SPECIFICATION OF CRATE

1. CRATE
   Standard 6U by 235 mm depth eurocrate without fans and with rear
   powerpack
   (rack will be equiped in fans and cooling system).

2. CARDS
   LV and HV cards are single width (4 HP - 20 mm).

3. LOCATION OF CARDS IN CRATE.

   LV CARDS - 4 CHANNELS
   HV CARDS - 8 CHANNELS

<table>
<thead>
<tr>
<th>INTERLOCK</th>
<th>CONTROL</th>
<th>LV</th>
<th>HV</th>
<th>LV</th>
<th>HV</th>
<th>LV</th>
<th>HV</th>
<th>LV</th>
<th>HV</th>
<th>LV</th>
<th>HV</th>
<th>LV</th>
<th>HV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>L</td>
<td>H</td>
<td>L</td>
<td>H</td>
<td>L</td>
<td>H</td>
<td>L</td>
<td>H</td>
<td>L</td>
<td>H</td>
<td>L</td>
<td>H</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T</td>
<td>R</td>
<td>O</td>
<td>L</td>
<td>K</td>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   TOTAL 48 CHANNELS OF POWER SUPPLY PER CRATE.
SPECIFICATION OF BACKPLANE

1. POWER, CONTROL LINES AND BOARD ADDRESS PINS

1.1 POWER LINES

1.1.1 From powerpack to cards

- +5VDC
- +12VDC
- Um=58V 48 kHz square
- Return Um=58V 48 kHz square
- GND (return +5VDC and +12VDC)
- EARTH

Total 7 lines

1.1.2 From LV cards to output connectors

- 4 lines high current
- 11 lines low current or signal.

1.1.3 From HV cards to output connectors

- 1 line HV special protected pin
- 1 line return HV
1.2 CONTROL LINES

1.2.1 From crate controller to LV and HV cards

- data/address D/AD0 - D/AD7
- data strobe DS
- address strobe AS
- acknowledge ACK
- read/write R/W
- interrupt request IRQ
- reset RESET

Total 14 lines

1.2.2 From interlock card to LV cards

- 12 lines I0-I11
  
each LV card has individual interlock line

1.2.3 From LV to HV cards

- 48 lines ICH0-ICH47
  
each channel of LV allows switch of adequate HV channel.

1.2.4 From interlock connector to interlock card

- 24 lines II00, II01, II10, II11,...,II120, II121.

1.3 BOARD ADDRESS PINS

Each upper connector of LV and HV card has got five pins BA0 - BA4
which code address of card. The pins proper for the card position will
be connected to GND on backplane. All will be pulled +5VDC by
resistors on card.
2. SCHEMATIC DRAFT OF BACKPLANE, CONNECTOR TYPES AND TERMINATIONS OF CONTROL LINES.

C1  96 pins 603-2-IEC-C096  female connector
C2  32 pins 603-2-IEC-D032  female connector
C3  25 pins D-SUB                    male connector
C4  CONEC 24W7                    male connector

Control lines D/AD0 - D/AD7, DS, AS, ACK, R/W, IRQ, RESET will be terminated on both sides on backplane.
Control lines I0-I11 will be pulled up on LV cards.
SCHEMATIC DRAFT OF BACKPLANE

+5 +12 GND EAR.
58V 48 kHz
D0-D7, DS, AS, ....

ICH0, ICH1
ICH2, ICH3
....

I0, I1, ...

II00, ....II121

C1, C1

C1, C1

C1, C1

LV lines
HV lines

C1, C4

C4, C4

C4, C4

C4, C4

C1, C1

C2, C1

C1, C1

LV output

LV output

LV output

LV output

LV output

...