LCFI CCD Test System Readout Electronics

- CCD Motherboard/flexible circuit
- Local R driver/transition box
- VME Amplifier module
- VME Driver module

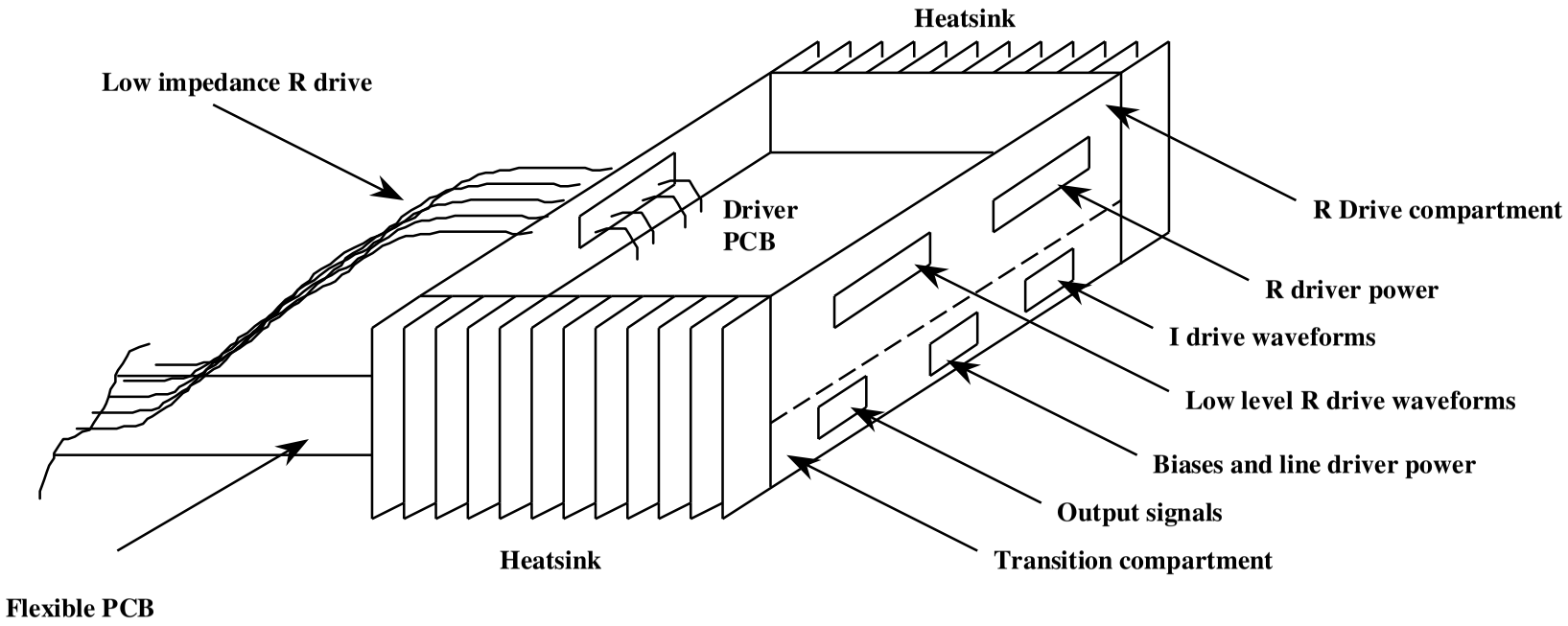
CCD motherboard/flexible circuit

- CCD specific (5 designs)
  - Removes the need for local linking box
- Signal line drivers (50 ohm capable)
- Driver power decoupling
- Bias voltage decoupling
- R drive coax terminations

Local R driver/transition box

- Single box with two screened compartments
- External heatsinks
- Single R driver PCB
- Transition compartment
    - Interfaces flexi-circuit with I drives, Biases & CCD output signals
- R drive compartment
    - Interfaces low impedance motherboard coaxes to low level R signals and power

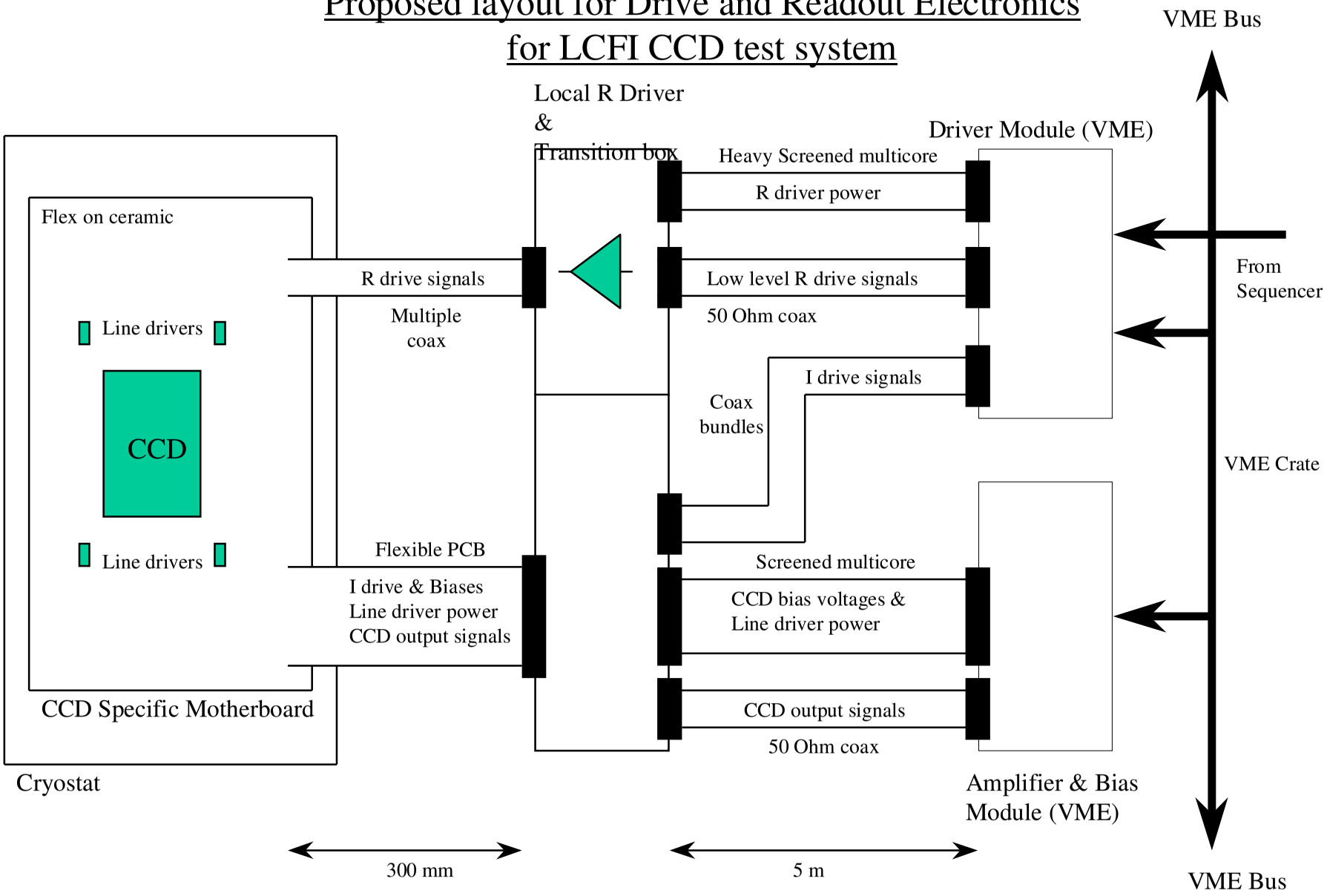
Sketch of driver/transition box



VME Amplifier/Bias module

- 4 amplifier channels
  - Linkable gain and shaping
  - 100 Mhz bandwidth
  - Fast overload recovery
- 8 bias voltages
  - Vss, Vrd, Vog, Vod, Vabg, Vabd, Vig & Vid
  - Power for local signal drivers on motherboard

VME Driver module

- Low level R drive waveforms
  - 3 phase operation
  - 50 Mhz clock rate
- I drive waveforms
  - 3 phase operation
  - 5 Mhz clock rate
- Power for local R drivers

Proposed layout for Drive and Readout Electronics for LCFI CCD test system