

IBM Power[®] E1080[®] Facts and Features:

Enterprise systems with Power10 Processor Technology

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IBM® Power [™] servers using IBM POWER9[®] processors are described in a separate Facts and Features report dated July 2020 (EPNDE9D0)

IBM® Power [™] servers using IBM POWER8[®] processors are described in a separate Facts and Features report dated February 2018 (POB03046-USEN).

IBM® Power [™] servers and IBM BladeCenter[®] blade servers using IBM POWER7[®] and POWER7+[®] processors are described in a separate Facts and Features report dated July 2013 (POB03022-USEN-28).

IBM Power servers and IBM BladeCenter[®] blade servers using IBM POWER6[®] and POWER6+[™] processors are described in a separate Facts and Features report dated April 2010 (POB03004-USEN-14).

These notes apply to the description tables for the pages which follow:

Y	Standard / Supported
Optional	Optionally Available / Supported
N/A or – n/a	Not Available / Supported or Not Applicable
SOD	Statement of General Direction announced
SLES	SUSE Linux Enterprise Server
RHEL	Red Hat Enterprise Linux
A	CoD capabilities include: Capacity Upgrade on Demand option – permanent processor or memory activation, Elastic Capacity on Demand – temporary processor or memory activation by the day, Utility Capacity on Demand – temporary processor activation by the minute, and Trial Capacity on Demand.
В	Withdraw from marketing date generally true worldwide, but there may be specific countries exceptions
1	IBM Power E1080; two-tier SAP SD standard application benchmark running SAP ERP 6.0 EHP5; Power10 3.55-4.0 GHz processor, 4,096 GB memory, 8p/120c/960t, 174,000 SD benchmark users (955,050 SAPS), AIX 7.2, DB2 11.5. Certification #2021059. All results can be found at sap.com/benchmark Valid as of 8/27/21 HPE Superdome Flex; two-tier SAP SD standard application benchmark running SAP ERP 6.0 EHP5; Intel Xeon Platinum 8280L 2.7 GHz, 16p/448c/896t, 152,508 SD benchmark users (877,050 SAPS), running Windows Server 2019 and Microsoft SQL Server 2019, Certification # 2020029.
2	SPECInt Math: (Power10 2170 peak /120 core)/(1620 peak/224 cores)=2.5 Max System SPECint IBM Power E1080 (3.55-4,0 GHz, Power10) 120 Cores, 8 CPUs, SPECint Score 2170, per CPU Score 271.25, per core score 18.08 Date: Audit submitted Hewlett Packard Enterprise Superdome Flex 280 (2.90 GHz, Intel Xeon Platinum 8380H), 224 Cores, 8 CPUs Intel Xeon Platinum 8380H Speed 2900 MHz SPECint Score 1620.00, per CPU Score 202.50 per Core Score 7.23 Date: Feb-2021 Link: CPU2017 Integer Rate Result: Hewlett Packard Enterprise Superdome Flex 280 (2.90 GHz, Intel Xeon Platinum 8380H) (test sponsored by HPE) (spec.org) ***
3	Power9 (12c) is 5081 rPerf @ 16,520 Watts (0.31 rPerf/Watt), Power10 (15c) is 7998 rPerf @ 17,320 Watts (0.46 rPerf/Watt). 0.46 / 0.31 = 1.48 More rPerf/Watt
4	Transparent Memory encryption means that the capability does not need any user configuration
5	POWER9 core has one AES/SHA crypto engine per 4 threads. Power 10 core has 4 crypto engines per 4 threads
6	AES-256 in both GCM and XTS modes runs about 2.5 times faster per core when comparing Power10 E1080 (15-core modules) vs. Power9 E980 (12-core modules) according to preliminary measurements obtained on RHEL Linux 8.4 and the OpenSSL 1.1.1g FIPS library
7	5x improvement in per socket inferencing throughput for large size 32b floating point inferencing models from Power9 E980 (12-core modules) to Power10 E1080 (15-core modules) Based on IBM testing using Pytorch, OpenBLAS on the same BERT Large with SqUAD v1.1 data set

8	Based on "ITIC 2020 Global Server Hardware, Server OS Reliability Report", April 2020
9	Based on IBM's internal analysis of the IBM product failure rate of DDIMMS vs Industry
	Standard-DIMMS

For additional connectivity information, please reference the IBM Sales Manual for more information on I/O features and adapters.

Why Power E1080?

IBM® Power® E1080, the first in a generation of servers built on Power10 processor, is engineered for agility. It delivers on key enterprise needs –

- Respond faster to business demands with world record performance scalability for core enterprise workloads and frictionless hybrid cloud experience
- Protect data from core to cloud with accelerated encryption and new in-core defense against Return-Oriented Programming attacks
- Streamline insights and automation with in-core AI inferencing and machine learning
- Maximize reliability and availability with Open Memory Interface (OMI) attached memory DIMMs

Respond faster to business demands:

Power E1080 delivers scalability and efficiency.

- a. World record SAP SD-two tier benchmark with 8 sockets that beats the best 16 socket results of x86 environment¹
- b. 2.5X performance per core than x86 Xeon Platinum²

What if you can get this performance with a lower energy footprint? With the revolutionary 7nm Power10 processor, workloads that run on a Power E980 will consume 33% lower energy when run on the Power E1080³.

IBM Power10 generation of servers is designed to make technology consumption a frictionless experience. With Hybrid Cloud Credits, enterprises can procure pay-per-use capacity that can be deployed across Power Private Cloud and Power Virtual Server co-located with IBM Cloud. The architectural consistency across these environments gives the flexibility to deploy where you want and when you want without requiring additional middleware or application re-factoring.

Protect data from core to cloud:

With data residing in an increasingly distributed environment, you cannot set a perimeter to it anymore. This reinforces the need for layered security across IT stack. Power10 family of servers introduces a new layer of defense with transparent memory encryption⁴. All data in memory remains encrypted when in transit between memory and processor. Since this capability is enabled at the silicon level, there is no additional management setup and performance impact. Power10 also includes 4X more crypto engines in every core compared to

¹ IBM Power E1080; two-tier SAP SD standard application benchmark running SAP ERP 6.0 EHP5; Power10 3.55-4.0 GHz processor, 4,096 GB memory, 8p/120c/960t, 174,000 SD benchmark users (955,050 SAPS), AIX 7.2, DB2 11.5. Certification # 2021059. All results can be found at sap.com/benchmark Valid as of 8/27/21 HPE Superdome Flex; two-tier SAP SD standard application benchmark running SAP ERP 6.0 EHP5; Intel Xeon Platinum 8280L 2.7 GHz, 16p/448c/896t, 152,508 SD benchmark users (877,050 SAPS),

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Math: (Power10 2170 peak /120 core)/(1620 peak/224 cores)=2.5

Max System SPECint

IBM Power E1080 (3.55-4,0 GHz, Power10) 120 Cores, 8 CPUs, SPECint Score 2170, per CPU Score 271.25, per core score 18.08 Date: Audit submitted

Hewlett Packard Enterprise Superdome Flex 280 (2.90 GHz, Intel Xeon Platinum 8380H), 224 Cores, 8 CPUs Intel Xeon Platinum 8380H Speed 2900 MHz SPECint Score 1620.00, per CPU Score 202.50

per Core Score 7.23 Date: Feb-2021

Link: CPU2017 Integer Rate Result: Hewlett Packard Enterprise Superdome Flex 280 (2:90 GHz, Intel Xeon Platinum 8380H) (test sponsored by HPE) (spec.org) ***

³ Power9 (12c) is 5081 rPerf @ 16,520 Watts (0.31 rPerf/Watt), Power10 (15c) is 7998 rPerf @ 17,320 Watts (0.46 rPerf/Watt). 0.46 / 0.31 = 1.48 More rPerf/Watt)

⁴ Transparent Memory encryption means that the capability does not need any user configuration

Power9⁵ to accelerate encryption performance across the stack. For example, the widely used AES encryption performance is improved by 2.5X⁶ over Power E980.

With these innovations along with new in-core defense for Return-Oriented Programming attacks and support for Post Quantum Encryption and Fully Homomorphic Encryption, IBM Power E1080 makes the server platform family that is among the most secure even better.

Streamline insights and automation:

As more AI models are deployed in production, the challenges around the AI infrastructure are coming to the fore. The typical AI deployment involves sending data from an operational platform to a GPU system. This usually induces latency and may even increase security risks with more data in network. Power10 addresses this challenge with in-core AI inferencing and machine learning. The Matrix Math Accelerator (MMA) in Power10 core provides the computational strength (at multiple levels of precision) and data bandwidth to tackle demanding AI inferencing and machine learning. Power E1080 delivers 5X faster AI inferencing per socket over Power E980⁷.

Maximize reliability and availability:

Power has been leading the industry in infrastructure reliability with 25% lower downtime vs. comparable high-end server⁸. With Power E1080 we are making the most reliable server platform in its class⁸ even better with advanced recovery, diagnostic capabilities, and Open Memory Interface (OMI) attached advance memory DIMMs. The continuous operations of today's in-memory systems depend on memory reliability because of their large memory footprint. Power10 DIMMs deliver 2X better memory reliability and availability than industry standard DIMMs⁹.

⁵ POWER9 core has one AES/SHA crypto engine per 4 threads. Power 10 core has 4 crypto engines per 4 threads

⁶ AES-256 in both GCM and XTS modes runs about 2.5 times faster per core when comparing Power E1080 (15-core modules) vs. Power E980 (12-core modules) according to preliminary measurements obtained on RHEL Linux 8.4 and the OpenSSL 1.1.1g library

^{7 5}x improvement in per socket inferencing throughput for large size 32b floating point inferencing models from Power9 E980 (12-core modules) to Power10 E1080 (15-core modules)

Based on IBM testing using Pytorch, OpenBLAS on the same BERT Large with SqUAD v1.1 data set

⁸ Based on "ITIC 2020 Global Server Hardware, Server OS Reliability Report", April 2020

Based on IBM's internal analysis of the IBM product failure rate of DDIMMS vs Industry Standard-DIMMS

Power E1080

Product Line	IBM Power E1080	IBM Power E1080
	(1 node)	(2 node)
Machine type	9080-HEX	9080-HEX
	19" rack drawer (7U)	19" rack drawer (12U)
System packaging	One 5U system node & one	Two 5U system nodes & one
	2U system control unit	2U system control unit
Microprocessor type	64-bit Power 10	64-bit Power 10
# of processor sockets per server	4	8 (4 per system node)
Processor options	3.65 to 3.9 GHz (10) 40	3.65 to 3.9 GHz (10) 80
GHz (cores/socket) # of cores	3.60 to 4.15 GHz (12) 48	3.60 to 4.15 GHz (12) 96
	3.55 to 4.00 GHz (15) 60	3.55 to 4.00 GHz (15) 120
Minimum number cores active	16	16
Energy Scale	Y	Y
Level 2 (L2) cache per core	2 MB	512 KB
Level 3 (L3) cache per core	120 MB	10 MB
DDR4	256 GB / 4 TB / (50%)	512 GB / 8 TB / (50%)
NVMe bays	4	8
Active Memory Expansion	Optional	Optional
Reliability, availability, serviceability		
First failure data capture (FFDC)	Y	Y
Processor instruction retry	Y	Y
L2 and L3 Cache ECC protection with cache line-delete	Y	Y
Core Checkstops	Y	Y
Dynamic processor deallocation	Y	Y
Chipkill protection for x4 DDIMMs, with DRAM sparing	Y	Y
Processor fabric and memory buses retry with data lane	Y	Y
sparing and ½ bandwidth mode		
High speed internode cables, with passive components and	Y	Y
advanced fault isolation diagnostic capabilities		
Guided FSP & SMP cable installation	Y	Y
Concurrent repair of external SMP cable	Y	Y
Redundant phase and spare phase for voltage regulator modules (VRMs) supplying processors	Y	Y
Spare Power Management Integrated Circuit (PMIC) for on	Y	Y
DDIMM power regulation	X	
Redundant system clocks with dynamic failover	<u> </u>	Y Y
Concurrent add/repair of I/O drawers	Y	Ŷ
Extended error handling on PCIe slots Hot-plug/blind-swap	Y	Y
Concurrent renair of On-Panel	V	V
Concurrent repair of Time of Day Battery	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
Selective dynamic firmware undates	 V	 V
Active Memory Mirroring for Hypervisor	Y	Y
Cloud Mgmt and Deployment	•	•
IBM Cloud PowerVC Manager	Included (separately priced)	Included (separately priced)
	No oborgo (for 26 months)	No charge (for 26 months)
HMC Apps as a Server	No charge (for 36 months)	
Convert Power server resources to cloud	Yes	Yes
IBM API Connect and WebSphere Connect	Included	
Open source cloud automation and configuration tooling for AIX	Included	Included
Power-to-Cloud Rewards	10,000 point	ts (per system)
Capacity and expandability		

IBM Power			
Capacity on Demand (CoD) functions	Y	Y	
Power Private Cloud with Dynamic Capacity	Optional	Optional	
Power Integrated Facility for Linux	N/A	N/A	
PowerVM Enterprise Edition	Enterprise	Enterprise	
Max logical partitions/micro-partitions	1,000	1,000	
Eight PCIe slots of which six are PCIe Gen4 x16 or PCIe Gen5	5 Per System node		
x8			
slots and two are PCIe Gen5 x8 slots.			
Max PCIe Gen3 slots (all PCIe I/O drawers)	48	96	
System Control Unit: Media USB ports:	2/1	5/1	
System node / System Control Unit			
Max disk storage in system unit	12.8TB (4 x 3.2TB NVMe)	25.6TB (8 x 3.2TB NVMe)	
Max EXP24SX/EXP12SX	42	84	
Maximum in EXP12SX	504 drives	1,008 drives	
Maximum in EXP24SX/EXP24S	1,008 drives	2,016 drives	
Performance	U		
rPerf	3.65 to 3.9 GHz (40) : 1,367	(80): 2,734	
GHz (# of cores) : perf	3.60 to 4.15 GHz (48) :	(96): 3,361	
	1,681	(120): 3,999	
	3.55 to 4.00 GHz (60) :		
	2,000		
IBM i CPW	3.65 to 3.9 GHz (40) :	(80): 1,834,000	
GHz (# of cores) : perf	922,000	(96): 2,246,000	
	3.60 to 4.15 GHz (48) :	(120): 2,626,000xx	
	1,129,000		
	3.55 to 4.00 GHz (60) :		
	1,320,000		

* Six PCIe Gen4 x16 or PCIe Gen5 x8 and two PCIe Gen5 x 8 I/O low-profile expansion slots per system node (maximum 32 in a 4-node system)

System Node and System Control Unit Details (Power Enterprise Server)

Power E1080

System Unit Details	Power E1080 system node	System control unit (one per system)
Power10 SCM sockets		
Number of SCMs	4	N/A
Memory CDIMM slots	64	N/A
Integrated ports		
System/serial	N/A	N/A
(RJ45)		
USB PCIe adapter	0	1
must be used for		
enabling USB access 1		
x USB 3.0 in System		
Control Unit		
HMC ports	0	4
(RJ45)	•	•
Ethernet adapter ports	N/A	N/A
SAS bays in unit		
2.5-inch	N/A	N/A
(disk/SSD)		
1.8-inch (SSD)	N/A	N/A
NVMe bays in unit	4	N/A
Media bays		
DVD-RAM	N/A	Attached via
slimline		USB port
Integrated SAS storage		
controllers for	N/A	N/A
disk/SSD/DVD		
PCIe Gen4/Gen5	8	N/A
adapter slots	0	
PCIe x8	2	N/A
PCIe x16	6	N/A
Max I/O bandwidth	576 GB/sec	N/A
(peak)		
Service indicator LEDs	Y	Y
Operator panel	N/A	1

Server PCIe I/O Drawers

Drawer	Server Attachment	PCIe Slots per Drawer	SAS Bays per Drawer	Available to order	Drawer Footprint
PCIe Gen3 I/O Drawer (#EMX0)	via x16 PCIe slot	6 or 12	0	Υ	19" rack 4U

Server PCIe I/O Drawer Attachment

Server Drawer	Power E1080
PCIe	Max 16

PCIe Gen3 I/O Expansion Drawer notes

- Each I/O drawer holds one or two 6-slot fan-out modules. A drawer with just one fan-out module is labeled "1/2" in this document. Each fan-out module is attached to a x16 PCIe slot in the Scale-out system unit or in the Enterprise system node or CEC.
- The attachment card in a 4U Power10 server or in a 5U E1080 Enterprise system node uses one PCIe slot.
- Each fan-out module provides 6 PCIe Gen3 slots. Two of the six slots are x16 and four are x8.
- Up to four drawers per each system node of an E1080 system
- PCIe Gen3 I/O drawers can not be shared between two servers
- For good cable management practices, a maximum of 4 PCIe Gen3 I/O drawers per rack is generally recommended for configurations using a large number of 4-port PCIe adapters with cables attached to all the ports. If the rack has an 8-inch rear extender making it deeper and able to manage more cables, then a maximum of 6 PCIe Gen3 I/O drawers is recommended.
- Peak I/O bandwidth per fan-out module is 32 GB/sec.

For additional connectivity information, please reference the IBM Sales Manual for more information on I/O features and adapters.

IBM Power Server I/O SAS Enclosure Units

Drawer	Server	PCIe Slots per	SAS Bays	Available to	Drawer Footprint
	Attachment	Drawer	per Drawer	order	
EXP12SX (#ESLL / #ELLL)	Via SAS	0	12 LFF-1 SAS	Y	19" rack 2U
EXP24SX (#ESLS / #ELLS)	Via SAS	0	24 SFF-2 SAS	Y	19" rack 2U

Server I/O Drawer Attachment

Server	Power
Drawer	E1080
EXP12SX	Max 168
EXP24SX	Max 168

EXP12SX/EXP24SX storage enclosure notes:

- The maximum drawer attachment is shown above per type of drawer. But it is also a "combined" server maximum. For example, if the maximum shown above is for 14 drawers, it would be combined total of EXP12SX and EXP24SX which would be 14. It would not be 14+14 for a combined total of 28.
- The EXP12SX and EXP24SX are designed for 12Gb throughput. Currently no 12Gb SAS adapters are announced.
- The EXP12SX and EXP24SX are attached to PCIe3 SAS adapters or to integrated Power10 SAS controllers. They are not attached to older PCIe SAS adapters.
- The EXP12SX supports large capacity 3.5-inch (LFF) disk drives which are 7200 rpm. 4k byte sector drives are supported. Big data applications are its primary usage.
- The EXP12SX is not supported by IBM i.
- The EXP24SX supports 2.5-inch (SFF) SSD and 10k/15k rpm disk drives. 4k and 5xx byte sector drives are supported.
- A single system node Power E1080 with 4 PCIe drawers has a maximum of 64 storage enclosures. A two-node Power E1080 with 8 PCIe drawers has a max of 128 storage enclosures. A three or four node Power E1080 has a max of 168 storage enclosures. PCIe Gen3 drawers are required to attain this maximum.
- A maximum of 16 storage enclosures can be attached to one PCIe Gen3 I/O drawer due to cable management considerations

For additional connectivity information, please reference the IBM Sales Manual for more information on I/O features and adapters.

Physical Planning Characteristics

Note: More comprehensive information may be found in the IBM Site and Hardware Planning document at <u>http://blaze.aus.stglabs.ibm.com/kc20E-cur/</u>. Plus, additional summary information can be found in the IBM Sales Manual for each server at **ibm.com**/common/ssi.

Server	Power E1080	Power E1080
	System node	System control unit
Packaging	19" rack drawer	19" rack drawer (one per
	5U per node	1080)
		2U
Power supplies	Four 1950W per node	Zero – redundant power
used	N + 2 standard	input from system node(s)
Voltage (AC)	200 240	2/2
single phase	200 - 240	II/a
Maximum		
altitude		
Feet	10000	10000
Meters	3050	3050

To avoid any delay in service, obtain an optional lift tool (#EB2Z). One feature EB2Z lift tool can be shared among many servers and I/O drawers. The EB2Z lift tool provides a hand crank to lift and position up to 159 kg (350 lb). The EB2Z lift tool is 1.12 meters x 0.62 meters (44 in. x 24.5 in.). Note that a single system node can weigh up to 86.2 kg (190 lb).

Racks	7965-S42
	Rack
	42U
Width	
Inches	23.6
Millimeter	s 600
Depth	
Inches	42.1
Millimeters	1070
Height	
Inches	79.5
Millimeter	s 2020
Weight	
lb	365
kg	166

Power E1080 are supported by IBM Manufacturing only in the 7965-42S.

Warranty¹ / Installation

Warranty Service Levels Power E1080

IBM Power	
24x7 with two hour	Ontional
service objective ²	Optional
24x7 with four	
hour service	Standard
objective	
9x5 with four hour	_
service objective	-
9x5	
next-business-day	-
Warranty Services	1 year
Period	1 year
Server installation	TDT
4	101

1. These warranty terms and conditions are for the United States and may be different in other countries. Consult your local IBM representative or IBM Business Partner for country-specific information.

2. Optional = Warranty Service Upgrade available.

4. CSU = Customer Set Up, IBI = Installation by IBM. For server hardware only. Note for IBI severs, server feature codes such as an EXP24SX I/O drawer or PCIe Gen3 I/O drawer or PCIe adapter or disk drive are installed by the IBM service representative as part of the initial installation. Optionally a client may choose to install CSU features without an IBM service representative.

Power Enterprise Servers Software Support

Power Software	Power E1080
Software Tier	Medium
PowerVM™	
PowerVM Linux Edition	With Power IFL
PowerVM Enterprise Editions	Standard
AIX ***	
AIX 7.2	Supported
AIX 7.3 *	Supported
IBM i	
IBM i Software Tier	P30
IBM i 7.3 TR11 *	Supported
IBM i 7.4 TR5 *	Supported
Linux	
Red Hat Enterprise Linux 8 for Power LE, version 8.4, or later	Supported
Red Hat Enterprise Linux for SAP with Red Hat Enterprise Linux 8 for Power LE version 8.4, or later	Supported
SUSE Linux Enterprise Server 12, Service Pack 5,	Supported

Supported	
Supported	
N/A	
N/A	
N/A	
N/A N/A	
N/A N/A	
N/A N/A N/A	

* Or later

Performance Notes

The performance information contained herein is current as of the date of this document. All performance benchmark values and estimates are provided "AS IS" and no warranties or guarantees are expressed or implied by IBM. Buyers should consult other sources of information, including system benchmarks, to evaluate the performance of a system they are considering.

rPerf (Relative Performance) is an estimate of commercial processing performance relative to other IBM UNIX[®] systems. It is derived from an IBM analytical model which uses characteristics from IBM internal workloads, TPC and SPEC benchmarks. The rPerf model is not intended to represent any specific public benchmark results and should not be reasonably used in that way. The model simulates some of the system operations such as CPU, cache and memory. However, the model does not simulate disk or network I/O operations.

rPerf estimates are calculated based on systems with the latest levels of AIX and other pertinent software at the time of system announcement. Actual performance will vary based on application and configuration specifics. The IBM eServer[™] pSeries[®] is the baseline reference system and has a value of 1.0. Although rPerf may be used to approximate relative IBM UNIX commercial processing performance, actual system performance may vary and is dependent upon many factors including system hardware configuration and software design and configuration. Variations in incremental system performance may be observed in commercial workloads due to changes in the underlying system architecture. For additional information about rPerf, contact your local IBM office or an IBM authorized reseller.

Commercial Processing Workload (CPW) is a relative measure of performance of systems running the IBM i operating system. Performance in client environments may vary. The value is based on maximum configurations. For a complete description Please refer to the "IBM Power Performance Capabilities Reference - IBM i operating system" at the following Web site of CPW and the CPW rating for IBM Power:

www.ibm.com/systems/power/software/i/management/performance/resources.html

All performance estimates are provided "AS IS" and no warranties or guarantees are expressed or implied by IBM. Buyers should consult other sources of information including system benchmarks and application sizing guides to evaluate the performance of a system they are considering buying. Actual system performance may vary and is dependent upon many factors including system hardware configuration and software design and configuration. IBM recommends application-oriented testing for performance predictions. Additional information about the performance benchmarks, values and systems tested is available from your IBM marketing representative or IBM Authorized Reseller or access the following on the Web:

SPEC – <u>http://www.spec.org</u> TPC – <u>http://www.tpc.org</u>

More information

Contact your IBM sales representative or IBM Business Partner

Access the Power Products and Services page on IBM's World Wide Web server at **<u>ibm.com**/systems/power</u> and then select the appropriate hardware or software option

Product announcement letters and Sales Manual containing more details on hardware and software offerings are available at **ibm.com**/common/ssi

More detailed benchmark and performance information is available at <u>ibm.com/systems/p/hardware/benchmarks</u>, <u>ibm.com/systems/p/hardware/system_perf.html</u> and at <u>ibm.com/systems/i/solutions/perfmgmt/resource.html</u>.



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Information concerning non-IBM products was obtained from the suppliers of these products or other public sources. Questions on the capabilities of the non-IBM products should be addressed with the suppliers.

All performance information was determined in a controlled environment. Actual results may vary. Performance information is provided "AS IS" and no warranties or guarantees are expressed or implied by IBM.

When referring to storage capacity, total TB equals total GB divided by 1000; accessible capacity may be less.

IBM Power The IBM home page on the Internet can be found at **<u>ibm.com</u>** .

This brochure provides detailed technical specifications of all IBM Power10 processor-based Power servers in a tabular, easy-to-scan format for easy comparison between systems. These systems are UNIX (AIX), IBM i and Linux operating system servers. Not all features listed in this document are available on all three operating.

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