



# The JEP/CP Backplane Status Report

FYSIKUM

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# Recent developments



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May 9, 2001

# Recent developments (backplane related)

- APW Electronics, Ltd. won bid to produce the backplane
- Preliminary artwork sent to APW and Level-1 colleagues for feedback
- Discussions with APW have led to some changes in the specification...

# Changes in specification since PDR

- Move from 16 layers to 18 layers
  - More uniform build, all traces stripline instead of mixed stripline/microstrip
  - Ground planes (chassis\_gnd) on the outer layers, required some redesign.
  - 5.8 mm thick!

# Changes in specification

- **Bill of Materials modified**
  - PEM studs for guide pins (to accommodate thick PCB)
  - Connectors with longer through-pins
  - Different rotary switch
- **Support hardware, power bus bar designs simplified**

# Internal review of artwork

- Level-1 artwork reviewed by module designers
- Errors discovered and fixed:
  - backplane height and mounting hole spacing
  - Shifted centerline
  - Guide pin position

# Current Status

- Artwork submitted to APW and reviewers for final approval
- Bracing hardware complete
- Work starting on power bus bars

# Concerns

- Timeline delayed - important to prioritize delivery to institutes
- VMM and TCM do not have guide pins. Important to investigate retrofit option



# Outlook

- Backplane production “real soon”
  - Production 5-6 weeks (?)
  - After delivery, more work to do:
    - Install power pins
    - Mount PB in crate
    - Install bracing hardware, bus bars
    - Pack and ship completed crates
  - No good basis for time estimate :-)
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