Track Finder Crate, Backplane and Parts

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Standard VME 64x J1/P1 backplane

DDU | MPC 1 | MPC 2 | MPC 3 | SRSP 1 | SRSP 2 | SRSP 3 | SRSP 4 | SRSP 5 | SRSP 6 | Clock and control | Muon sorter | SRSP 7 | SRSP 8 | SRSP 9 | SRSP 10 | SRSP 11 | SRSP 12

These SRSP feedthru connectors are for DT information exchange via transition board

- 80 MHz clock lines to three MPC slots

- **Based on very conservative calculations**
  - Each Sector Processor:
    - 21.5A @ 3.3V
    - 3A @ 5V
  - Crate (safety factor 1.5):
    - 400A @ 3.3V
    - 60A @ 5V
  - Total maximum power: ~1620 W
- **Power consumption will be thoroughly measured before crate is ordered**

Track Finder Crate

- ## W-IE-NE-R 9U crate

- ## Standard VME-64X J1 section

- ## Custom J2 and J3 sections

- ## Power supply
  - 6U box (10 modules max)
  - 4 MEH modules (115A each) @ 3.3V
  - 1 MEH module @ 5V
  - $\pm$12 and $-$5 V if necessary
  - Input: 115 or 220V (selectable)

- Cooling:
  - Most powerful fan tray
    - 6020/4 type
    - 1500 m^3/hr
  - Temperature sensors on top of the crate
    - Two threshold temperatures
    - First switches fans to maximum RPM
    - Second turns off power

Track Finder Crate spare parts

- – 1 Power supply box, 6U (without power modules)
- – 2 MEH power modules (2-7V, 115A)
- – 1 J1 standard VME64X backplane
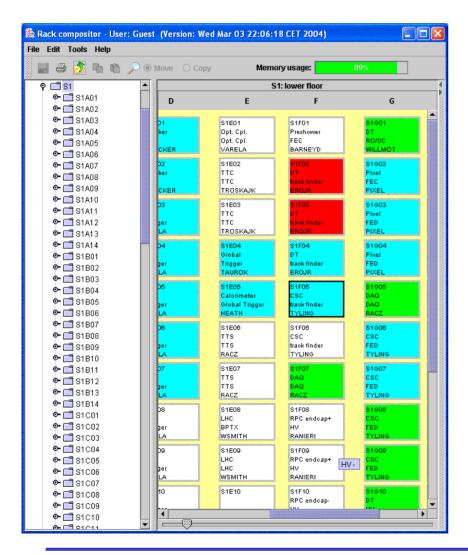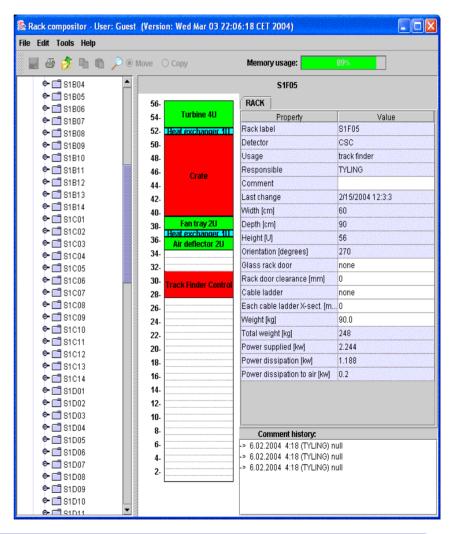- – 1 Fan tray, 6020/4, intelligent

Track Finder Rack

- ## Rack requirements:
  - Power outlets (220V, 50 Hz, 15A)
  - Front and Back door with locks, to protect optical cables
  - Cable strain relieves on front and back of TF crate. Probably need to be custom-designed by us.
  - The rest is according to Rack Wizard

Rack Wizard

- Entry in Rack Wizard for TF crate was done a few months ago

- Currently, message from Rack Wizard is:

This version of Rack Wizard is no longer supported.

Please use the link below:

https://oraweb.cern.ch/pls/cmsintegration/docs/EDMH.html

…and this link does not work…

Control computer and VME controller

- – 1 computer + 1 spare
- – 1 VME controller + 1 spare
- – Computer and controller can be purchased later on. We have everything to run tests now.

- All parts are available within 4-6 weeks delivery time, except optical links
- Optical links FTRJ-8519-1-2.5 are obsolete
- Need ~500 pcs (SP+MPC)
- Found and ordered 409 pcs
- Drop-in replacement part is FTRJ8519F1GNL
- If the rest of original part could not be found, replacement part has to be tested before ordering
- All other parts will be ordered soon.