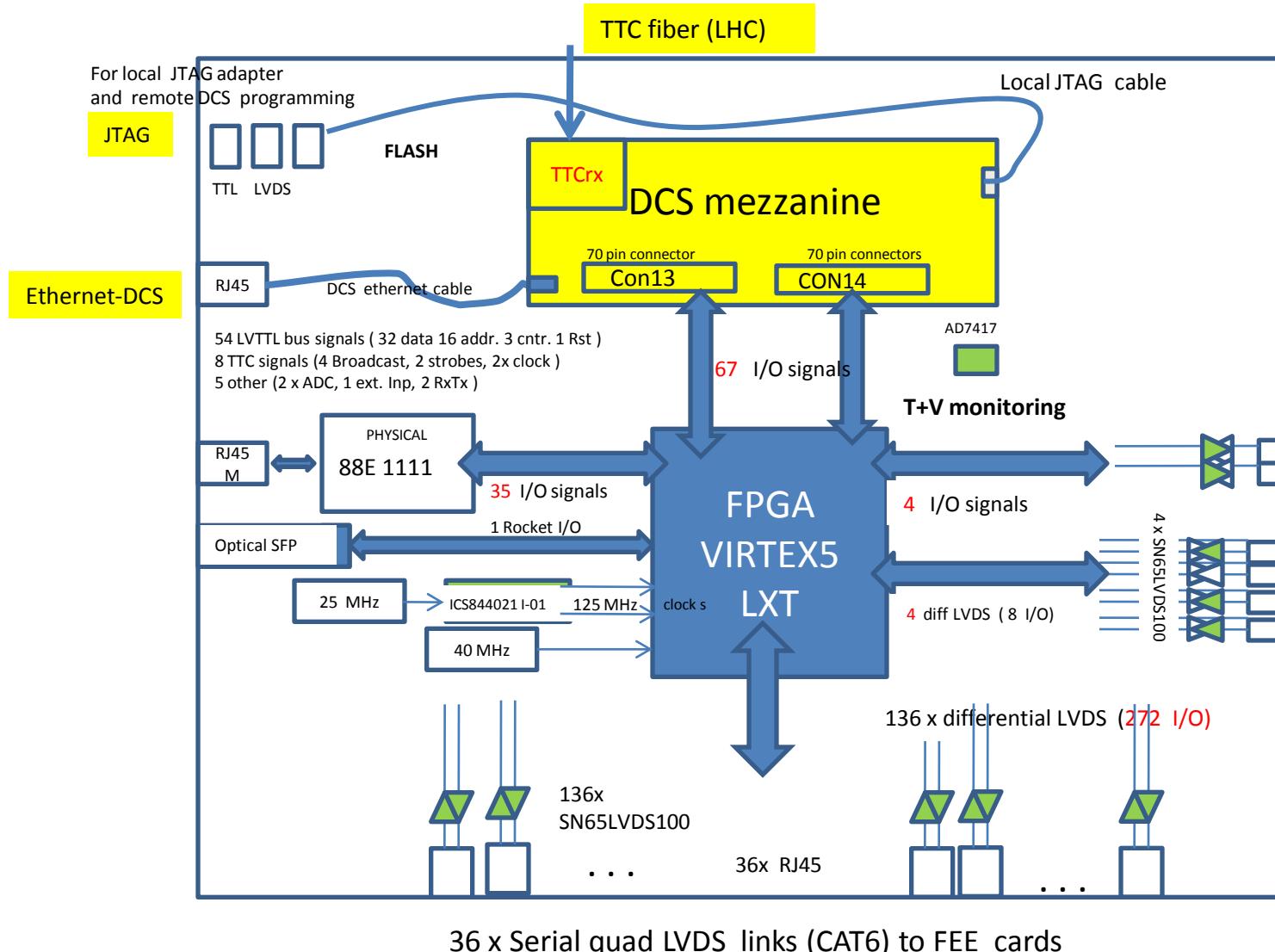
Optical TTC  
Receiver

Only important for LHC applications

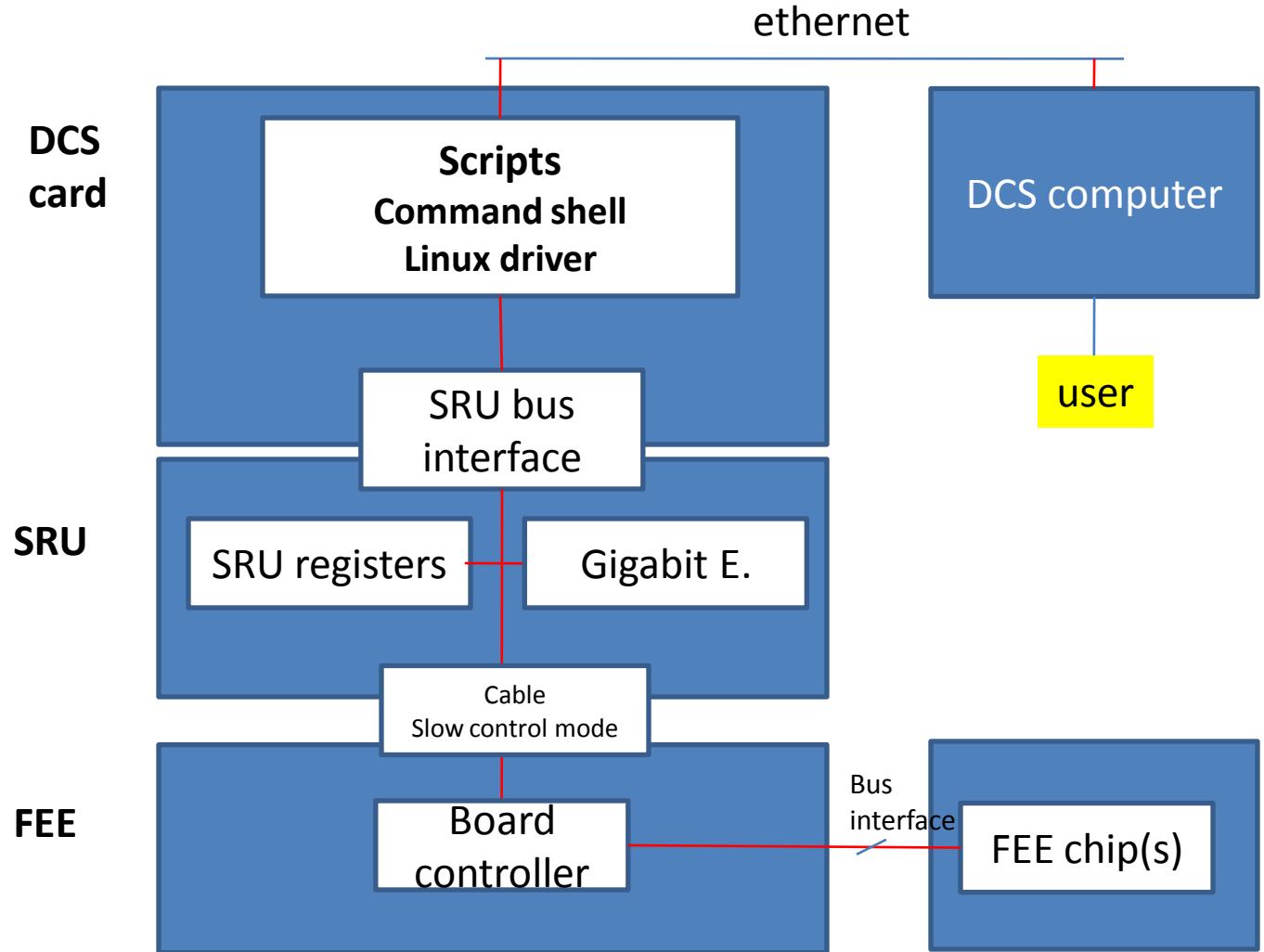


BUS connector for SRU

# DCS mezzanine on SRU



# Slow controls Overview



# Lowest level: shell scripts (example)

Linux boot

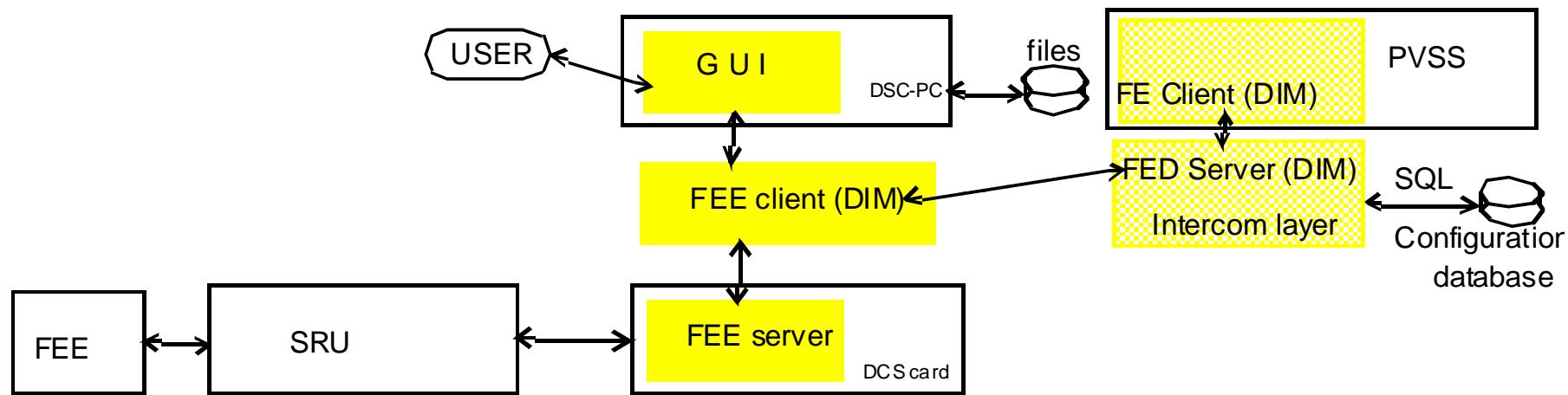
```
*****  
* Welcome to the DCS Board *  
*****  
executing /etc/profile  
  
FIRMWAREVERSION=v2.4uib  
  
dcs0034:/ $ cd dcs  
  
dcs0034:/dcs $ rcu-sh  
  
open device: using message buffer v2 format for  
firmware version 2.4  
  
current driver version 0.5 - debug  
  
*****  
  
rcu bus easy read/write access  
version 1.4 (compiled Feb 15 2006, 15:50:09)  
Matthias Richter, University of Bergen  
Matthias.Richter@ift.uib.no  
  
enter operation (h/i/q/r/w):b init.scr
```

Run script

executing: wait 1 s  
executing: w 0x2002 0x0  
executing: wait 1 s  
executing: w 0xe000 0x0 #bus control  
executing: wait 1 s  
executing: w 0x2001 0x0  
executing: wait 1 s  
executing: w 0x2001 0x0  
executing: wait 1 s  
executing: w 0xe000 0x0  
enter operation (h/i/q/r/w):  
terminating batch processing, please wait ..  
enter operation (h/i/q/r/w):

Script execution

# TOP level: Integration in LHC DCS system (Alice)



Users of medium sized systems may use any kind of GUI like Labview to execute pre-stored scripts on user buttons