

Model	IR110a-1H		IR120a-1E						
	2.5-inch disk drive model		3.5-inch disk drive model		2.5-inch disk drive model		3.5-inch disk drive model		
Processor type	Intel® Core™2 Duo		Intel® Xeon®						
Processor number	T9400	P8400	E5504	L5506	L5520	E5504	L5506	L5520	
Core	2		4						
Clock	2.53GHz	2.26GHz	2GHz	2.13GHz	2.26GHz	2GHz	2.13GHz	2.26GHz	
L2 cache	6MB	3MB	256KB						
L3 cache	—		4MB	8MB	—		4MB	8MB	
No. of processors	1		1-2						
Intel® 64	Supported		Supported						
Intel® Virtualization Technology	Supported		Supported						
Enhanced Intel® SpeedStep® Technology	Supported		Supported						
Chip set	Intel® 5100 (1066MHz)		Intel® 5500 (800/1066MHz)						
Memory	DDR2-667 SDRAM DIMM with ECC, x4 SDDC		DDR3-1333 SDRAM DIMM with ECC, unbuffered						
Standard	1GB (1 x 1GB)		—						
Maximum	16GB (4 x 4GB) *The standard DIMMs must be removed		32GB (8 x 4GB)						
Internal HDD	—		—		—		—		
Standard	—		—		—		—		
Maximum	SATA: 2TB (4 x 500GB) SAS: 1.2TB (4 x 300GB)*1		3.5-inch SATA: 2TB (2 x 1TB)		SATA: 4TB (8 x 500GB) SAS: 2.4TB (8 x 300GB)*3		SATA: 4TB (4 x 1TB)		
Disk controller	SATA SAS: Option*1		SATA		SATA SAS: Option*3		SATA		
Hot plug	Supported		—		Supported				
Internal SSD	—		—		—		—		
Standard	—		—		—		—		
Maximum	200GB (4 x 50GB)		—		400GB (8 x 50GB)		—		
Disk controller	SATA: Option		—		SATA: Option		—		
Hot plug	Supported		—		Supported				
RAID	RAID 0, 1, 5, 6*1		SATA: RAID 0, 1, 5, 6, 10, 50*2 SAS: RAID 0, 1, 5, 6, 10, 50*4		RAID 0, 1, 5, 6, 10*2				
FDD	Option: external FDD (2-mode, USB)		Option: external FDD (2-mode, USB)						
Optical disk drive	Option		Option						
LAN interface	2 x 1000BASE-T (100BASE-TX and 10BASE-T are supported.)		2 x 1000BASE-T (100BASE-TX and 10BASE-T are supported.)						
Disk drive bays (3.5-inch) [open]	—		2 [2]		—		4 [4]		
Disk drive bays (2.5-inch) [open]	4[4]		—		8 [8]		—		
Expansion slots [open]	Total: 1 [1]		Total: 2 [2] (PCI Express X8 slots, Lowprofile)						
Graphics	Integrated in the Server Management Controller		Integrated in the Server Management Controller						
Chip	—		—						
VRAM	32MB		32MB						
Server management	Server Management Controller (EXPRESSSCOPE Engine 2) installed as standard		Server Management Controller (EXPRESSSCOPE Engine 2) installed as standard						
Redundant power supply	—		—						
Redundant cooling	—		—						
Keyboard	Option (not included in server as standard)		Option (not included in server as standard)						
Mouse	Option (not included in server as standard)		Option (not included in server as standard)						
Interface	1 x Keyboard (Mini DIN 6pin), 1 x Mouse (Mini DIN 6pin), 1 x Display (Mini D-sub 15pin), 1 x Serial (D-Sub 9pin), 4 x USB2.0 (front x 2, internal x 2), 2 x LAN (RJ-45) [1000BASE-T/100BASE-TX/10BASE-T], 1 x LAN (RJ-45) for management [100BASE-TX/10BASE-T]		2 x Display (Mini D-sub 15pin) (front x 1, rear x 1), 1 x Serial (D-Sub 9pin), 8 x USB2.0 (front x 2, rear x 4, internal x 2), 2 x LAN (RJ-45) [1000BASE-T/100BASE-TX/10BASE-T], 1 x LAN (RJ-45) for management [100BASE-TX/10BASE-T]						
Dimensions (WxDxH) mm	428 x 356 x 43 428 x 370 x 43 (including protruding objects)		444 x 615 x 43.6 482 x 653 x 44.3 (including protruding objects and inner rails)						
Weight	Standard	7kg	10.5kg						
	Maximum	8kg	16kg						
Power consumption	Max. config. (standby)	105VA/105W	90VA/90W	212VA/210W	192VA/190W	194VA/192W	198VA/197W	177VA/176W	187VA/185W
	Max. config. (during operation)	161VA/160W	140VA/139W	366VA/363W	335VA/332W	353VA/350W	353VA/349W	316VA/314W	338VA/335W
Temperature and humidity condition	During operation: 10 to 35°C / 20 to 80% (non-condensing) During storage: -10°C to 55°C / 20 to 80% (non-condensing)*5		During operation: 10 to 35°C / 20 to 80% (non-condensing) During storage: -10°C to 55°C / 20 to 80% (non-condensing)*5						
Supported OS	Red Hat® Linux™*6		Microsoft® Windows Server® 2003 R2, Standard Edition, Microsoft® Windows Server® 2003 R2, Enterprise Edition, Microsoft® Windows Server® 2003 R2, Standard x64 Edition, Microsoft® Windows Server® 2003 R2, Enterprise x64 Edition, Microsoft® Windows Server® 2008 Standard, Microsoft® Windows Server® 2008 Enterprise, Microsoft® Windows Server® 2008 Standard (x64), Microsoft® Windows Server® 2008 Enterprise (x64), Red Hat® Linux™*6						

*1 Requires an optional RAID Controller and a Riser Card.
 *2 For RAID 5, 6, and 50, the optional RAID controller is required. On-board disk array is not supported on Linux.
 *3 Requires an optional RAID Controller.
 *4 Requires an optional Riser Card. A low profile PCI Express X8 slot becomes available.
 *5 When stored at a low or high temperature, the system clock may largely deviate from the current time.
 *6 For Linux support, contact your local NEC sales office, or go to the NEC website at: <http://www.nec.com/global/prod/express/linux/index.html>

Data Center Server

NEC Express5800/iModel

The Solution for Energy-Efficient, Simplified Data Center Management



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For further information, please contact:

Innovation for energy-efficient data center operations

1U 2-socket server

NEC Express5800/iR120a-1E



Uncompromising energy efficiency

The iR120a-1E saves every possible watt of power by featuring energy-efficient components including Intel low-voltage QPI processors, a low power chipset, and the latest low-power-consumption unbuffered DIMM. This NEC server is also designed to minimize wasted power by offering infrequently used devices such as a DVD-ROM drive as external options, controlling the speed of the cooling fan, and adjusting a processor frequency and VR (Voltage Regulator) on idle or when application workloads increase.

The highly-efficient power supply unit is another important energy saving feature of the iR120a-1E. Certified by the 80 PLUS Program (www.80plus.org), a program which promotes energy efficient electronic devices, the 80 PLUS Silver power supply delivers a power conversion rate as high as 88%.



Lower power, higher rack density

Every rack has a power limit. The power consumption of each server therefore determines how many servers can be packed in a single rack. The iR120a-1E, although powered by two processors, consumes less power than conventional dual-socket servers. Therefore a standard rack can house more servers than ever before.

Massive-capacity storage in compact form

In its compact 1U form, the iR120a-1E models are capable of installing up to either four 3.5-inch or eight 2.5-inch hard disk drives. Large capacity and RAID configuration can efficiently enhance your system. In addition, the 2.5-inch disk model optionally supports the SSD for designing the hard disk drives to best meet your needs.

1U half-sized server

NEC Express5800/iR110a-1H



Technology for energy-efficient operation

The iR110a-1H features Intel® Core™2 Duo processor with Intel C-State Technology that delivers both faster multitasking and greater energy efficiency. Additionally, the model uses high efficiency power supplies to achieve green operations.

Half the size, double the density

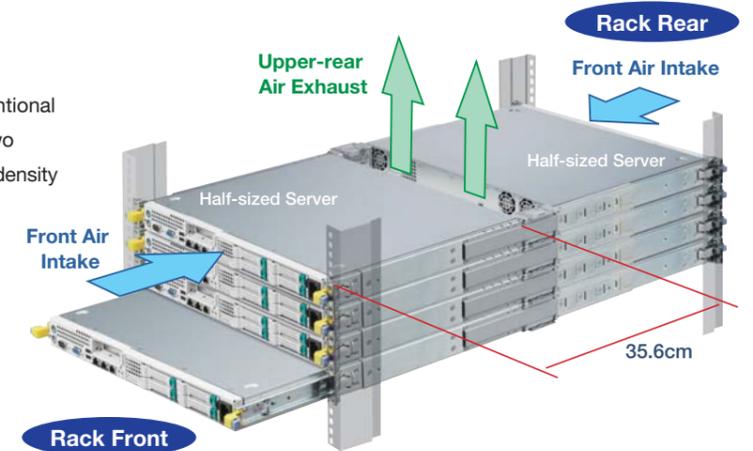
The iR110a-1H is 35.6cm in depth, less than half that of conventional rack servers. This allows a standard 19-inch rack to contain two servers in the front and the rear of the rack, achieving twice the density of traditional data center arrays in the same footprint.

Effective cooling

The iR110a-1H is designed to create adequate airflow inside a rack and improve cooling effectiveness in the high-density rack enclosure.

Energy-efficient disk drives

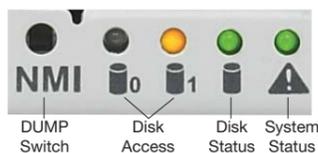
Along with 3.5-inch hard disk support, the iR110a-1H provides the 2.5-inch disk drive model with four hot-plug disk bays, supporting silent, low-voltage, and shock-resistant Solid State Disk drives (Serial ATA) to improve disk maintainability.



Better in-rack serviceability

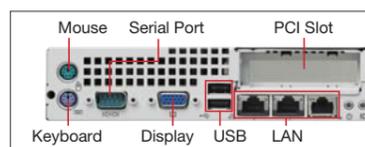
Front indicators

The iModel servers provide USB and graphic ports as well as status LED indicators on the front panel so administrators can see server health at a glance and perform maintenance in front of the rack, instead of behind it.



Front-accessible interface

All interface ports are on the front panel to make it easier for administrators to perform maintenance on the server.



Front-replaceable hard disk drives

The disk drives are front-replaceable on both the 2.5-inch and 3.5-inch disk drive models.



Factory-installed guide rails

The iModel servers ship with guide rails installed on the chassis and fit into a rack without any tools. The iModel servers do not use slide-out rails, so that it can be pulled out easily from a rack in a server room where there is limited access space between rack arrays.

A pull-out tab

A front pull-out tab allows administrators to note individual server IDs and status information.



Remote management

The integrated EXPRESSSCOPE Engine 2 management controller alerts administrators to failures in the primary components, so that they can arrange remedial actions immediately. With support for DMTF-compliant CLI, EXPRESSSCOPE Engine flexibly interacts with 3rd party management software in user environments.