

DT CHAMBERS: Manometers Honeycomb Panels Wires

Hans Reithler
040428

Manifolds with sensors and preamplifiers:

- Mechanical production: finished
- Electronic assembly: finishing this week
- Calibration: running routinely
- Shipment to CERN: in advance of needs

PADC box:

- All boxes available
- Cutout for 5 cables and cable protection defined
- Machining done by end June



Pressure ADC board ("PADC"):

- Key tests done successfully on PADC boards: I2C access, magnetic field, irradiation, reprogramming via I2C bus, to evaluate several main chips.

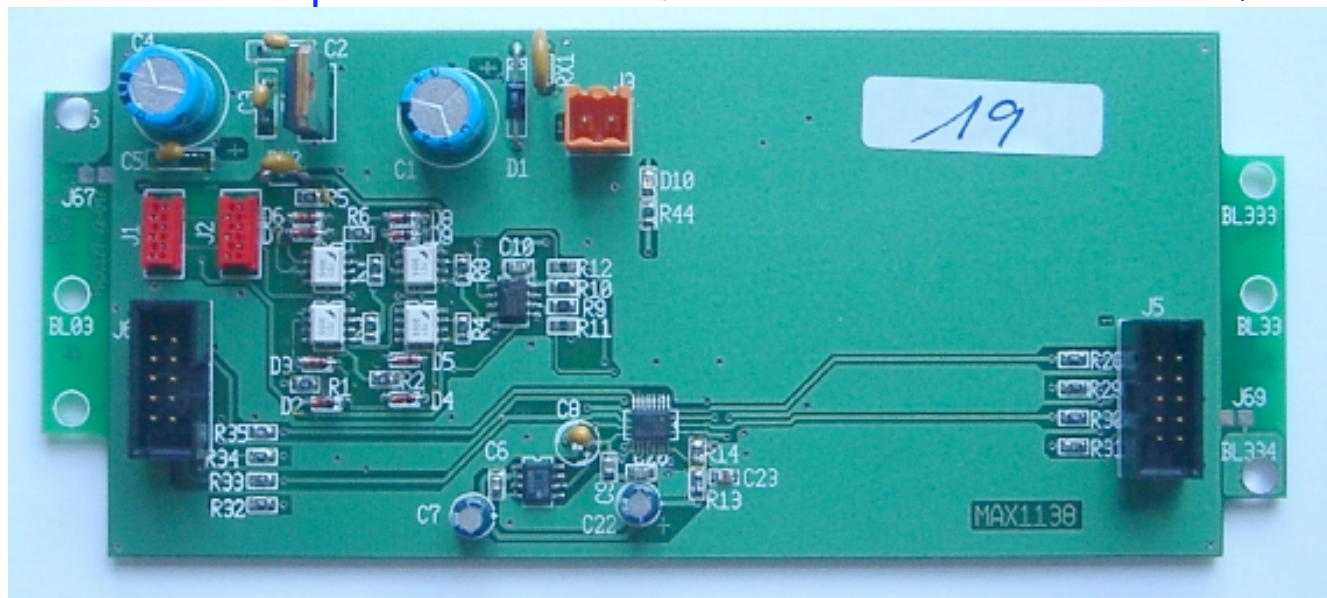
- Tests done by Aachen and Debrecen

- Main chips considered:

AT90S8535, ATmega8535, ATmega128 (ADC, calibration tables, autonomous measurement and monitoring, diagnostic tests, reprogrammable in situ, ...)

Maxim127, Maxim1138 (ADC only)

- Boards and components **ordered for version with Maxim1138**; arrived today.

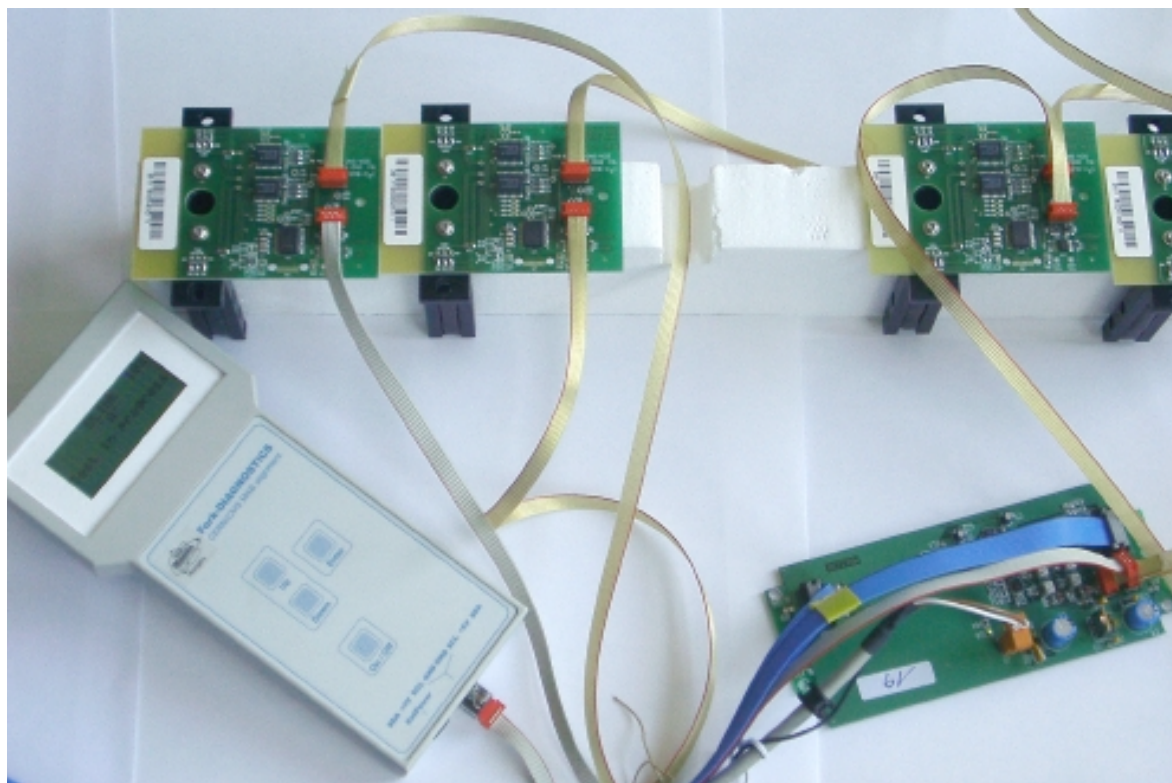


PADC version
chosen

- Assembly + calibration: ready to ship to CERN ~end July.

System tests:

- Running 4 LED "Forks" + 1 PADC on same bus, as on DT: no interference observed
- Test including MiniCrate: to be done, when MC available



Bench test of 4 LED "forks" for alignment (top), together with 1 PADC board for manometer readout (bottom right), connected to common I2C bus via cables as used in MB3 chambers. See hand-held tester (bottom left) used to drive the LED "forks" via the I2C bus.



Interface USB-I2C, as made at Debrecen

In situ rapid test:

Debrecen proposing to build hand-held tester for manometer readout.

Honeycomb panels:

040320 HR
final list

DT type: lab: install: spares: total:

MB1	A	58	4	62
MB2	M	58	4	62
MB3	L	58	3	61
MB4	T	29	2	31
MB4/4	L	8	1	9
MB4/8,12	T	10	1	11
MB4/9,11	A	10	1	11
MB4/10	M	10	1	11
MB1 chimney	A	2	0	2
MB2 chimney	M	2	0	2
MB3 chimney	L	2	0	2
MB4 chimney	T	1	0	1
MB4/4 chimney	L	2	0	2

File: 040320hc_panels_qty_final_HR.

Total produced 250 17 267

Production, delivery, invoices:

- **All done**; last invoice released last week.
- Interim storage at CERN, presently:
29 honeycomb panels for Madrid
32 honeycomb panels for Torino
- Note that in total **267 DT chambers** can be built, not 269.

File: 040320hc_panels_qty_final

Reconstruction/decision CMS Week 0212; updates from profiles' inventory ~0306 and final count 0403.

Note: original list 0212 had one MB3 and one MB4 spares more;
these spares could not be produced due to lack of extruded profiles.

Status:

- >50% chambers produced --> good statistics on wires consumption, in principle
- Estimation of amount of wire still on spools uncertain (awaiting feedback from sites)
- Should order final batch for completion, incl. spare DTs, real losses, as well as some spare wire for the assembly sites
- Production of wire and extensive acceptance QC at Aachen take long time

Proposal:

- Order 100 km, on 40 spools