

HPC Compute Platform with Direct Liquid Cooling

SlideSX[®]-LC

- up to 70 nodes within a 42 U rack
- 10 compute nodes per chassis
- energy monitoring
- central chassis management
- InfiniBand or Omni-Path
- innovative liquid cooling
- energy efficiency (reuse of waste heat)
- high return temperatures
- modular system (HotSwap)
- leak-free ports
- uncomplicated disassembly for service



Technical Data

Width	19" (449.8 mm)
Height	6 U (265.6 mm)
Depth	800 mm
Power supply unit	Up to 5 power supplies 80+ Platinum in N+1 redundancy 1620/2000 W
Plug-in	Single compute node with liquid cooling (SSI half-size board)
Hard disks	2 x 2.5" HDD
Processor	Dual Intel® Xeon® Scalable or AMD EPYC™ Processors
High-performance network	Mellanox Infiniband EDR, HDR, Intel® Omni-Path, Ethernet
Network	Management network IPMI, data network
Management	Central network for chassis management
Cooling	Direct liquid cooling of compute nodes, air cooled mains adapter
Energy measurement	Direct current measurement for each compute node
Technical use	In conjunction with ColdCon®: - all-year free cooling using dry cooler - operation of adsorption refrigeration - warm water production and heating support

Highlights

SlideSX®-LC delivers efficient direct liquid cooling for HPC compute nodes with the latest Intel® Xeon® Scalable or AMD EPYC™ CPUs. This results in highest power-efficiency for maximized compute performance.

Direct liquid cooling facilitates the extraction of heat produced in the compute nodes. Each SlideSX®-LC compute node therefore includes all components necessary for directly cooling the entire node. In addition, liquid cooled power supplies are available as an optional feature.

Liquid-cooled elements directly transfer the waste heat from each component into the water circuit. The fanless compute nodes therefore save energy and reduce noise emission in the data center. The system handles operation with high water temperatures and therefore permits energy-efficient, all-year free cooling or downstream use in the production of hot water or heating support, among others.

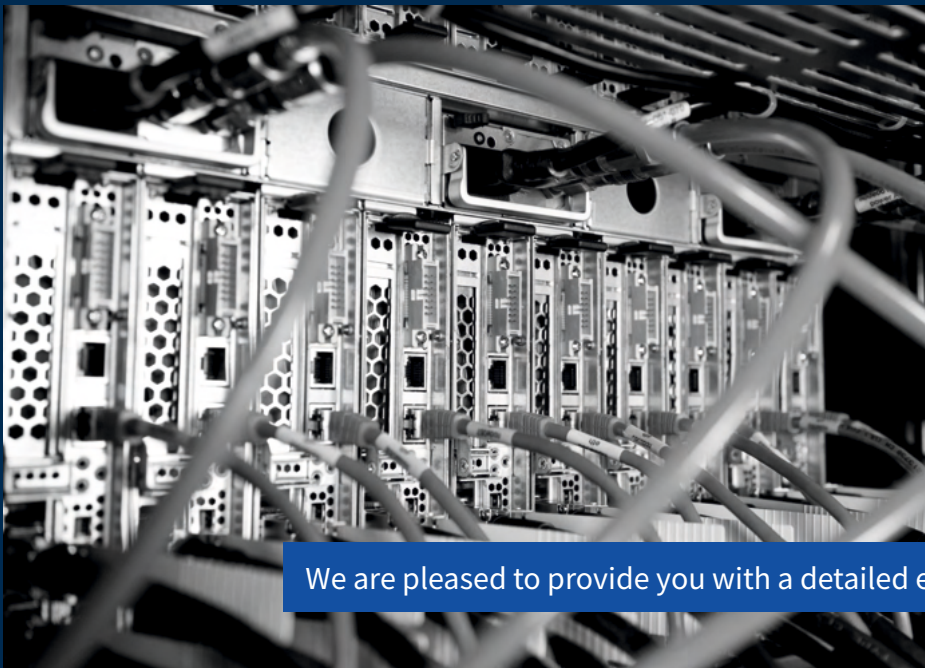
The temperature control range is defined on the one hand by the intended application and on the other by the existing infrastructure.

This extends from classic integration within compression cooling circuits with temperatures in a range of 12 - 18 °C to systems that provide dynamic, seasonal temperature adjustment, and that use free cooling.

A seasonally-dependent whole-year spread of 15 - 35 °C is achieved in the flow temperatures within the primary circuit. The temperature of cooling circuit can be raised to a higher temperature level for downstream use of the thermal energy. Therefore, the system also permits operating modes in excess of >45 °C according to ASHRAE-W5.

SlideSX®-LC is just as service-friendly as any air-cooled system. Each of the direct-cooled compute nodes can be removed and reintegrated by HotSwap for maintenance purposes. The system is connected to the cooling circuit via automatic leak-free connectors in the backplane.

The extremely efficient direct cooling and the flexible temperature ranges within the compute nodes allow system configuration for a variety of ambient parameters and applications.



We are pleased to provide you with a detailed equipment and price offer.