



LIQUIDIQ® DATA SHEET

LiquidIQ

LiquidIQ makes data centers easy to manage by delivering an integrated solution that makes complicated infrastructure changes dynamic and effortless.

Product Description

LiquidIQ is a converged system that combines standard physical data center resources, (i.e. servers and switching) with sophisticated management and control software. The system allows the entire data center to be defined and managed in software, enabling new service offerings, an order of magnitude reduction in time to deployment of applications and dramatically reduced data center operating costs.

Features & Benefits

Rapid provisioning

LiquidIQ's diskless and stateless logical servers provide extremely rapid provisioning of servers and associated networking. Templates can be copied and deployed in minutes.

Verifiable disaster recovery & business continuity

The system provides verifiable business continuity as all application, operating system and network data is stored externally on Network Attached Storage (NAS) or on Storage Area Networks (SANs). Simple replication of this data provides business continuity at a second site.

Interoperability

LiquidIQ embraces standard operating systems, standard Ethernet networking and management tool interfaces (SNMP, command line interface) to provide simple data center integration.

High energy efficiency

The system uses 20-30% less power to provide the same processing power as equivalent clusters built using rack mounts servers and switches

High density footprint

LiquidIQ enjoys more than a 6:1 ratio benefit for floor space for an equivalent amount of computing and switching.

Hardware lifecycle management

The system is based on a scalable chassis and software design that allows servers with processors from different vendors to co-exist in the system and to be retired at a rate determined by the business.

Fully integrated solution

VMware® Virtual Appliance Server provides the power of VMware Virtual Infrastructure, the complete library of VMware virtual appliances, VMware VDi and LiquidIQ in an integrated package. This package is financed to enable monthly billing versus up front capital expenditures. Additionally, NetApp™ filers can be included in this financed package.

"The innovative system offers converged data center services at a fraction of the cost of traditional data centers."
Microsoft

"I can have a dynamic environment that allows me to sense and respond to changing compute needs without having to go through a physical reconfiguration."
**—Herb Kelsey
CTO (Federal), CA**





LIQUIDIQ® TECHNICAL SPECIFICATIONS

CPU	<ul style="list-style-type: none">– AMD Opteron™ dual-core (2200 or 8200 series) or quad-core (2300 or 8300 series) – AMD PowerNow! fully supported
Memory	<ul style="list-style-type: none">– Up to 64 GB (16 X 4GB DIMMS) per Compute Module
SMP	<ul style="list-style-type: none">– Dual socket, 4-core (dual core) or 8-core (quad core) coherent regions – Quad socket, 8-core (dual core) or 16-core (quad core) coherent regions
Compute Module (CM)	<ul style="list-style-type: none">– Scales from 1 to 20 CMs in a single chassis . Designed to scale out to many chassis – each Compute Module supports two 1 gigabit Ethernet adaptors and four 10 gigabit Ethernet adaptors plus eSATA and USB external faceplate ports
Fabric	<ul style="list-style-type: none">– Module-to-module, incrementally scalable, fabric bandwidth up to 84 Gbps The chassis mid-plane allows for future bandwidth support
Software Defined Infrastructure	<ul style="list-style-type: none">– Logical server, LAN/WAN and SAN networking, IP addresses and MAC addresses
External Interfaces	<ul style="list-style-type: none">– Supports up to 24 RJ45 (1 gigabit Ethernet) ports on the Fabric Switch Modules per chassis– Supports up to 18 CX4 (10 gigabit Ethernet) ports on the Fabric Switch Modules per chassis– 802.3ad Link Aggregation on external ports– 802.1q port and trunk based VLAN support on internal and external ports
Operating System	<ul style="list-style-type: none">– Windows Server® 2003– RedHat® Enterprise Linux releases 4 and 5– Oracle® Enterprise Linux release 5 update 1
Hypervisors	<ul style="list-style-type: none">– VMware ESX 3.5– Oracle VM
Oracle Support	<ul style="list-style-type: none">– Oracle Validated Configurations (see URL below) (http://www.oracle.com/technology/tech/linux/validated-configurations)– Oracle Enterprise Linux (OEL)– Oracle VM
Power	<ul style="list-style-type: none">– Redundant power feeds– AC or DC powered
System Administration	<ul style="list-style-type: none">– Partitioning of pooled resources– Unified management of all hardware and logical elements– Built in redundancy to provide auto fail-over for compute and networking– Auto-resolution of specific alarms and alerts– Version control and auto-deployment software– ‘Hot-swappable’ hardware modules to allow for replacement or insertion of field replaceable units to a powered up chassis– Unified system logging with dependency tracing– I/O, VLAN, subnets– SNMP Support (SNMPv2c compliant)– KVM over IP support

LIQUIDIQ[®] TECHNICAL SPECIFICATIONS

Compute Module



Chassis



Multi-Chassis
Scale-Out
Configuration

Fabric Switch
Module



FabricBoss
Module



Compute Modules • Up to 20 Compute Modules per chassis • Quad Socket or Dual Socket AMD Opteron dual or quad-core processors per module • Up to 64 GB of memory per Compute Module • In service, hot-swappable field replaceable units • Dynamic sparing

Chassis Modules • Alarm Interface Module • Fan-tray Module • In service, hot-swappable field replaceable units

Chassis • Mid-Plane design – No cables • Seamlessly scales to multi-chassis • AC/DC powered

Interconnect Modules • FabricBoss Module • Fabric Switch Modules provide up to 84 Gbps of throughput guaranteed inside chassis • In service, hot-swappable field replaceable units

Dimensions • 26U height • 40" deep • 17.5" wide (19" frame)



About Liquid Computing

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