

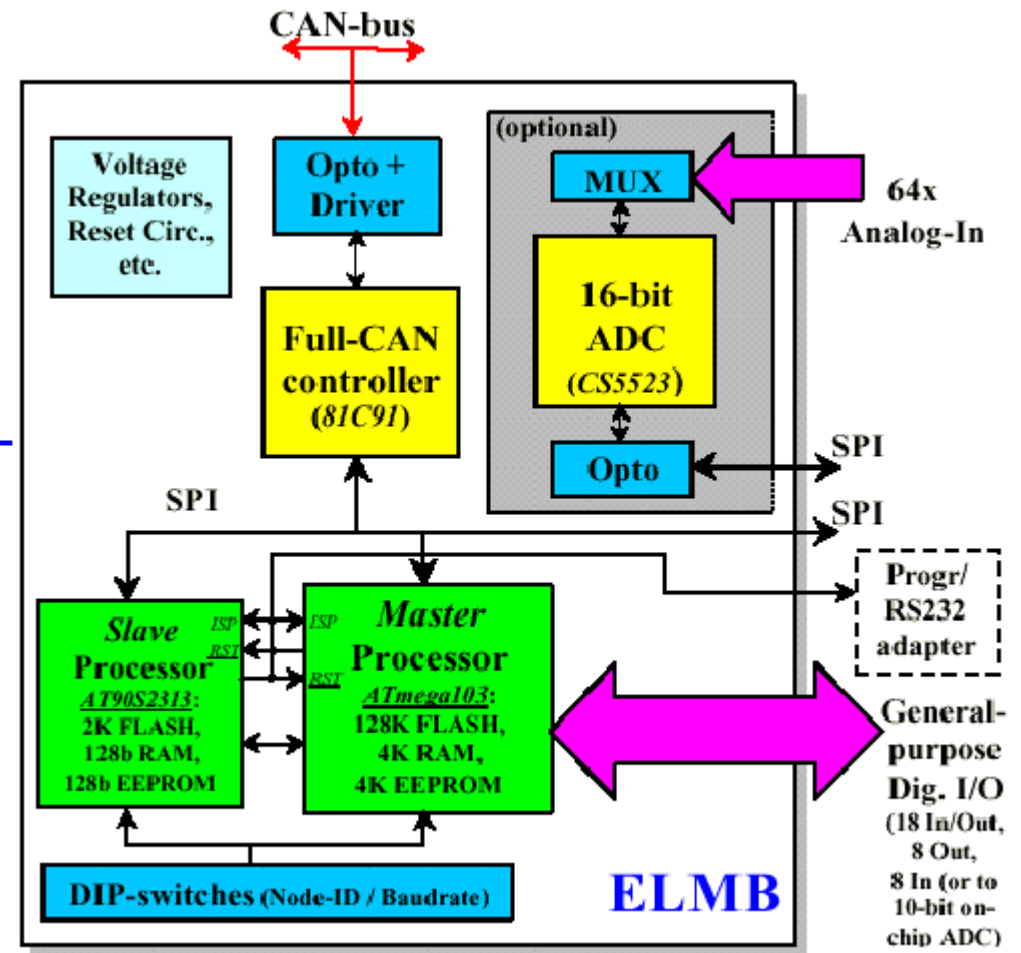
DCS

- ELMB hardware
- ELMB software
- SCADA
- Interfaces

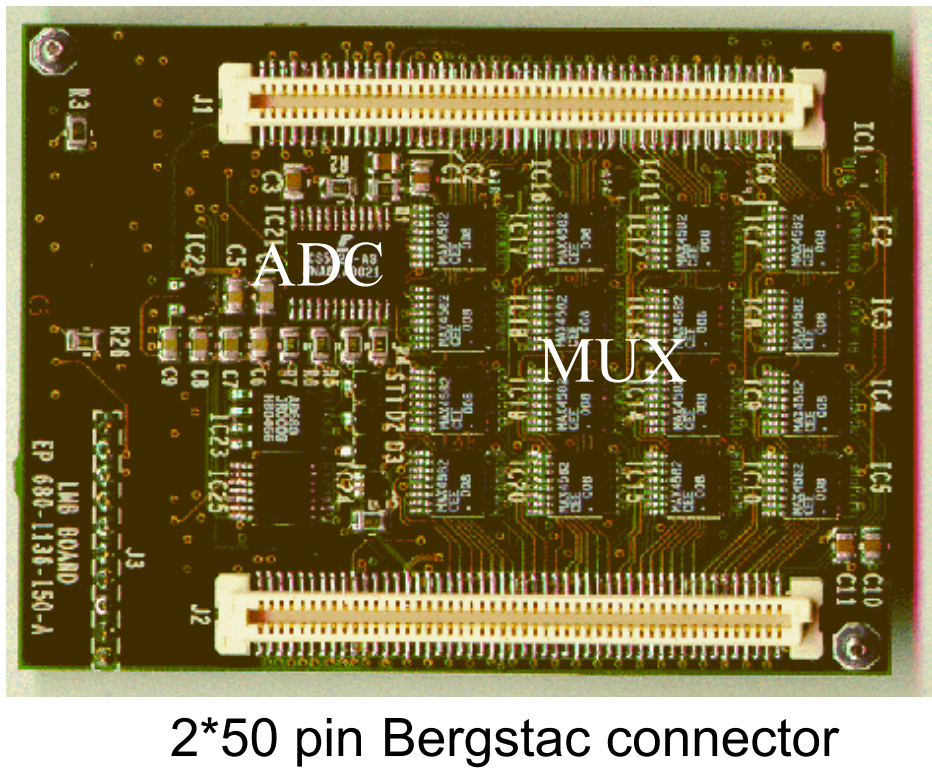
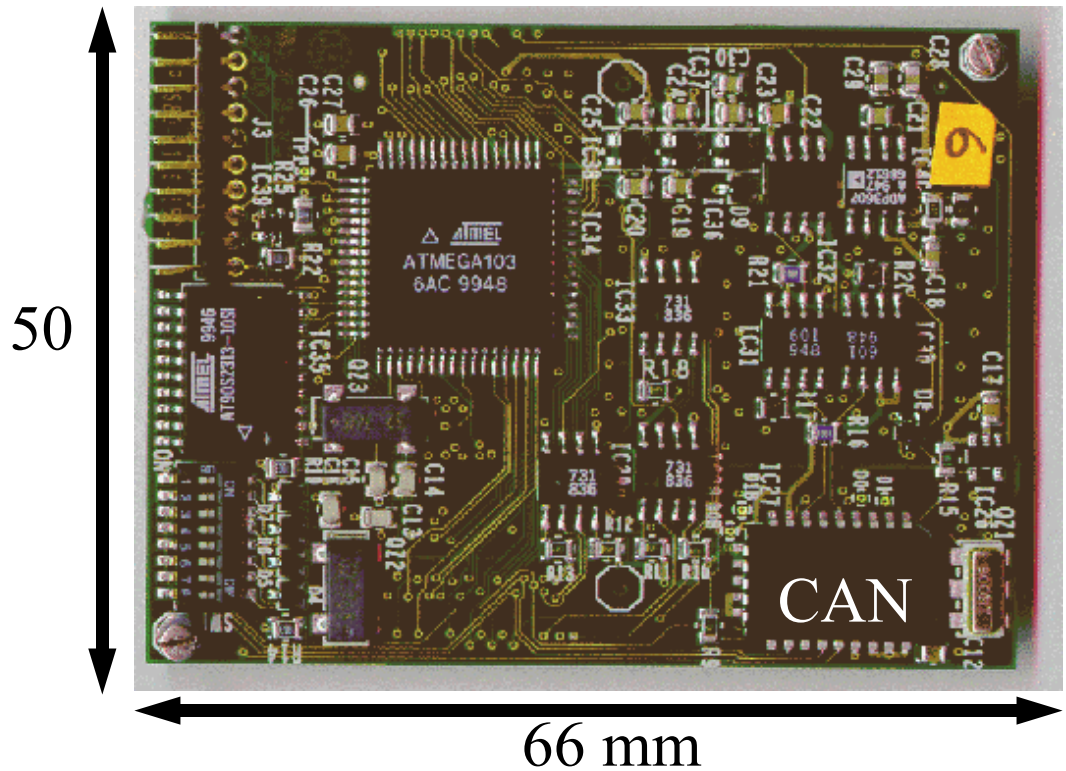
ELMB hardware

- Credit card size CAN processor module
- 2 processors, on-chip low resolution ADC, 8channels
- 64 ch muxed ADC 16 bit + 7 bit range
- Digital I/O, DAC?
- SPI, JTAG, I2C ports

useful to us ?



ELMB board



2*50 pin Bergstac connector

ELMB status

- 20 pc in production (15 Oct 2000)
- 20 prototypes will be available Nov. 2000 1→Mainz
- A first series of the ELMB will be produced to June 2001. 10→Mainz
- Cost CHF 250 (150 w/o ADCs) ↓
- Modifications possible (I2C, DACs, JTAG) on request

ELMB software

Standard firmware available:

- Communication via CANopen protocol
- ADC read-out
- Compare to thresholds
- Action on change of state...

Can be customised by the user (C-compiler ~ 200\$)

SCADA (Supervisory Control and Data Acquisition)

- SCADA is the high level control software package
- Commercial package PVSS from Austrian company ETM chosen by **J**oint **C**ontrols **P**roject group (ie. LHC-wide)
- runs on both Linux and WinNT / W2000 on a PC
- Available to all ATLAS institutes for free. Need to sign agreement to obtain access to S/W
- Training courses at 1000 CHF pp pwk ! (weeks 48 and 49 and 3)

Interfaces

front-end system:

- Subdetector groups need to provide software connection to SCADA unless standard components/standard protocols are used
- Standard hardware is ELMB
- Protocol is CANopen
- Hardware will normally be connected via OPC (OLE for process control) server running on WinNT
- OPC server available from CERN

DCS - DAQ Connection : DDC

- exchange (status) data with DAQ, send messages to and receive commands from DAQ

And what are we going to do ?

We have a choice of either using our own CAN hardware and writing our own CANopen compliant firmware >>> cheap

or

use ELMB >>> 150/250 CHF/module

In either case A. Trigger-Person will have get used to SCADA soon, if we want to exercise our CAN circuitry in the slice test ...