



# TCM, GIO, CAN, DSS & TTCR<sub>x</sub>

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# TCM

- **Modifications and Improvements**
  - **VME display logic have been re-designed.**
    - **Displays VME data of other modules.**
  - **Extended memory for CAN.**
  - **Document produced for up-dating TCM CPLD code.**
    - **Can be downloaded from the Firmware page of TCM:-**  
**<http://www.te.rl.ac.uk/esdg/atlas-flt/>**
- **Three modules in use, three to be updated and tested**



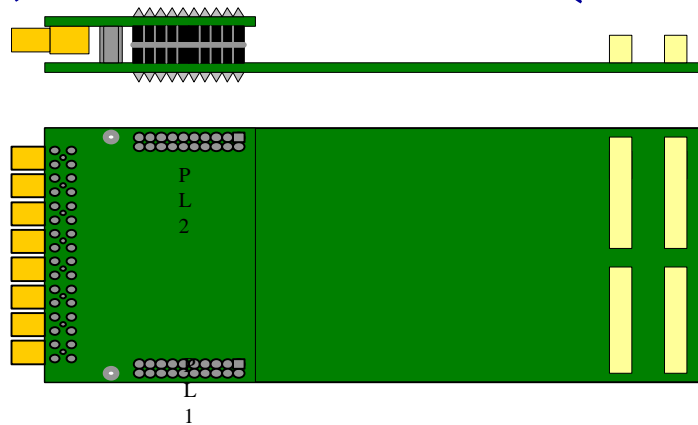
## GIO

- **One design for Rx, Tx in LVDS, Bus LVDS, CMOS, etc**
- **BusLVDS (transceiver) used to test CMM (no differential assembly required, same for Tx and Rx)**
- **Modifications to design complete.**
  - **Incorrect CMC connector orientation**
  - **Other minor improvements**
  - **Add signals for TTCvi**
- **Into drawing office on the 11/11/02 for layout.**
- **Order eight boards ?**
  - **CMM tests (BusLVDS, BusLVDS-> LVDS to CMOS board)**
  - **CPM tests (BusLVDS-> LVDS to CMOS board)**
  - **For TTCvi**

- **SCSI3 connector, LVDS for CMM / CPM.**



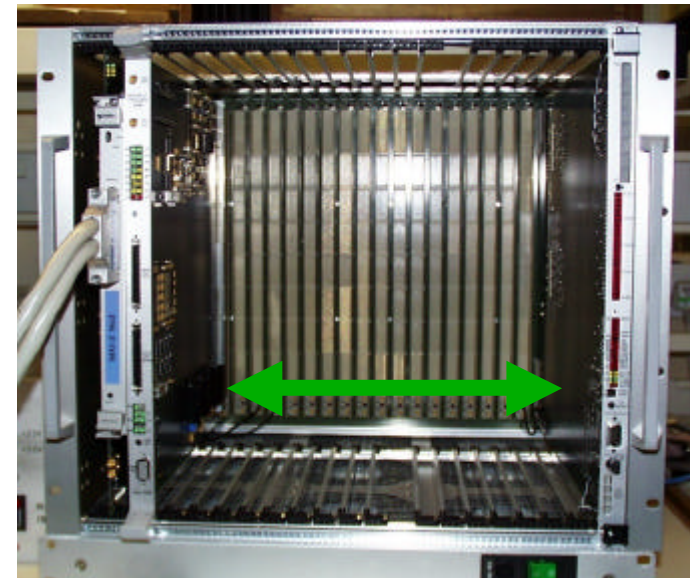
- **Version II, Lemo for TTCvi. (PECL / CMOS)**





# CAN

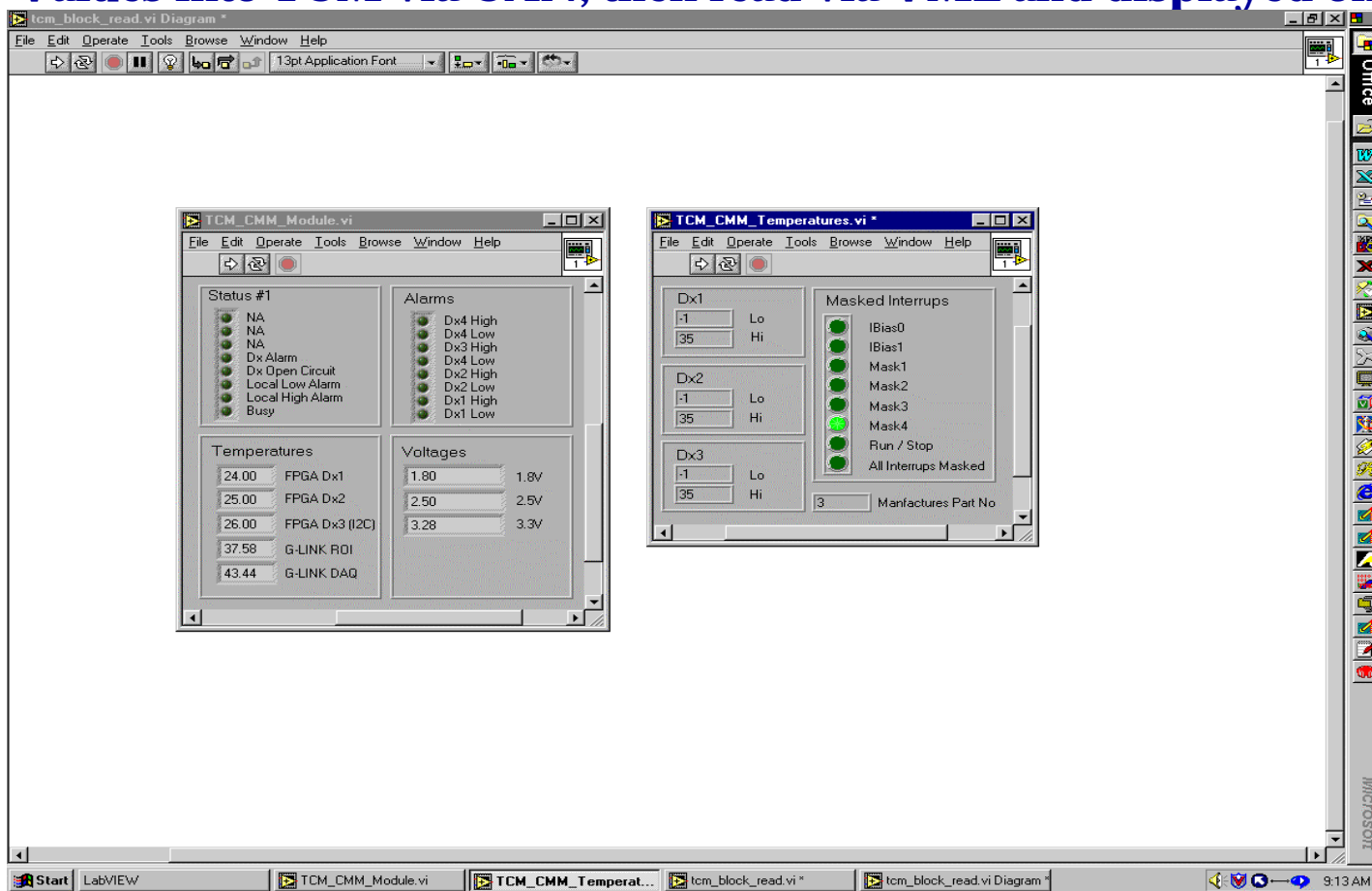
- **TCM requests temperature and voltage readings from CMM via the CAN Bus (CAN Remote Request).**
- **CMM obtains FPGA temperatures via SMBus protocol & voltages using AtoD converters.**
- **CMM also alerts (CAN Transmit) TCM that over-temperature (FPGA too hot) alarm has been set.**
- **Software for CPM in development.**



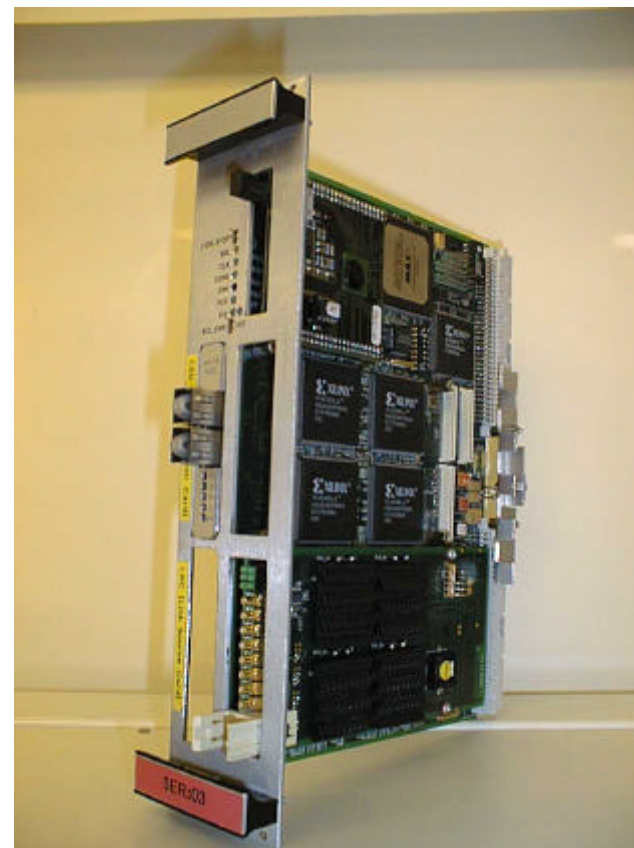


# CAN

- Values into TCM via CAN, then read via VME and displayed on PC



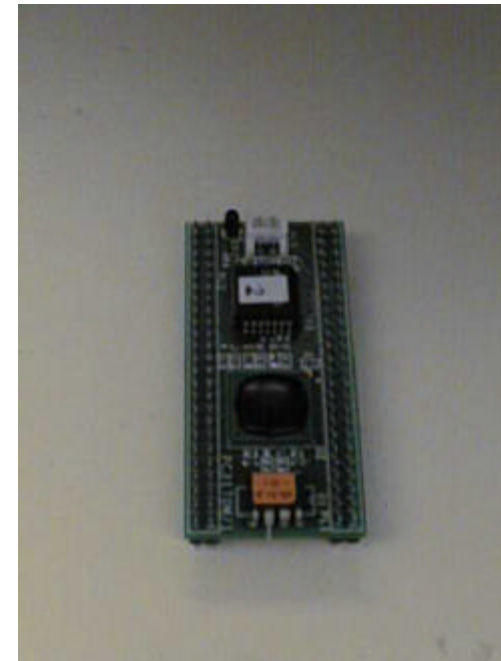
- **All modules have been updated with new firmware and tested. Some modules need further attention.**





# TTCRx

- **Updated schematics for new TTCrx chip.**
  - In Drawing office, layout.
  - Available mid-December.
- **Old cards (8)**
  - Ready for testing.
  - Program PROMS (Addresses.?)







## Summary

- **TCM - Display Problem solved.**
- **GIO - Successfully being used with CMM.**
- **CAN - 'functional' .**
- **DSS modules up-dated and tested.**
- **TTCRx - New schematics completed.**



## Things to do

### In priority order:

- **Finish DSS testing.**
- **Test TTCRx cards (old).**
- **Complete CAN software for CPM.**
- **Three TCMs to be updated.**
- **Test New TTCRx, when available.**
  
- **Manufacture, assemble and test more G-Link Rx cards for ROD's .**