Clustrix

Clustrix CLX 4010™
Clustered Database Systems

Product Datasheet

A High Performance Database Solution for Internet-Scale Applications

Database systems must be fast, scalable, and highly available to meet the demands of today's large-scale Web applications. Yet, to scale the database as capacity and performance requirements grow, companies are asked to choose between partitioning their SQL database or switching to the minimalist functionality of key-value stores. Clustrix removes the pain of selecting between solutions that are costly, complex, and risky to implement—and still fall short. The Clustrix Clustered Database System delivers the fully relational, ACID-compliant functionality of SQL and the high performance, massive scalability of NoSQL key-value stores.

Clustrix designed a cost-effective, turnkey solution that allows large volumes of data to be easily accessed and managed as a single database. Packaged as an easy-to-install appliance, the Clustrix CLX 4010 combines revolutionary database technology—the Sierra Clustered Database Engine (including the Sierra Parallel Planner and the Sierra Distributed Execution Engine)—with preconfigured standard hardware.

Scaling the database is as simple as adding one or more CLX appliances to a rack, connecting the ports, assigning IP addresses, and clicking the expand button. CLX 4010 appliances deploy in a transparent and non-disruptive manner into a MySQL environment. No changes are required to existing database applications or schemas. As CLX 4010 appliances are added, the distributed and parallel architecture automatically distributes data to new nodes and scales performance linearly—even under heavy write loads. To ensure high availability, the CLX solution provides automated load balancing, failover, recovery, and self-healing.

Figure 1: CLX 4010™ Chassis Front Panel

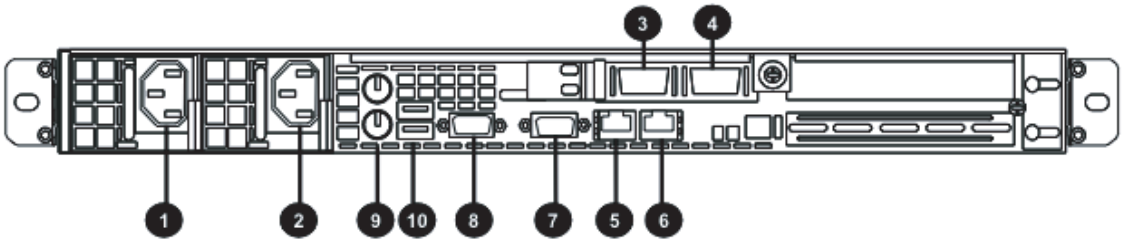
CLX 4010 Hardware Description

A Clustrix Clustered Database System requires three or more CLX 4010 appliances and an interconnect switch. The CLX 4010 has eight 2.5-inch storage slots on the front panel. Storage slots 1-7 are used for data storage and must be configured with a Clustrix verified and formatted SATA SSD Module. Storage slot 8 is used for data logs and must be configured with a Clustrix verified and formatted SATA HDD Module. The local console, network interface, cluster interconnect, and power ports are accessed through the rear panel.

HIGHLIGHTS

- Incrementally scales to hundreds of nodes
- High performance—even under heavy write loads
- Fully relational database, ACID compliant
- Efficiency and scale of key-value stores
- High availability: automatic failover and self-healing
- Non-disruptive: online deployment, expansion, and schema updates
- Supports all MySQL connectors, including Native C API, JDBC, ODBC, .NET, .PH, Perl, Python, PHP, and Ruby
- Delivered as a turnkey appliance

Clustrix



CLX 4010 Rear Panel Connector

Tag #	Connector	Description
1	PSMAC connector, slot 1	Power Supply Module, slot 1 IEC-C14 AC inlet connector (IEC 60320 compliant).
2	PSMAC connector, slot 2	Power Supply Module, slot 2 IEC-C14 AC inlet connector (IEC 60320 compliant).
3	InfiniBand, port 1	InfiniBand Copper DDR port 1 (female, latching).
4	InfiniBand, port 2	InfiniBand Copper DDR port 2 (female, latching).
5	Gigabit Ethernet, port 1	Gigabit Ethernet Port 1, RJ-45 Modular Jack. Client port connecting the server to the clients.
6	Gigabit Ethernet, port 2	Gigabit Ethernet Port 2, RJ-45 Modular Jack. Local management port, for local access to configure the server.
7	VGA port	VGA port, not connected.
8	COM port	COM port, not connected.
9	PS2 KeyBd/Mouse connectors	Keyboard/Mouse ports, not connected.
10	USB connectors	USB ports, not connected.

CLX 4010 Product Specifications

Description	Specification
Enclosure Dimensions (H x W X D):	1.70 x 17.2 x 23.5in (43.0 x 437.0 x 597.0 mm) (1 Rack Unit)
Weight :	33 lbs (15 kgs).
AC Input Power:	Input Voltage: 100-240 VAC, auto-ranging with PFC Input Frequency: 50-60 Hz Input Current: 4.36A at 110 VAC, max, as configured 5.91A at110VAC, rated absolute max 2.09A at 230 VAC, max as configured 2.83A at 230VAC, rated absolute max
Power Dissipation:	Maximum: 4.36A @ 110 VAC, as configured Nominal: 3.82A @ 110VAC, as configured
Heat Dissipation:	Maximum: 1638.24 BTU/hr maximum, as configured Nominal: 1433.40 BTU/hr nominal, as configured
Environmentals, Operating:	Temperature: 10° to 30°C (50° to 86°F) Relative Humidity: 20-80%, non condensing Altitude: <10,000 ft (< 3000 m); derate temperature 1°C per 1,000ft
Environmentals, Nonoperating:	Temperature: -40° to 70°C (-40° to 158°F) Relative Humidity: 5 to 95%, non condensing
Noise Level:	≤ 60 dBA sound pressure (LpA) @ normal operating conditions (at 23°C and at sea level)
Regulatory Compliance and Safety Translations / Green Directives:	Refer to CLX 4000 Series Regulatory Compliance and Safety Transition Guide

SPECIFICATIONS

Form Factor

- 1 Rack Unit Height

Core Components

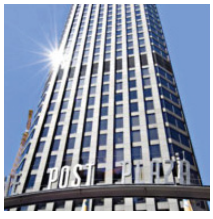
- Dual Quad Core CPUs
- 32 GB RAM
- 7x160 GB Solid State Drives
- 1x500 GB SATA Hard Disk Drives
- 2x20 Gb/s Infiniband Interconnect
- 2x1 Gb/s Ethernet

Dimensions

- Height x Width x Depth: 1.70 x 17.2 x 23.5 inches (43.0 x 437.0 x 597.0 mm)

Weight

- 33 Pounds (15 kg)



Clustrix

One Post Street
Suite 2600
San Francisco, CA 94104
(415) 501-9550
info@clustrix.com