

A TIMING AND CONTROL MODULE (TCM)
FOR THE PROTOTYPE TRIGGER PROCESSOR MODULES

THREE FUNCTIONS

- 1 DISTRIBUTE TIMING, TRIGGER AND CONTROL (TTC) SIGNALS IN ELECTRICAL FORM TO MODULES**

- 2 PROVIDE A CONTROL AND MONITORING LINK TO THE DETECTOR CONTROL SYSTEM (DCS)**

- 3 DISPLAY THE CRATE'S VME BUS ACTIVITY**

PHYSICAL FORM COMPATIBLE WITH CLUSTER PROCESSOR, JET ENERGY PROCESSOR, & PRE PROCESSOR CRATES

TIMING SECTION

RECEIVE OPTO INPUTS.

CONVERT TO ELECTRICAL (PECL)

**OUTPUT CONNECTIONS TO BACKPLANE FOR USE WITH THE CLUSTER AND
JET PROCESSOR CRATES .**

OUTPUT CONNECTIONS TO J0 FOR USE WITH THE PRE PROCESSOR CRATE

ADDITIONAL OUTPUT CONNECTIONS TO THE FRONT PANEL

(22 BACKPLANE & FRONT PANEL OUTPUTS)

CONTROL SECTION

HOST CANbus NODES TO:-

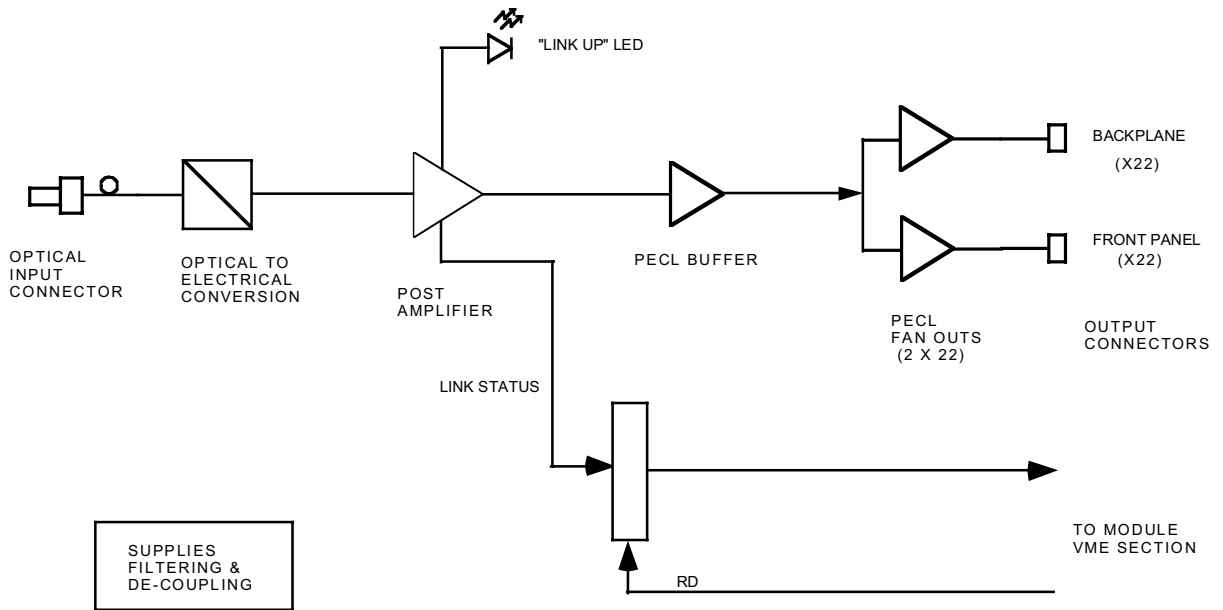
**CONTROL & MONITOR CRATE COMPONENTS (PSUS, etc. AND MODULES) VIA
THE 'LOCAL' CANbus**

PROVIDE A LINK TO THE EXTERNAL CANbus (TO DCS)

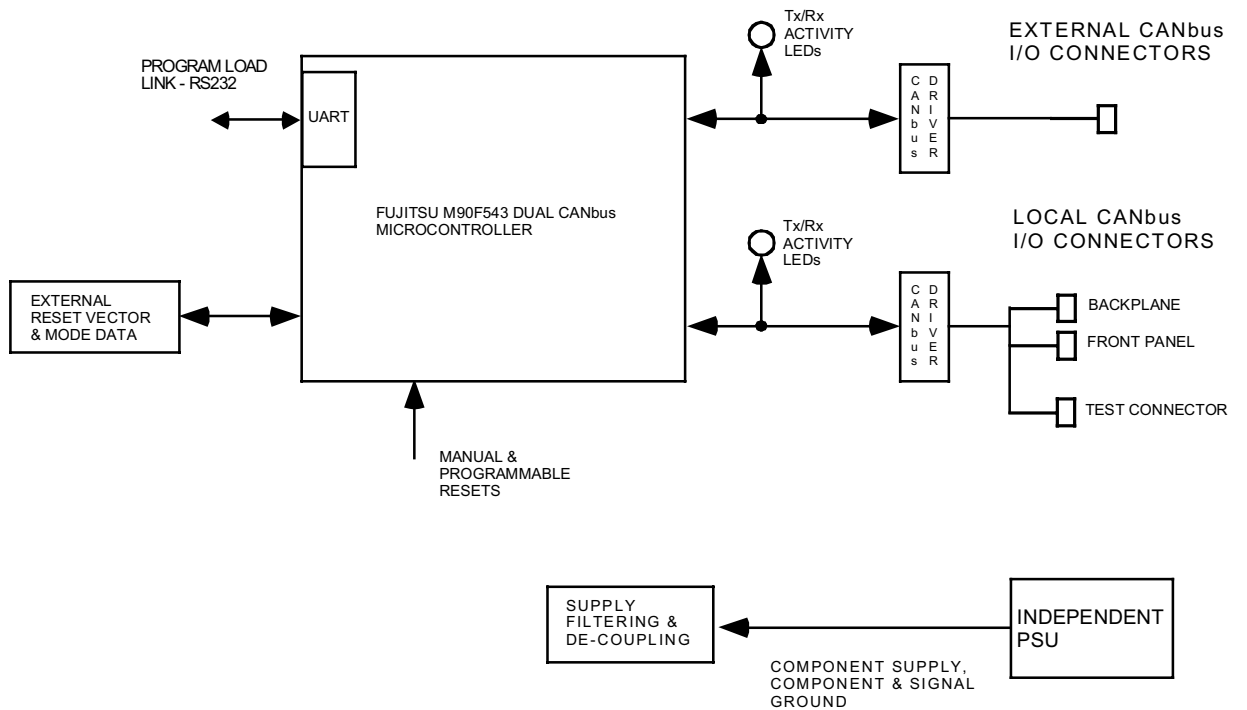
**OUTPUT CONNECTIONS TO BACKPLANE FOR USE WITH THE CLUSTER, JET &
PRE PROCESSOR CRATES**

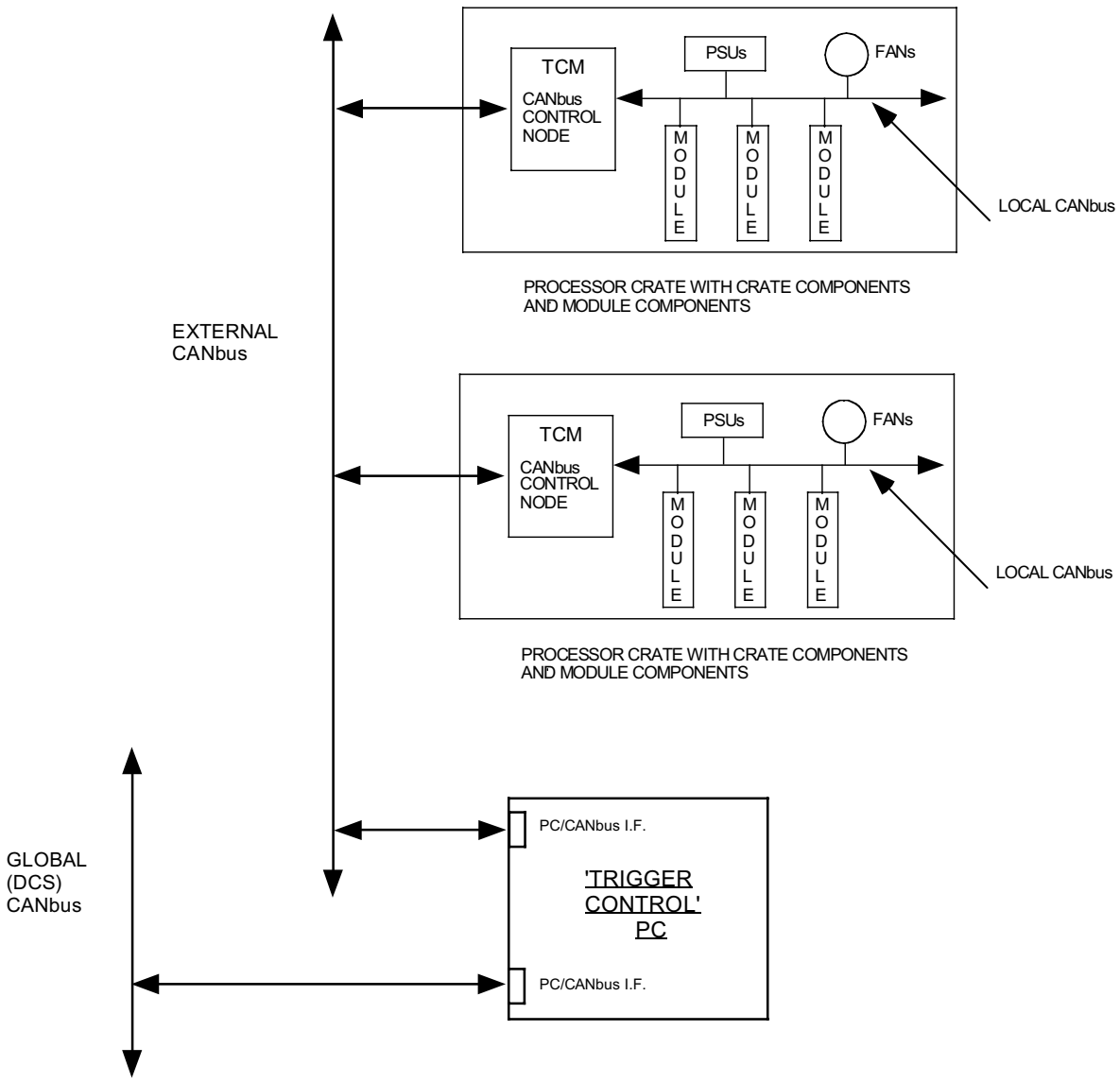
CANbus MICRO CONTROLLER PROGRAM LOADING VIA VME RS232 LINK.

TCM 'TIMING' SECTION



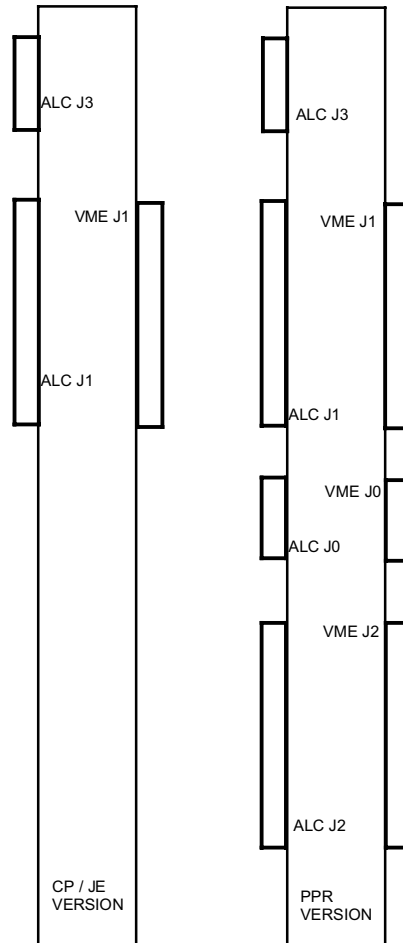
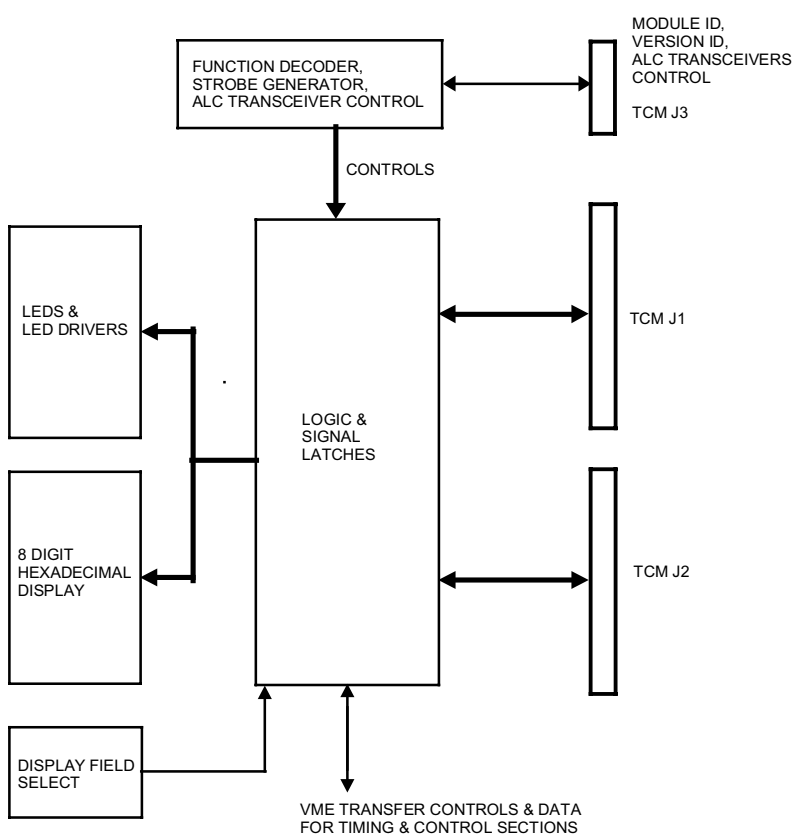
TCM 'CONTROL' SECTION





File = h:\ NEW TCM \ CAN_BUSES_2.CNV

TRIGGER CRATES WITH 'LOCAL', 'EXTERNAL' AND 'GLOBAL' CANbuses



ADAPTER LINK CARDS

file = h:\ new tcm\tcm vme display.cvn

TCM VME DISPLAY SECTION 24/7/2000

(INCLUDES VME TRANSFER CONTROLS & DATA FOR TCM TIMING & CONTROL SECTIONS.)

STATUS OF TCM 11/2000

FUNCTIONALITY ..

ALL FUNCTIONS SPECIFIED

SCHEMATIC DESIGN ..

IN PROGRESS -- TIMING SECTION ~ 90% DONE
-- CONTROL SECTION ~ 60% DONE
-- VME DISPLAY SECTION ~ 50 % DONE
(INCLUDES CPLD DESIGN)

AWAITING SOME DECISIONS ON CRATE PARAMETERS

ELECTRICAL / MECHANICAL SPECIFICATION ..

AWAITING SOME DECISIONS ON CRATE PARAMETERS – CARD PROFILE,
CONNECTOR TYPE AND PLACEMENT, PIN ALLOCATION

ASSOCIATED COMPONENTS ..

EG -- ADAPTER LINK CARDS, FUNCTIONALITY SPECIFIED, SCHEMATIC
CAPTURE NOT STARTED

DRAWING OFFICE / PCB LAYOUT

AVAILABLE END NOVEMBER

ESTIMATE -- 6 WEEKS