

A short introduction to our new rx7620



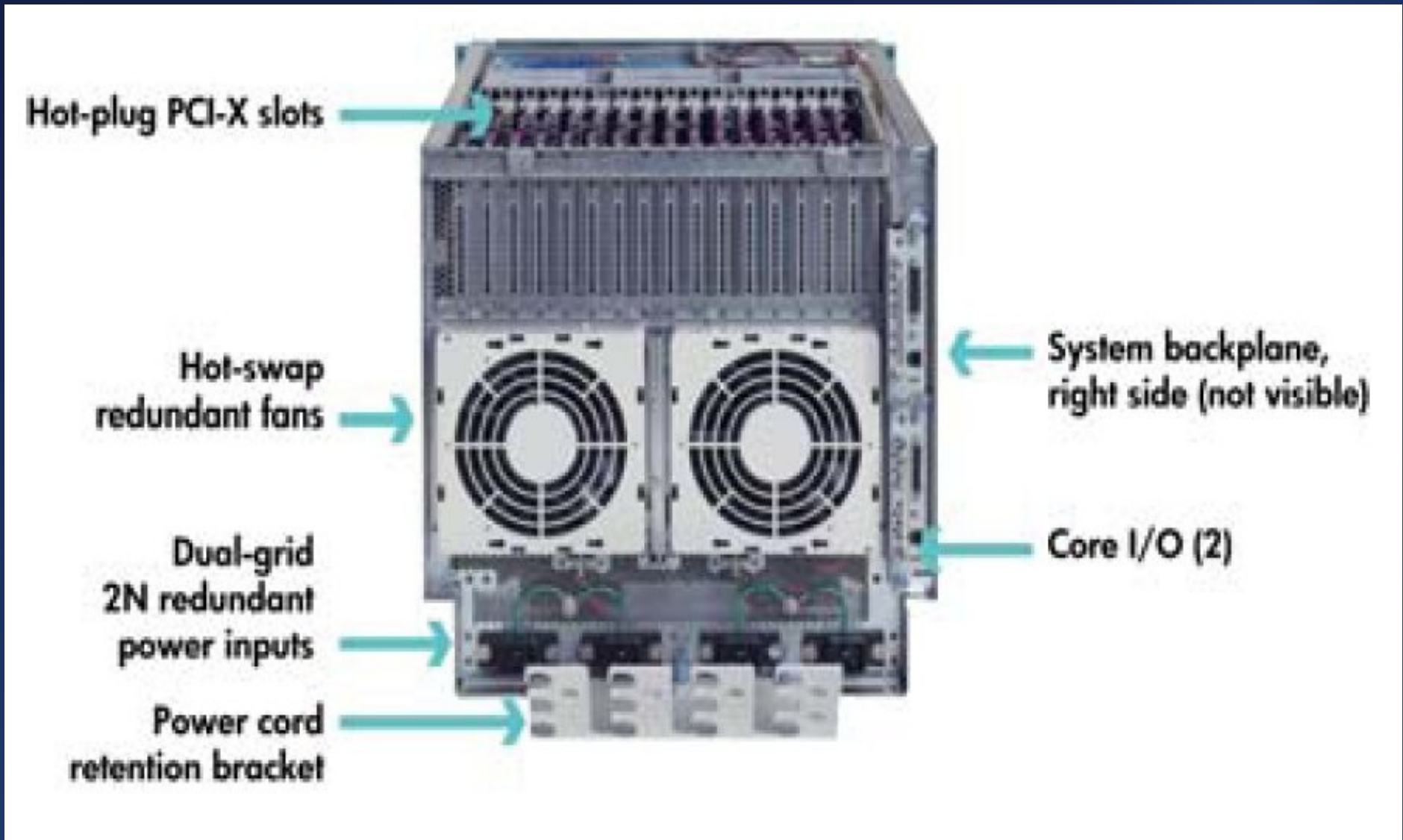
Basic Properties

- 8 CPUs - 1.6GHz Itanium2 (6MB L3 cache)
- 8GB RAM
- 14 PCI-X slots (“only” ~8GB/s total I/O)
- Supports hardware partitioning
- No VGA port – access only via serial port
- Weight ~100kg; Height 10U (rx2600 is 2U)
- Came in it’s own rack
 - Nice, but incompatible with CERN standard racks :-)

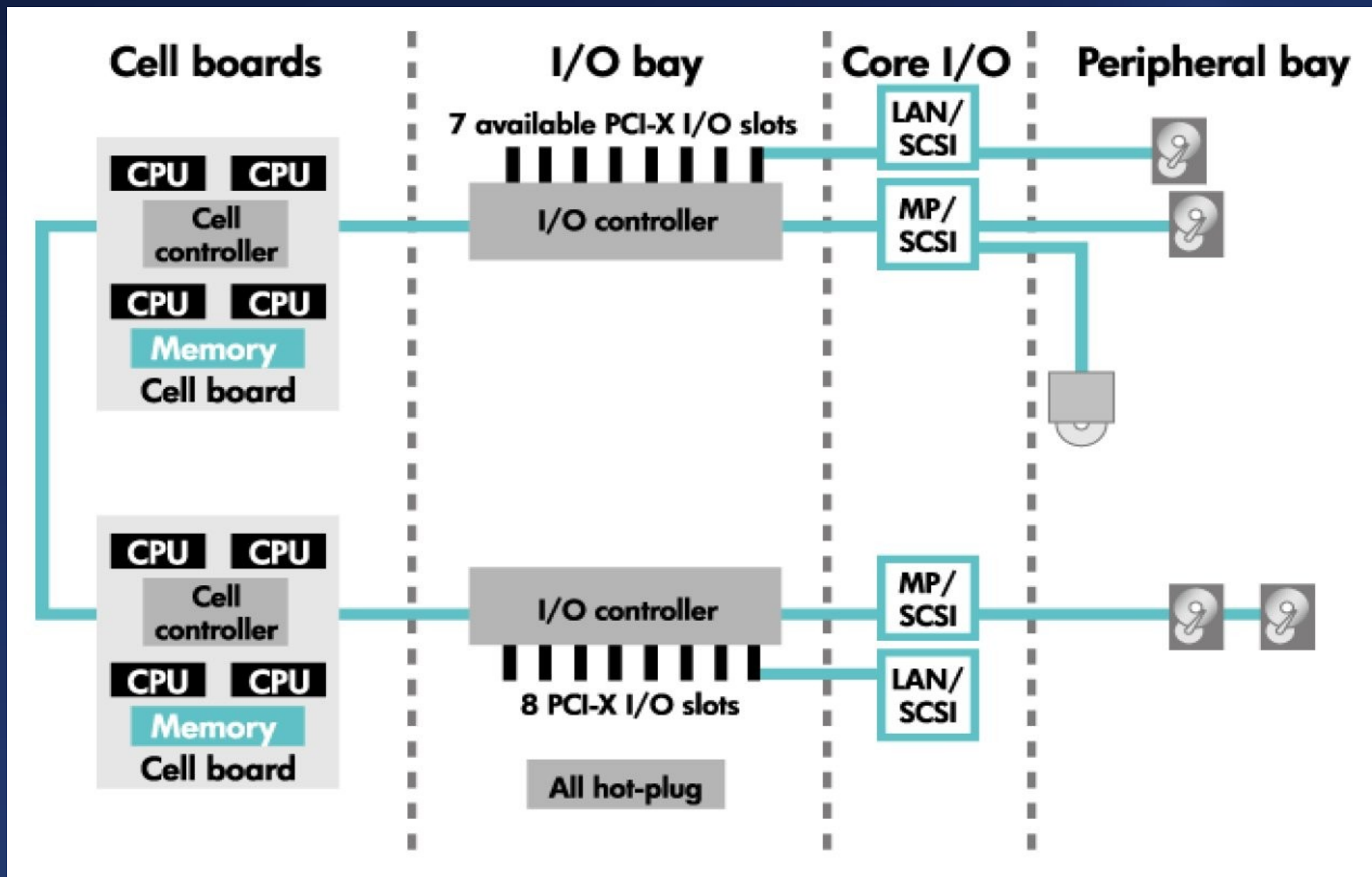
Overview I



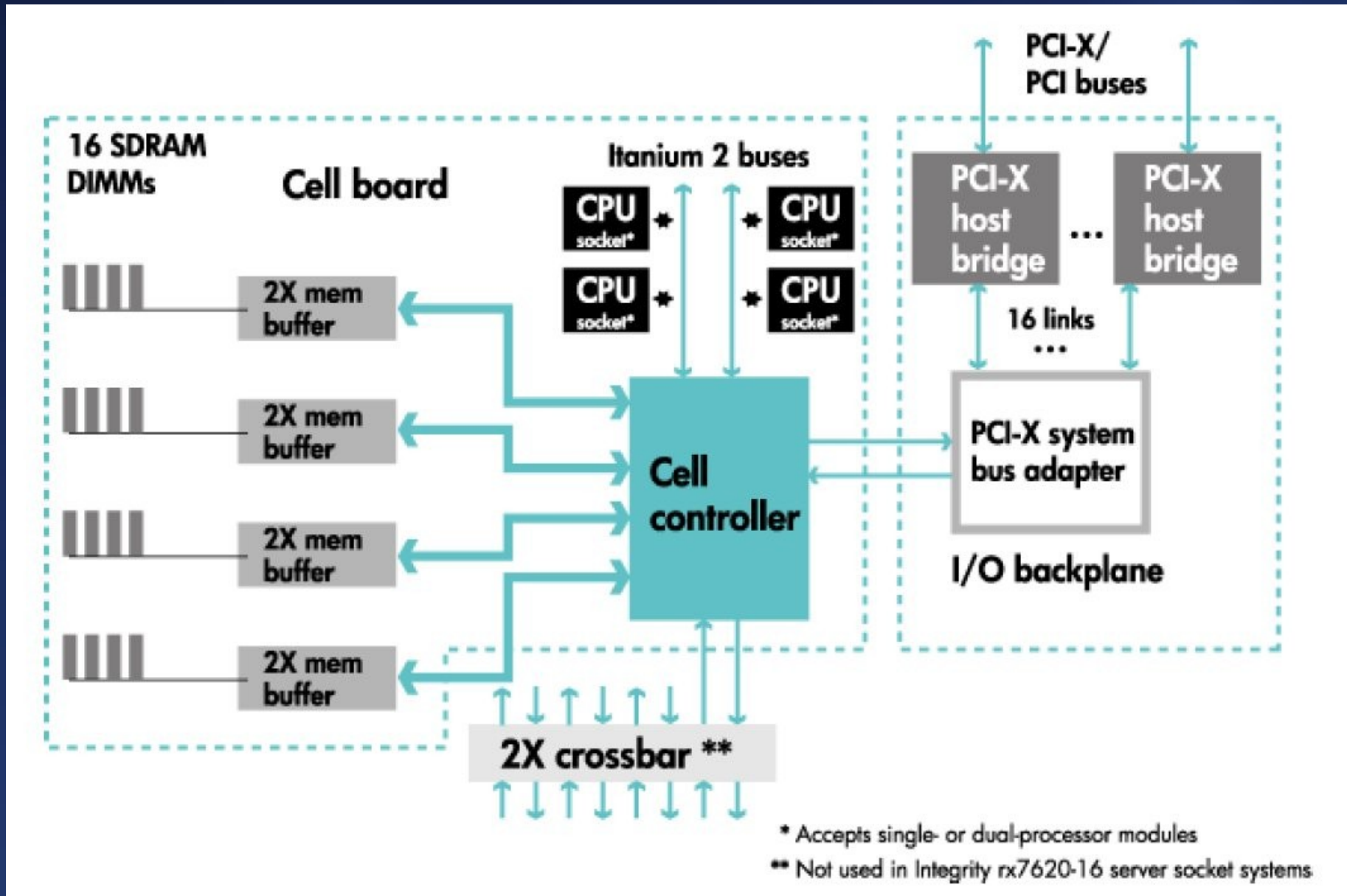
Overview II



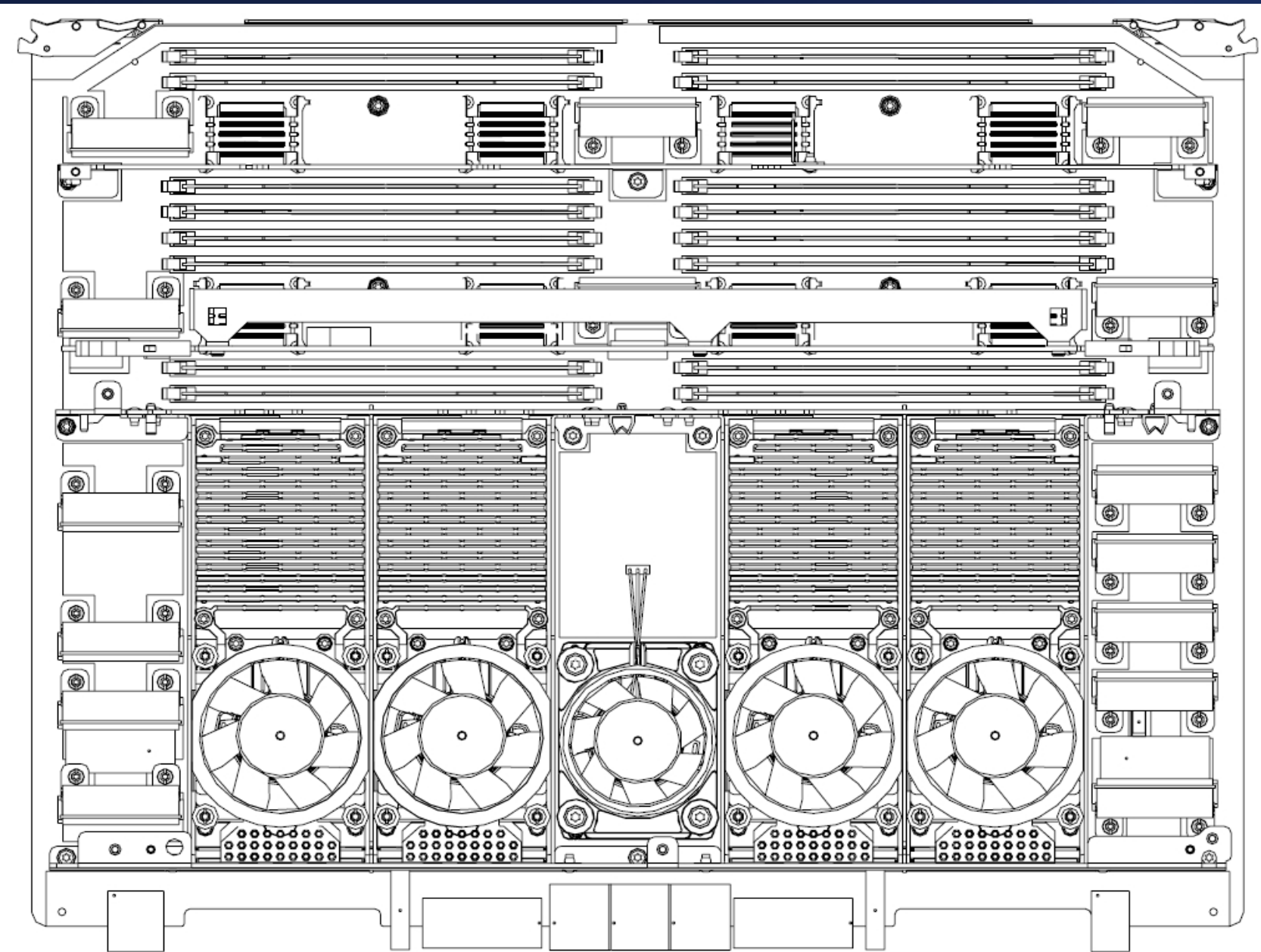
Internal Layout



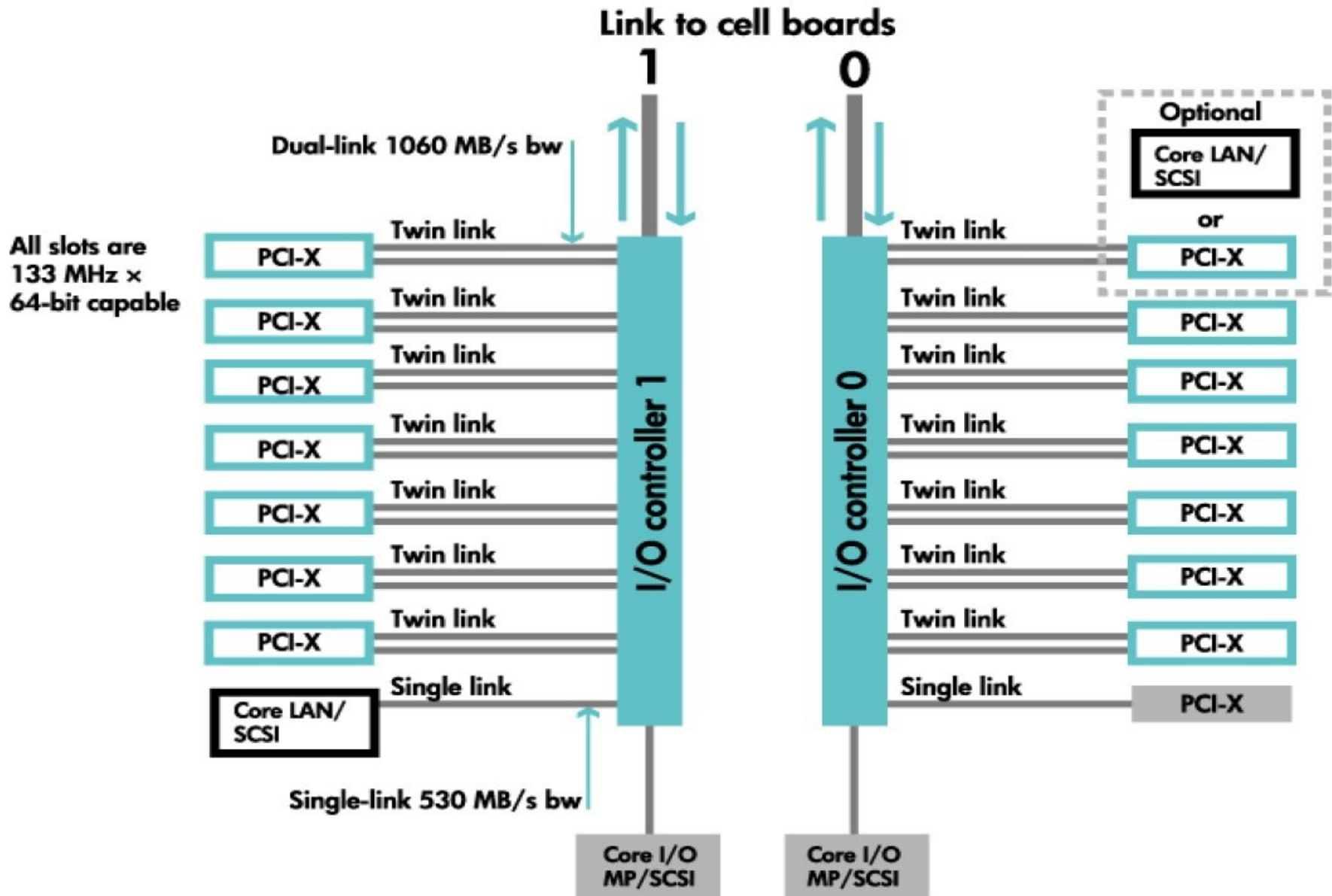
sx1000 Chipset - Schematics



Cell board - Design



I/O - Schematics



Possible Areas of Application

- Applications requiring massive I/O capabilities
 - CASTOR (disk-/tape-server)
 - Dataexport to the LCG Tier-1 sites
- Massive parallel Applications
 - Computational Fluid dynamics
- Database server
- Fast compile machine (to make Sverre happy :-))
- etc.

Installation - Hardware

- The positive side
 - Very nice and simple to use mechanism to physically install the machine (~100kg+~60kg rack!!)
 - Overall simple & smooth installation (except power distribution)
- The negative side
 - Power cables are not supported at CERN
 - Could re-use cables from another box which is not used anymore (big mess otherwise...)
 - In General: HP seems to assume that the entire computing center follows one particular way of power distribution (I assume any vendor does that...)

Installation - OS/software

- OS installation could not be started because boot kernels did not boot (incl. HP Linux Enablement kit)
 - Linux supports only a “simple” mapping partition ↔ I/O subsystem
 - Machine had single partition but still two separate I/O subsystems
 - nPartition manual (399 pages!!) a bit confusing (helpful only if you know what you’re looking for...) (...but I learned a lot about the internals of the box...)
 - Hint from the Gelato mailinglist helped (“acpiconfig single-pci-domain”)
- PXE boot (Netboot) doesn’t work
 - PXE protocol “spoken” by the NIC is not supported by our new network infrastructure!! (is it too new or too old?)
 - Installed “private” DHCP-/PXE-/Installation-server and it worked :-)