

About Kove® XPD

The Kove® XPD® L3 I/O appliance provides the highest performance InfiniBand and Fibre Channel persistent I/O available, holding world records for bandwidth, latency, and IOPS. XPD® L3 uses DRAM to deliver deterministic performance across all I/O patterns, whether reads or writes, small or large blocks, sequential, random, burst or sustained access, one minute or ten year duration, 10% or 100% full, or any combination thereof.



Applications using Kove® XPD® L3's don't worry about media wearing down or out, or performance changing because of load or occupancy. With determinacy and concurrency literally 100s of times better than Flash, apps can scale-out processing like no other product in the world. This means fewer CPUs, less energy, better output. For example, 4 servers using 4 XPDs have demonstrated 65 terabytes of database operations per hour at more than 800 million database operations per second. I/O is no longer the bottleneck in XPD installations.

Performance The Kove® XPD® L3i 1U appliance delivers performance I/O across the spectrum: **27+ GB/sec** read/write bandwidth (at 12 μ s latency and 100 ns variance) and **43+ million IOPS** (at 3.0 μ s latency and 100 ns variance). Or ingest (write) at **18 GB/sec** or **1 TB/min** (at 11 μ s latency and 100 ns variance). All performance is sustained, deterministic, and linearly scalable: XPD® L3i's do just as well in customer testing as in workhorse performance lasting years at a time under load. And performance doesn't change because of age, usage, load, profile, capacity, or any other factor.

Some vendors "tune" product performance for 4K blocks, or optimize for access pattern, and then perform poorly when using 512-byte or 1MB blocks, or sequential or random I/O. Kove® XPD® L3's deliver consistent performance across the I/O spectrum without qualification. They just work—faster. Apps just work—better.

This is the value of deterministic and concurrent I/O, the next new. Run faster, longer, better, reduce core count, drop licensing fees, reduce energy footprint, save more money, make more money. Let design drive profitability.

Features XPD® L3's are InfiniBand and Fibre Channel direct and mesh attachable to accommodate scalable, high performance I/O needs. All speeds are supported: SDR, DDR, QDR, FDR for InfiniBand, and 2-8 Gbps for Fibre Channel.

Kove® XPD® L3 I/O appliances monitor overall system health, and tracks 100s of system components and monitorables. The device can self-heal most problems before they are ever noticed, and report health status via SNMP, syslog, or HTTP.

The XPD® L3 uses an uninterruptable-power supply (UPS) to protect against downtime. Utility-company power spikes or outages do not threaten data integrity.



Memory on demand

14 North Peoria – 2H
Chicago IL 60607
+1 312 850 3308
sales@kove.net

kove.net

Capacity	64GB – 1.5TB per 1U unit, mesh connectable for larger capacities
Bandwidth	27+ GB/sec (12 μ s latency and 100 ns variance), sustained (world record)
IOPS	43+ million (3.0 μ s latency and 100 ns variance), sustained (world record)
Response Time	<2.5 μ s, random, consistent, & sustainable for any time duration (world record)
Instant Copy	6.7 PB/sec (Fibre Channel) – no disruption during operation (world record)
Management Connectivity	10/100/1000 Ethernet twisted pair, 4 ports
Volumes	Up to 256
Disk Drives	Up to 8 SAS
Connectivity	
InfiniBand:	SDR, DDR, QDR, FDR
Fibre Channel:	2,4,8 Gbps
Ports	
InfiniBand:	Up to 6 ports SDR, DDR, QDR, FDR
Fibre Channel:	Up to 6 ports 2,4,8 Gbps per port
Memory RAS Features	ECC plus SDDC (standard), rank sparing and RAM mirroring (optional)
Sparing	Prevent DIMM rank failure from affecting data integrity. Device copies failing rank to spare and then disables failed rank
Mirroring	Device maintains mirrored copy of memory image. Device fails over to mirrored copy if an uncorrectable error occurs
Management	HTTPS Command Line via SSH, SNMP, and syslog Phone home, customer selectable
Data Protection	Multiple modes for de-staging data from RAM onto persistent media Integrated instant copying Integrated monitoring logic for system health management and UPS
Uninterruptible Power Supply	XPD [®] L3 tightly integrates with standard UPS, bringing unit down gracefully if ever necessary. Integration with centralized UPS infrastructure available in many contexts
Health Monitoring	Device tracks health components for >100 monitorables, and self-heals most problems that can occur
Hot Swappable	Disk drives and power supplies
Power	Up to 1100 watts, 2 redundant power supplies. USA UL listed, FCC; Canada CUL listed; Germany TUV Certified; EN 60950/IEC 60950-Compliant; CB Report; CCC Certification
Warranty	World-wide support: on-site next day up to 2-hour same day available with contract