

IPBank E-Series Entry Level Rackmount iSCSI Appliances

IPBank E-Series for Workgroups and ROBOs

The IPBank E-Series, powered by DynamiX, utilizing a Windows Storage Server 2003 kernel, is a full-featured solution to deliver seamlessly integrated network storage services, including the aggregation



IPBank E-Series 400q (top); and 800qz (bottom)

and provisioning of iSCSI disks, to application hosts over an existing IP network. With compact 1U and 2U configurations, the entry-level rackmount solutions are designed for small to mid-sized businesses, remote offices and branch offices.

Based on Windows Storage Server for Ease

Windows Storage Server 2003 helps organizations to store and protect valuable end user data. From branch office file serving to full integration in the data center, Windows Storage Server 2003 is the dependable choice in storage. IPBank E-Series solutions have been designed to handle file serving, server consolidation, backup and restoration strategies, replication solutions, and handle the integration of NAS and SAN investments.

Centralized Disk Capacity Management

The E-Series Appliance aggregates integrated disk capacity and provisions iSCSI disk to application hosts, including Microsoft™ Exchange, SQL Server and Oracle, without downtime. As a result, IPBank reduces operating costs by eliminating the need to purchase

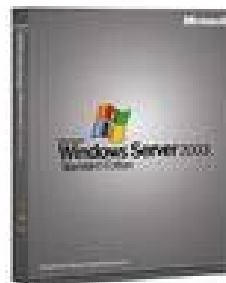
new file servers or fibre channel SANs and simplifies storage management tasks.

Rapid Recovery from Soft or Hard Failure

The E-Series Appliance offers a unique delta-based Snapshot Service designed to safeguard against “soft-errors” such as accidental deletions, file corruptions, and virus attacks by creating point-in-time images of data. The E-Series Snapshot Service integrates with application hosts running Microsoft Exchange, SQL Server, or Oracle applications to ensure that delta changes are replicated with 100% transactional integrity. In addition, the E-Series Appliance allows users or applications to request fast, space-efficient delta snapshots via Microsoft’s Volume Shadow Copy Service (VSS) interface, and performs policy-based, automatic delta snapshots of application hosts to significantly reduce potential data loss and ensure business continuity.

Backup/Restore Consolidation and Acceleration

The E-Series Backup Enabler facilitates centralized, zero impact backup and allows administrators to leverage 3rd party backup software to centralize the backup and recovery of an application hosts’ data at ultra high speed directly to the IPBank E-Series Appliance.



Intelligent Recovery from Site Failure

In today’s corporate 24x7x365 uptime environment, a practical Disaster Recovery (DR) solution is critical. The E Series Appliance is an optimizes business continuity in the event of a site failure or rolling disaster, by implementing business continuity at the SAN level, instead of on each individual application server. With centralized replication services and backups, an application hosts’ mission-critical data is easily migrated from a primary site to a DR site over IP.

IPBank E-Series Entry Level Rackmount iSCSI Appliances

	IPBank E-Series 400q	IPBank E-Series 401q	IPBank E-Series 620qz
Form Factor	1U Rackmount Chassis	1U Rackmount Chassis	2U Rackmount Chassis
Processor	Intel Quad-Core Xeon Processor	Intel Quad-Core Xeon Processor	Intel Quad-Core Xeon Processor
Standard Memory	2GB	2GB	2GB
Operating System	DynamiX iSCSI Storage Server with Snapshot Service	DynamiX iSCSI Storage Server with Snapshot Service	DynamiX iSCSI Storage Server with Snapshot Service
Data Disk Drives	Four Hot-Swappable 3Gbps SATA Disk Drives	Four Hot-Swappable 3Gbps SCSI Disk Drives	Six Hot-Swappable 3Gbps SATA Disk Drives
Storage Capacity (Drive Size)	600GB (150GB 10K RPM) 1TB (250GB) 2TB (500GB) 3TB (750GB) 4TB (1,000GB)	292GB (73GB 10K RPM) 292GB (73GB 15K RPM) 584GB (146GB 10K RPM) 584GB (146GB 15K RPM) 1.2TB (300GB 10K RPM) 1.2TB (300GB 15K RPM)	900GB (150GB 10K RPM) 1.5TB (250GB) 3TB (500GB) 4.5TB (750GB) 6TB (1,000GB)
Mirrored OS Drives	No	No	Yes
Network Connectivity	Dual 10/100/1000 Standard	Dual 10/100/1000 Standard	Dual 10/100/1000 Standard
Removable Media	Internal DVD ROM Drive Floppy Disk Drives	Internal DVD ROM Drive Floppy Disk Drives	Internal DVD ROM Drive Floppy Disk Drives
Available Upgrades	Dual Processors Up to 16GB of RAM Ultra320 SCSI Adapter 4Gb Fibre Channel HBA	Dual Processors Up to 16GB of RAM Ultra320 SCSI Adapter 4Gb Fibre Channel HBA	Dual Processors Up to 16GB of RAM Ultra320 SCSI Adapter 4Gb Fibre Channel HBA
Warranty Options	Standard On-Site 24/7	Standard On-Site 24/7	Standard On-Site 24/7

Advanced Data Storage Solutions

IPBank E-Series Entry Level Rackmount iSCSI Appliances

	IPBank E-Series 622q	IPBank E-Series 800qz	IPBank E-Series 802q
Form Factor	2U Rackmount Chassis	2U Rackmount Chassis	2U Rackmount Chassis
Processor	Intel Quad-Core Xeon Processor	Intel Quad-Core Xeon Processor	Intel Quad-Core Xeon Processor
Standard Memory	2GB	2GB	2GB
Operating System	DynamiX iSCSI Storage Server with Snapshot Service	DynamiX iSCSI Storage Server with Snapshot Service	DynamiX iSCSI Storage Server with Snapshot Service
Data Disk Drives	Siix Hot-Swappable 3Gbps SCSI Disk Drives	Eight Hot-Swappable 3Gbps SATA Disk Drives	Eight Hot-Swappable 3Gbps SCSI Disk Drives
Storage Capacity (Drive Size)	438GB (73GB 10K RPM) 438GB (73GB 15K RPM) 876GB (146GB 10K RPM) 876GB (146GB 15K RPM) 1.8TB (300GB 10K RPM) 1.8TB (300GB 15K RPM)	1.2TB (150GB 10K RPM) 2TB (250GB) 4TB (500GB) 6TB (750GB) 8TB (1,000GB)	584GB (73GB 10K RPM) 584GB (73GB 15K RPM) 1.168GB (146GB 10K RPM) 1.168GB (146GB 15K RPM) 2.4TB (300GB 10K RPM) 2.4TB (300GB 15K RPM)
Mirrored OS Drives	Yes	No	No
Network Connectivity	Dual 10/100/1000 Ethernet	Dual 10/100/1000 Ethernet	Dual 10/100/1000 Ethernet
Removable Media	Internal DVD ROM Drive Floppy Disk Drives	Internal DVD ROM Drive Floppy Disk Drives	Internal DVD ROM Drive Floppy Disk Drives
Available Upgrades	Dual Processors Up to 16GB of RAM Ultra320 SCSI Adapter 4Gb Fibre Channel HBA	Dual Processors Up to 16GB of RAM Ultra320 SCSI Adapter 4Gb Fibre Channel HBA	Dual Processors Up to 16GB of RAM Ultra320 SCSI Adapter 4Gb Fibre Channel HBA
Warranty Options	Standard On-Site 24/7	Standard On-Site 24/7	Standard On-Site 24/7

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iSCSI Configuration Options

Snapshot Service - Creates snapshots of designated disks based on an administrator-defined policy, capturing block-level changes (delta) in data at specified intervals. Administrators can quickly recover files or volumes by mounting a delta snapshot as an active volume. Snapshot images can be used to provide immediate access to data by mounting a temporary “view” of the snapshot, or to create a permanent copy of the snapshot.

IP Replication - Replicates data from one IPBank appliance to another over IP, and transmits block-level changes (delta) in data to maintain replica accuracy. If the Primary site fails, the Administrator can rapidly mount the replica at the Disaster Recovery site with minimal downtime to ensure optimum availability.

Asynchronous Mirroring - Allows block-level mirroring of storage volumes across long distances, in near-real-time. Asynchronous mirroring enables commands to be staged and delivered to primary disks and also secondary disks over a high-latency connection, without slowing down primary disk access. If the mirror is broken, only changes made to data during the outage will be written to the secondary disk.

Synchronous Mirroring - Delivers write requests simultaneously to primary and secondary disk resources. Mirrors can be created between cabinets for fault tolerance, or to migrate/synchronize data between old disks and new disks

Backup & BareMetal Recovery - Captures the boot image and data of designated hosts and utilizes the industry standard PXE protocol to boot these machines over an IP network in the event of a boot disk failure due to virus attack, software crash, mechanical failure, human error, etc. As a result, return to service is nearly immediate, reducing potential downtime and greatly improving IT efficiency.

Snapshot Agents - Integrate with application hosts running Oracle®, IBM® DB2 UDB, Sybase®, Microsoft® SQL Server, Microsoft Volume Shadow Copy Service (VSS), Microsoft Exchange applications and others, to ensure that delta changes are replicated with transactional integrity.

Zero Impact Backup Enabler - Dramatically increases the speed of block-level backups while using certified, off-the-shelf tape backup software running on the IPStor appliance. By offloading backup processing from application servers and the LAN, the backup window is eliminated, backup management is centralized, and there is no need for administrators to deploy and manage backup software at each application server. Working in conjunction with point-in-time snapshot technology, the ZeroImpact Backup Enabler allows the backup software to perform full, incremental, or differential, image backup/restore operations. This option integrates with Snapshot Agents to ensure transactional integrity and point-in-time consistency of active databases and messaging stores during backup.

IP Trunking - Ensures continuous data availability by pinpointing network bottlenecks and physical/logical faults and instantly rerouting network traffic around these faults. Peak performance is also enhanced by load balancing, allowing automatic distribution of traffic among the server's storage paths.

About Dynamic Network Factory

Dynamic Network Factory (DNF) has a long heritage of creating cutting-edge customer-driven products. As an engineering-focused company, with a history specializing in storage solutions, DNF is poised to rapidly expand its customer base and define the next generation of storage solutions ranging from workgroup RAID systems to iSCSI engines, and modular enterprise Fibre Channel solutions. In 2006, DNF acquired iSCSI pioneer Stonefly Networks; this wholly-owned subsidiary is operating under the name StoneFly, Inc. DNF started as US subsidiary of Japanese publicly-traded IT conglomerate CSK Electronics in 1989. In 1998 the company refined its strategy and began to focus the hardware group on storage solutions. Within a year, DNF's rapid growth resulted in its emergence as an independent, privately-held spin-off. Serving over 20,000 customers since its inception in 1989, DNF has provided custom solutions for organizations of all sizes and built products for many familiar computer manufacturers as an OEM.