Rack Layout

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`http://www.hep.ph.qmul.ac.uk/~landon/talks`

Overview

- Introduction
- Rack layouts
- Crate and rack power requirements and dissipation
- Open questions: cabling, patch panels

Introduction

Status

- Basic layout fixed for a while now. Various info and diagrams via:
  `hepwww.ph.qmul.ac.uk/~landon/atlas/racks`
- Layout entered into TC database using the “rack wizard”
- To have a look, follow the instructions given in
  `hepwww.ph.qmul.ac.uk/~landon/atlas/racks/rackwizard.html`
- Recent request to specify power requirements and heat dissipation in each rack: orders for power equipment and cooling are going out now
- Information I entered summarised (by TC) in a document:
  `hepwww.ph.qmul.ac.uk/~landon/atlas/racks/Draft_TrigL1_power_USA15.doc`

Crate Power Requirements and Dissipation

Crate	+3.3V	+5V	-5V	+12V	+12V	+48V	Supplied	Dissipated
Receiver		200A	100A				1.5kW	2kW?
Preprocessor	300A	300A		40A	40A		3.5kW	4.5kW?
CP/JEP	200A	300A					2.2kW	3kW?
ROD	200A	300A				24A	2.9kW	3.5kW?
6U crate							$\sim$1kW	1.5kW?

Rack Power Requirements and Dissipation

Rack	N.Crates	Dissipation	N. 3kW Heat Exch
Receiver	2	$\sim$4kW	2
Preprocessor	2	$\sim$9kW	3
CP/JEP	2	$\sim$6kW	2
ROD	3	$\sim$8kW	3
Spare/Patch	0?	0?	0?

Standard rack mains supply delivers 14kW, 3 phases, 4 outputs(?)

Open Questions

Cables

- Developments from TC about heavy RX-PPM cabling?
- Think about large maze of LVDS cables too

Patch panels

- We will need patch panels between receivers and PPMs next year...

Rack Layout

- CP/JEP and ROD rack layout OK? 6U crate at top?
- Will we need a 3U TTC crate (optical fanout etc?)

Empty racks?

- Power and cooling for “empty” patch panel and spare racks?