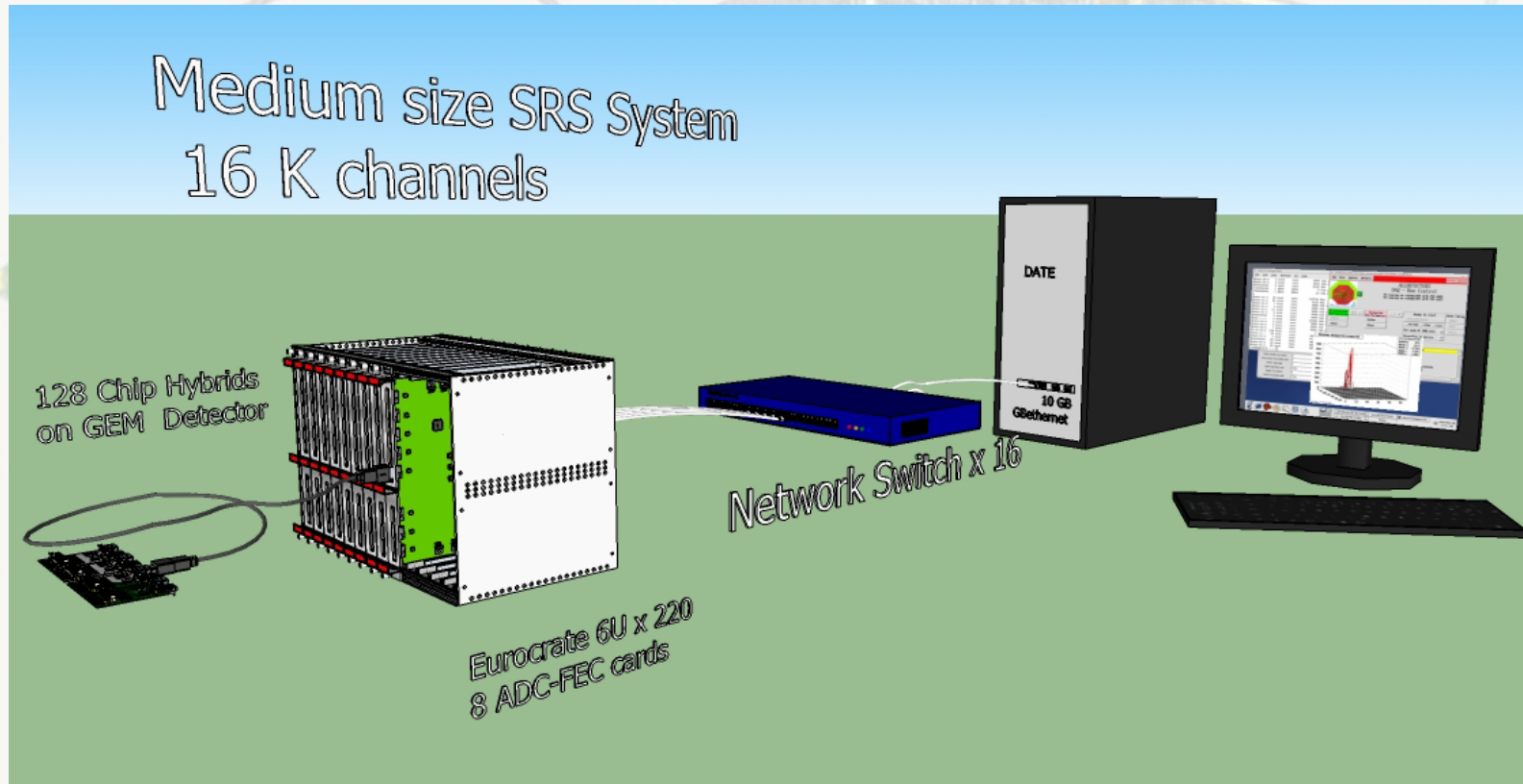


# SRS target by end 2010: 16 k channel system



# Frontend hybrids

so far all based on APV25 chip

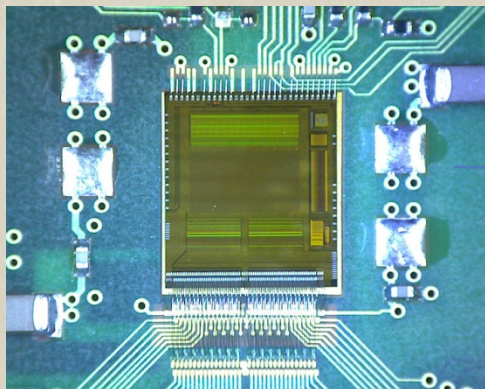
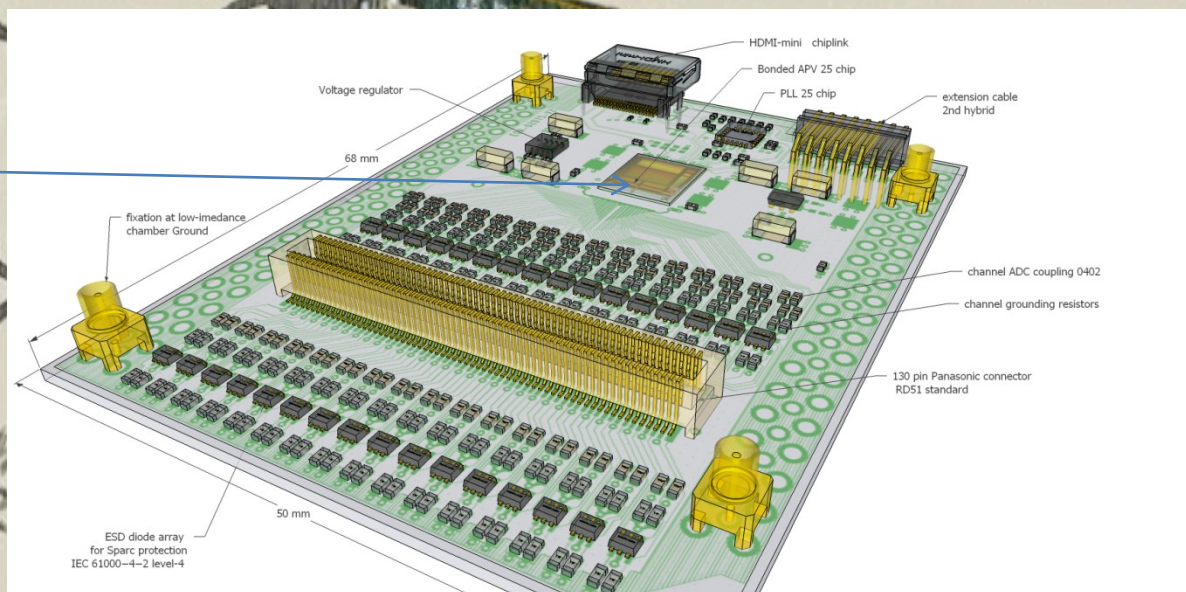


Photo of wire-bonded APV  
on RD51 hybrid Version 3

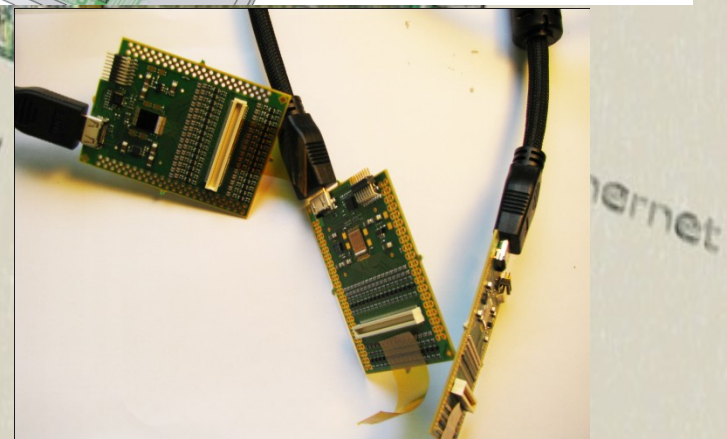


Version 1 proto: 5 working ones

Version 2 users: 11

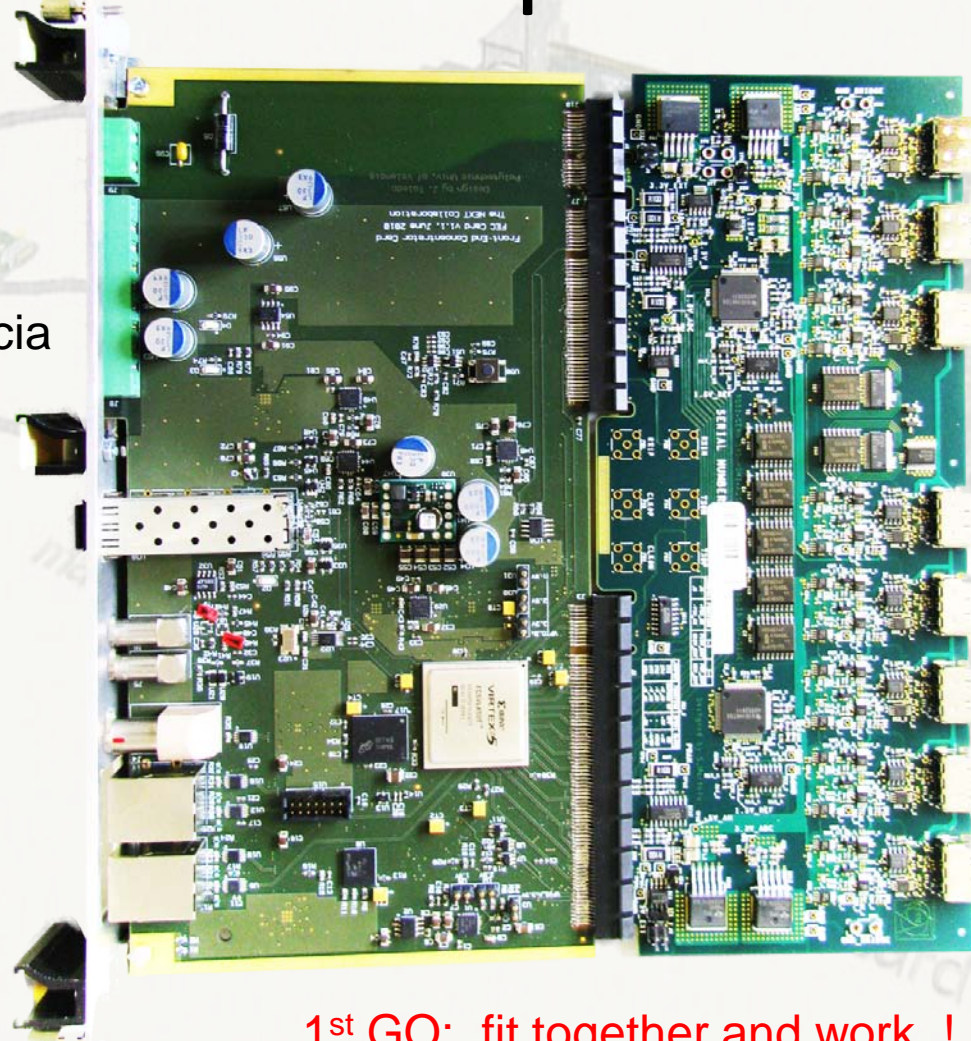
Version 3 systems: 15 (CERN: Rui + bonding service)

**292** (ELTOS + Hybrid SA )  
under production this week





# FEC and ADC adapter assembly



FEC card  
designed @UPV-Valencia  
by J.Toledo

Firmware:  
Gigabit ethernet  
Alfonso Tarazona

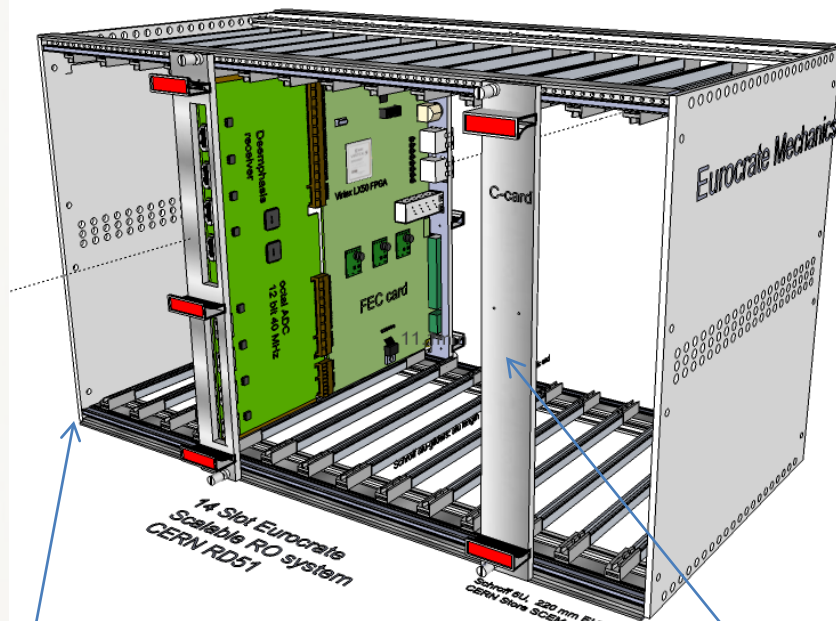
Octal ADC card  
designed @cern  
by S.Martoiu

Firmware:  
Data processing  
and buffering  
S.Martoiu

**1<sup>st</sup> GO: fit together and work !**

minor modifications for volume production

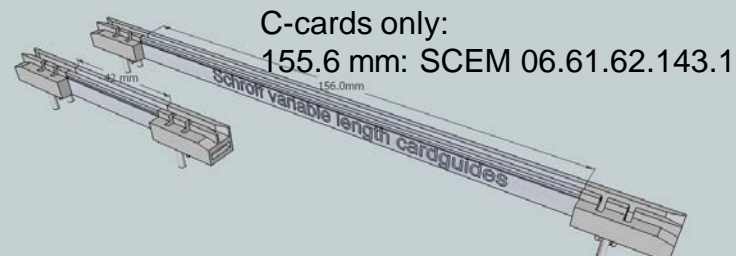
# Eurochassis 6U x 220



**Chassis:** 6U x 220 mm, CERN  
SCEM 06.61.61.045.7  
Fabricant ATOS  
<http://www.atos-racks.com>

**C-cards and FEC cards:**  
Front panel set 6U-6TE with fixations:  
CERN SCEM 06.61.63.156.3

A and B cards:  
41.6 mm: SCEM 06.61.62.143.0



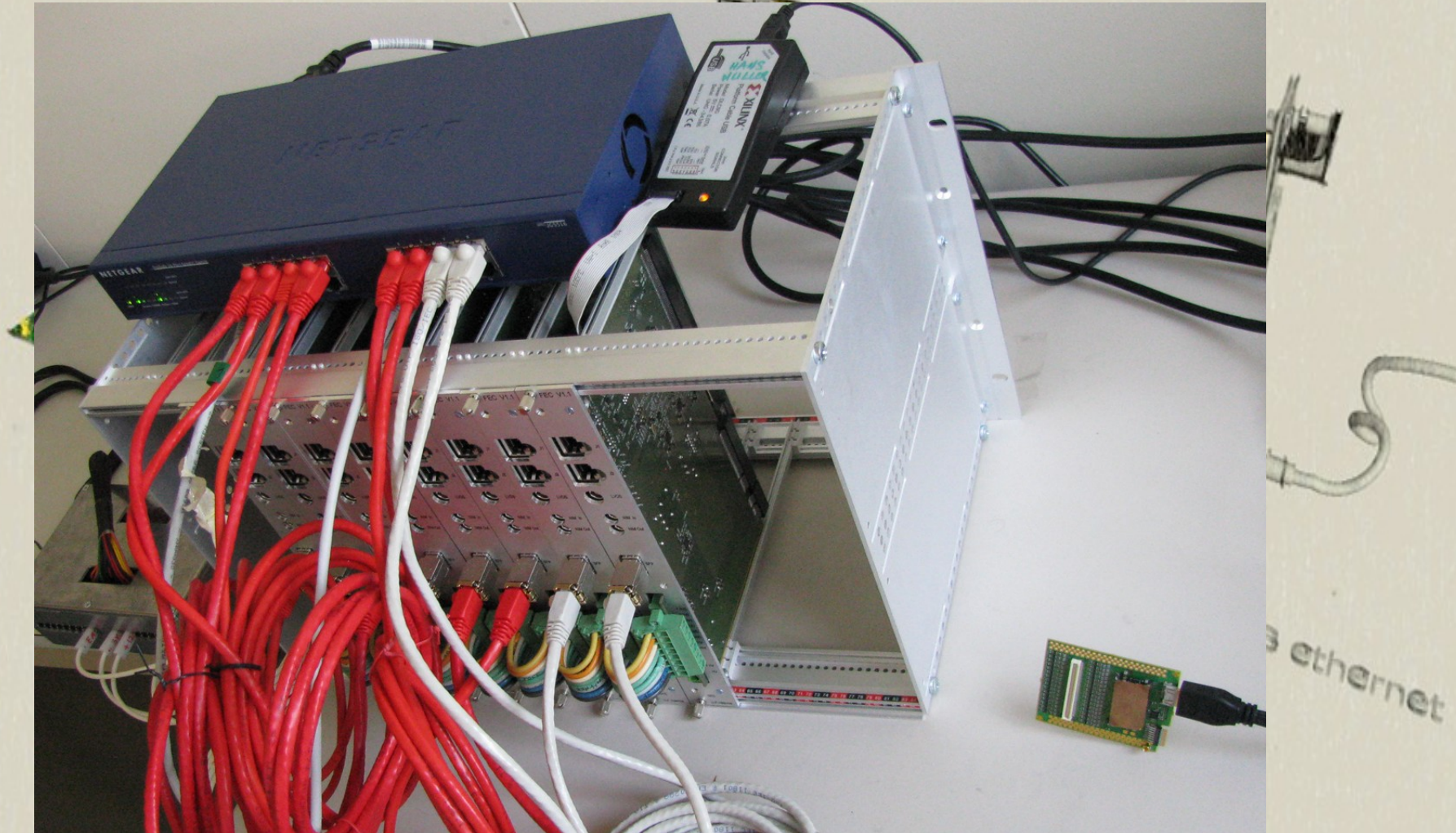
Card guides for SRS CERN store:

## **A-cards and B-cards**

Front panel set 3U-6TE with fixations:  
CERN SCEM 06.61.63.056.6



# Online(DATE) via 8xGbE Switch



→ requires SRU





# About chip candidates for SRS

SRS was designed to allow choice of frontend chip

the optimal chip interface is serial ( analogue or digital )

RD51 maintains a chip matrix under

<https://espace.cern.ch/rd51-wg5/chipmatrix/default.aspx>

please tell us if you want to add a chip to the knowledgebase

popular chip candidates: APV25, Beetle, VFAT, AFTER

The first SRS chip adapter implementation was made  
this year for the APV25 (+Beetle)

VFAT is on hold until it becomes available (

AFTER and NX-YTER would require some team to build the adapter

Adapter for BNL chip was started by ATLAS/Univ. O. Arizona

Adapters for emerging chips, MICROROC, Medipix are considered

More chips possible, their integration in SRS is user-driven

# SRU -2010

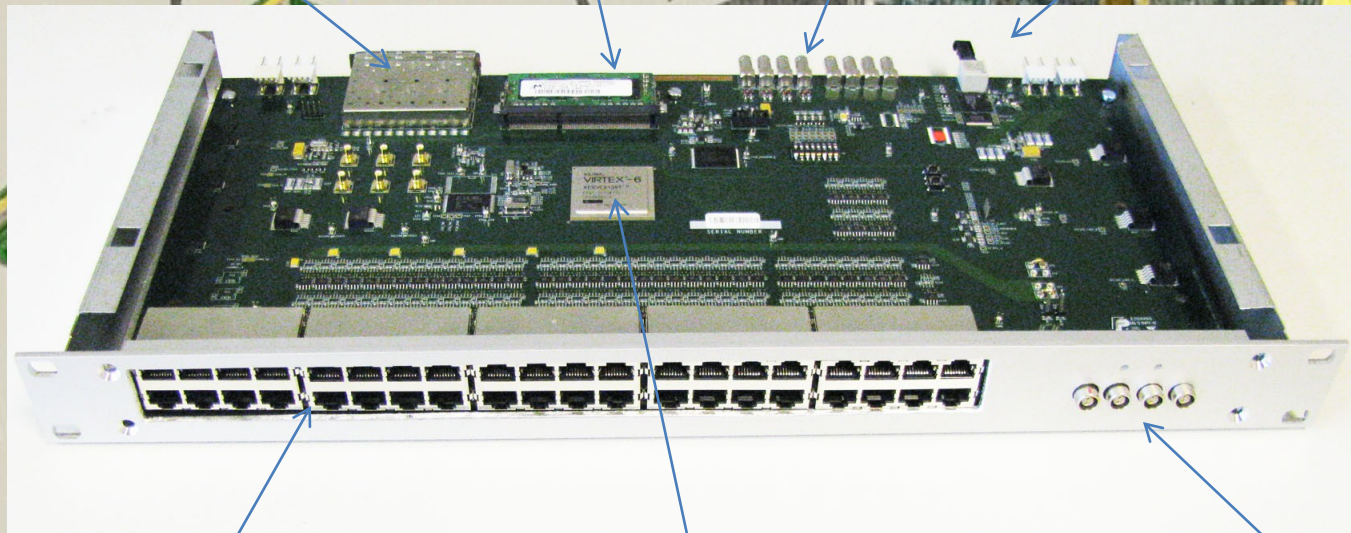
Gbit Ethernet, copper/fiber

Quad SFP+

DDR3

NIM I/O

TTCrx



1U x 220 chassis

40 x RG45  
(DTC link to FEC's)

VIRTEX-VI

4 x LVDS