A CRATE FOR THE ATLAS CALORIMETER LEVEL 1 TRIGGER DEMONSTRATOR

The crate system developed for the ATLAS calorimeter Level 1 Trigger comprises card cage, power supply box and fan tray. The total height is 720mm.

The card cage is 9U high, 21” wide and 430mm deep and is configured as 9 slots for cards 400 x 400mm on 40mm pitches. Each 9U trigger card accesses the three 3U buses mounted at the rear of the card cage.These are:- standard VME J1 (top), special VME J2 consisting of the pre assigned J2 signals in a Metral 4 x 12 format (middle) and special high speed bus in Metral 4 x 48 format (bottom). The cage also accepts 2 off (or optionally 4 off) standard 6U VME modules. The J1 and J2 buses from these are extended to the VME buses mentioned above. A control module allows basic control and monitoring of the crate system from a front panel.

The power supply box mounted over the card cage provides the following voltages and currents:- +5V at 200 amps +2.1V at 40 amps, +12V at 2 amps and -12V at 0.5 amps. Input is 220/240V single phase. The fan tray fits below the card cage.