

DR DATARAM
Optimizing Value and Performance

HP[®]

memory portfolio



The DATARAM Advantage



The DATARAM Product Line

HP

Servers

ProLiant DL
ProLiant ML
ProLiant BL blades
Integrity rx servers
Integrity BL blades
HP 9000 rp servers
AlphaServers

Workstations

Personal Workstations
RISC/Unix Workstations
AlphaStations

SUPERMICRO

Intel-based Server Boards

AMD

Opteron-based Server Boards

IBM

Servers

System p (pSeries)
System x (xSeries)
System i (iSeries)
BladeCenter
POWER processor-based servers
Intel-processor based servers
AMD processor-based servers

Workstations

IntelliStation Pro
IntelliStation POWER

INTEL

Server, Workstation
and Desktop Boards

DELL

Servers

PowerEdge

Workstations

Precision

SUN

Servers

Sun Fire
Enterprise
Netra

Workstations

Sun Blade
Ultra
Java

Should you need technical assistance, help is just a phone call or email away, as our customer support personnel are available at no extra charge.

In addition, Dataram memory products installed in IBM servers and workstations with Intel or AMD processors are eligible for support by IBM in the USA.

Lifetime Warranty

Dataram Corporation warrants that its memory products will be free from defects in materials and workmanship and conform to the manufacturer's specifications for the computer in which it is originally installed. This warranty is extended to the original end user for the lifetime of the system.

Responsiveness

Whether it's first-to-market memory for the latest system, up-to-the-minute product information via an on-line memory selector, contact with a memory specialist or timely receipt of competitive quotations, Dataram responds fast. Flexible manufacturing enables quick delivery of products. Plus Dataram's worldwide network of distributors and resellers enable local presence and in-house service regardless of your geography or time zone.

Dependability

No other memory company in the world can match our experience as an independent memory supplier. More than 60 of Fortune 100 companies have used Dataram memory. As a financially strong public company (Nasdaq: DRAM), Dataram is ready and capable of being your valued partner. **DATARAM is the Best Choice in Memory.**

Savings

Top organizations throughout the world choose Dataram to save up to 50% off OEM memory prices. You can too! Compare us and save thousands on your next memory upgrade purchase. Or to save even more, buy new servers with the factory minimum memory configuration and fill all remaining slots with cost effective Dataram memory upon delivery of the new systems.

Guaranteed Compatibility

Dataram is THE memory specialist with over 40 years experience designing, manufacturing and testing memory products. In addition, our memory modules are tested, validated and certified by Intel, AMD and CMTL. Beta sites enable additional testing in a wide range of applications and environments. Dataram has a ten-year relationship with

CMTL (Computer Memory Test Labs) where 2000+ system level tests have been performed on Intel and AMD based motherboards to ensure the highest level of memory compatibility available. For a greener earth, Dataram memory products are RoHS compliant and energy conserving low power modules are available. DATARAM memory modules are guaranteed to be 100% form, fit and function compatible for the system they are installed in.

Superior Quality - Exceptional Support

You expect memory products to last a lifetime and we go to great lengths to meet or exceed your expectations! DATARAM memory products are manufactured in our own state-of-the-art ISO 9001 manufacturing facility in the USA, adhering to the world's highest standards for quality excellence. Every module is 100% tested prior to shipment.

DATARAM

The Best Choice in Memory

800.DATARAM | usasales@dataram.com

Founded in 1967, Dataram is a worldwide leader in the design and manufacture of reliable, high capacity and innovative memory solutions. Dataram provides customized memory solutions for OEMs and memory upgrades for leading brands including HP, IBM, Sun Microsystems, Dell, Intel and AMD Opteron. For more information about Dataram's memory offerings, visit www.dataram.com

FAMILY	MODEL	MAX	SLOTS	CAPACITY	MFG #	DATARAM #	BOARDS
HP							
HP 9000 UNIX SERVERS							
HP 9000 rp2430		2GB	8	2GB	A6114A	DRHA500/2048	2
HP 9000 rp2405, rp2450, rp2470		8GB	8	2GB	A6114A	DRHA500/2048	2
HP 9000 rp3440-4		32GB	12	4GB	A9774A	DRH3400/4GB	4
				8GB	A9775A	DRH3400/8GB	4
				16GB ¹⁾	AB561A	DRH3400/16GB	4
¹⁾ When 16GB options (4 x 4GB DIMMs) are used, only one configuration is supported--8 x 4GB DIMMs in the first 8 slots, providing for the maximum memory capacity of 32GB. The remaining slots must remain empty. The next smallest capacity is 24GB (12 x 2GB DIMMs)							
HP 9000 rp4410-4, rp4440-8		128GB	32 ¹⁾	4GB	A7130A	DRH4440/4GB	4
				8GB	A7131A	DRH4440/8GB	4
				16GB	AB560A	DRH4440/16GB	4
¹⁾ Memory is installed on one of two possible HP Memory Cards. The A9738A is a 16-DIMM slot memory board allowing for up to 64GB of memory. The A9739A is a 32-DIMM slot memory board allowing for up to 128GB of memory.							
HP 9000 rp5400	360MHz, 440MHz, 550MHz	8GB	16 ¹⁾	2GB	A6115A	DRHL2000/2048	2
¹⁾ Memory is installed on two HP Memory Carrier, each having eight slots. Although it is possible to physically install more memory, the system will not recognize more than 8GB.							
HP 9000 rp5430	550MHz, 650MHz, 750MHz, 875MHz	8GB	16 ¹⁾	2GB	A6115A	DRHL2000/2048	2
¹⁾ Memory is installed on two HP Memory Carrier, each having eight slots. Although it is possible to physically install more memory, the system will not recognize more than 8GB.							
HP 9000 rp5405, rp5450, rp5470		16GB	16 ¹⁾	2GB	A6115A	DRHL2000/2048	2
¹⁾ Memory is installed on two HP Memory Carriers, each having eight slots.							
HP 9000 rp7400	550MHz, 650MHz, 750MHz	32GB	32 ¹⁾	2GB	A5864A	DRHN4000/2048	2
¹⁾ Memory is installed on one to four HP Memory Cards (A4882A), each having eight slots.							
HP 9000 rp7405, rp7410-8		64GB	32 ¹⁾	4GB	A6098A	DRH8400/4096	4
				8GB	A6100A	DRH8400/8192	4
¹⁾ Memory is installed on one to two HP Cell Boards, each having sixteen slots.							
HP 9000 rp7420-16	900MHz, 1.0GHz	128GB	32 ¹⁾	4GB	AB308A	DRH8620/4096	4
				8GB	AB309A	DRH8620/8192	4
				16GB ²⁾	AB322A	DRH8620/16GB	4
¹⁾ Memory is installed on one to two HP Cell Boards, each having sixteen slots.							
²⁾ 16GB kits cannot be mixed with any other capacity on a Cell Board.							
HP 9000 rp7440		128GB	32 ¹⁾	4GB	AB454A	DRH8640/4GB	2
				8GB	AB455A	DRH8640/8GB	2
¹⁾ Memory is installed on one or two HP Cell Boards, each containing 16 DIMM slots.							
HP 9000 rp8400-16	650MHz, 750MHz, 875MHz	128GB	64 ¹⁾	4GB	A6098A	DRH8400/4096	4
				8GB	A6100A	DRH8400/8192	4
¹⁾ Memory is installed on one to four HP Cell Boards, each having sixteen slots.							
HP 9000 rp8420-32	900MHz, 1.0GHz	256GB	64 ¹⁾	4GB	AB308A	DRH8620/4096	4
				8GB	AB309A	DRH8620/8192	4
				16GB ²⁾	AB322A	DRH8620/16GB	4
¹⁾ Memory is installed on one to four HP Cell Boards, each having sixteen slots.							
²⁾ 16GB kits cannot be mixed with any other capacity on a Cell Board.							
HP 9000 rp8440		256GB	64 ¹⁾	4GB	AB454A	DRH8640/4GB	2
				8GB	AB455A	DRH8640/8GB	2
¹⁾ Memory is installed on one, two, or four HP Cell Boards, each containing 16 DIMM slots.							
HP 9000 A-Class	A400	2GB	8	2GB	A6114A	DRHA500/2048	2
HP 9000 A-Class	A500	8GB	8	2GB	A6114A	DRHA500/2048	2
HP 9000 L-Class	L1000	8GB	8	2GB	A6115A	DRHL2000/2048	2
HP 9000 L-Class	L2000, L3000	16GB	16	2GB	A6115A	DRHL2000/2048	2

FAMILY	MODEL	MAX	SLOTS	CAPACITY	MFG #	DATARAM #	BOARDS
HP 9000 N-Class	N4000	32GB	32 ¹⁾	2GB	A5864A	DRHN4000/2048	2
¹⁾ Memory is installed on one to four HP Memory Cards (A4882A), each having eight slots.							
INTEGRITY SERVER FAMILY							
Integrity rx2600-2		32GB ¹⁾	12	4GB	A6834A, A9910A	DRH5670/4096	4
				8GB	A6835A, AB228A	DRH5670/8192	4
				16GB	AB475A	DRH4640/16GB	4
¹⁾ 32GB maximum using 8x4GB DIMMs.							
Integrity rx2620-2		32GB ¹⁾	12	8GB	A6835A, AB228A	DRH5670/8192	4
				16GB	AB475A	DRH4640/16GB	4
¹⁾ 32GB maximum using 8x4GB DIMMs.							
Integrity rx2660		32GB	8	4GB	AD275A	DRH2660/4GB	2
				8GB	AD276A	DRH2660/8GB	2
Integrity rx3600		192GB	24 ¹⁾	8GB	AB565A	DRH6600/8GB	4
				16GB	AB566A	DRH6600/16GB	4
				32GB	AH405A	DRH6600/32GB	4
¹⁾ The standard rx3600 server configuration includes an 8-DIMM memory carrier which contains two 4-DIMM memory boards. An optional, high-capacity memory configuration with a 24-DIMM memory carrier containing a pair of 12-DIMM memory boards is available with this server. DIMMs are installed onto the memory carriers. The minimum server configuration requires at least one memory quad, or group of four DIMMs.							
Integrity rx4640-8		128GB	32 ¹⁾	4GB	A6969A	DRH4640/4096	4
				8GB	A6970A	DRH4640/8192	4
				16GB	AB475A	DRH4640/16GB	4
¹⁾ Memory is installed on a single HP Memory Carrier Board containing 16 or 32 DIMM slots. The system can be purchased with an HP# A9738A (16 DIMM slots) or an HP# A9739A (32 DIMM slots).							
Integrity rx5670		96GB	48 ¹⁾	4GB	A6834A	DRH5670/4096	4
				8GB	A6835A	DRH5670/8192	4
¹⁾ Memory is installed on one or two HP Memory Carrier Cards (A6747A), each containing 24 DIMM slots.							
Integrity rx6600		384GB	48 ¹⁾	8GB	AB565A	DRH6600/8GB	4
				16GB	AB566A	DRH6600/16GB	4
				32GB	AH405A	DRH6600/32GB	4
¹⁾ The standard rx6600 server configuration includes a 24-DIMM memory carrier and can be expanded with an additional 24-DIMM memory carrier. DIMMs are installed onto the memory carriers. The minimum server configuration requires at least one memory quad, or group of four DIMMs.							
Integrity rx7620-16		128GB	32 ¹⁾	4GB	AB308A	DRH8620/4096	4
				8GB	AB309A	DRH8620/8192	4
				16GB ²⁾	AB322A	DRH8620/16GB	4
¹⁾ Memory is installed on one to two HP Cell Boards, each having sixteen slots. ²⁾ 16GB kits cannot be mixed with any other capacity on a Cell Board.							
Integrity rx7640		256GB	32 ¹⁾	4GB	AB454A	DRH8640/4GB	2
				8GB	AB455A	DRH8640/8GB	2
				16GB	AB456A	DRH8640/16GB	2
¹⁾ Memory is installed on one or two HP Cell Boards, each containing 16 DIMM slots.							
Integrity rx8620-32		256GB	64 ¹⁾	4GB	AB308A	DRH8620/4096	4
				8GB	AB309A	DRH8620/8192	4
				16GB ²⁾	AB322A	DRH8620/16GB	4
¹⁾ Memory is installed on one to four HP Cell Boards, each having sixteen slots. ²⁾ 16GB kits cannot be mixed with any other capacity on a Cell Board.							
Integrity rx8640		512GB	64 ¹⁾	4GB	AB454A	DRH8640/4GB	2
				8GB	AB455A	DRH8640/8GB	2
				16GB	AB456A	DRH8640/16GB	2
¹⁾ Memory is installed on one, two, or four HP Cell Boards, each containing 16 DIMM slots.							
Integrity Superdome (sx1000)	16-way, 32-way, 64-way	1TB	512 ¹⁾	4GB	A6863A	DRH1000SD/4GB	4
				8GB	A6867A	DRH1000SD/8GB	4
¹⁾ Memory is installed on one to sixteen HP Cell Boards (depending on model), each containing 32 DIMM slots.							

FAMILY	MODEL	MAX	SLOTS	CAPACITY	MFG #	DATARAM #	BOARDS
ALPHA SERVERS							
AlphaServer	DS10, DS10L	2GB	4	1GB	3X-MS310-EA	DRQDS10E/1024	2
AlphaServer	DS15	4GB	4	1GB 2GB	3X-MS315-FA 3X-MS315-GA	DRHDS15/1024 DRHDS15/2GB	2 2
AlphaServer	DS25	16GB	16	2GB 4GB	3X-MS350-EA 3X-MS350-FA	DRHDS25/2048 DRHDS25/4GB	4 4
Note: With 1 memory option (4 DIMMs) installed, memory interleaving will not occur. With 2 identical options (8 DIMMs), 2-way interleaving occurs. With 4 identical options (16 DIMMs), 4-way interleaving occurs.							
AlphaServer	ES45 Model 1, 1B	16GB	16	2GB 4GB	MS620-CA MS620-DB	DRQES45/2048 DRQES45B/4GB	4 4
	ES45 Model 2, 2B, 3, 3B	32GB	32	2GB 4GB	MS620-CA MS620-DB	DRQES45/2048 DRQES45B/4GB	4 4
	ES45 Model 2 (xx-68DAA-xx)	32GB	32	2GB 4GB	MS620-CA MS620-DA	DRQES45/2048 DRQES45/4GB	4 4
Do not order MS620-DB (DRQES45B/4096) memory for ES45 1-GHz Model 2 (xx-68DAA-xx) system. When upgrading your system, ensure all memory within an array are of the same type and capacity. Contact Dataram Customer Support for assistance.							
BLADE SYSTEM p-CLASS SERVERS							
ProLiant BL20p G2	X2800, X3060, X3200	8GB	4	2GB 4GB	300680-B21 300682-B21	DRH370/2048 DRH370/4096	2 2
ProLiant BL20p G3		16GB	4	2GB 4GB 8GB	343056-B21 375004-B21 348106-B21	DRH380G4/2GB DRH380G4D/4GB DRH380G4D/8GB	2 2 2
ProLiant BL20p G4		32GB	8	2GB 4GB 8GB	397411-B21 397413-B21 397415-B21	DRH667FB/2GB DRH667FB/4GB DRH667FB/8GB	2 2 2
DIMMs must be installed in matched pairs.							
ProLiant BL25p		32GB ¹⁾	8	4GB 8GB	379300-B21 395409-B21	DRH385/4GB DRH585/8GB	2 2
¹⁾ Four DIMM slots per processor; 16GB maximum for single processor models.							
ProLiant BL25p G2		32GB	8 ¹⁾	2GB 4GB 8GB	408851-B21 408853-B21 408854-B21	DRH585G2/2GB DRH585G2/4GB DRH585G2/8GB	2 2 2
¹⁾ Four DIMM slots per processor							
ProLiant BL30p	X3.06, X3.2	4GB	2	2GB 4GB	300680-B21 300682-B21	DRH370/2048 DRH370/4096	2 2
ProLiant BL35p		16GB ¹⁾	4	4GB 8GB	379300-B21 395409-B21	DRH385/4GB DRH585/8GB	2 2
¹⁾ Two DIMM slots per processor; 8GB maximum for single processor models.							
ProLiant BL40p	X1.5, X2.0, X2.2, X2.8, X3.0	12GB	6	2GB 4GB	300680-B21 300682-B21	DRH370/2048 DRH370/4096	2 2
ProLiant BL45p		64GB ¹⁾	16	4GB 8GB	379300-B21 395409-B21	DRH385/4GB DRH585/8GB	2 2
¹⁾ Four DIMM slots per processor; 16GB maximum for single processor models.							
ProLiant BL45p G2		64GB	16 ¹⁾	2GB 4GB 8GB	408851-B21 408853-B21 408854-B21	DRH585G2/2GB DRH585G2/4GB DRH585G2/8GB	2 2 2
¹⁾ Four DIMM slots per processor							

FAMILY	MODEL	MAX	SLOTS	CAPACITY	MFG #	DATARAM #	BOARDS
BLADE SYSTEM c-CLASS SERVERS							
ProLiant BL2x220c G5		32GB	4	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				4GB	483401-B21	DRH585G2L/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
				8GB	483403-B21	DRH585G2L/8GB	2
				16GB	408855-B21	DRH585G2/16GB	2
ProLiant BL260c G5		48GB	6	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				4GB	483401-B21	DRH585G2L/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
				8GB	483403-B21	DRH585G2L/8GB	2
				16GB	408855-B21	DRH585G2/16GB	2
ProLiant BL460c		64GB	8	2GB	397411-B21	DRH667FB/2GB	2
				4GB	397413-B21	DRH667FB/4GB	2
				4GB	461828-B21	DRH667FBL/4GB	2
				8GB	397415-B21	DRH667FB/8GB	2
				8GB	466440-B21	DRH667FBL/8GB	2
				16GB	413015-B21	DRH667FB/16GB	2
				64GB	495604-B21	DRH667FB/64GB	8
DIMMs must be installed in matched pairs. HP's 461828-B21, 466440-B21 and Dataram's DRH667FBL/4GB, DRH667FBL/8GB are Low Power DIMMs.							
ProLiant BL460c G5		32GB	8	4GB	461828-B21	DRH667FBL/4GB	2
				8GB	466440-B21	DRH667FBL/8GB	2
ProLiant BL465c		32GB	8 ¹⁾	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
¹⁾ Four DIMM slots per processor							
ProLiant BL465c G5		64GB	8 ¹⁾	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				4GB	483401-B21	DRH585G2L/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
				8GB	483403-B21	DRH585G2L/8GB	2
				16GB	408855-B21	DRH585G2/16GB	2
				64GB	495605-B21	DRH585G2/64GB	8
¹⁾ Four DIMM slots per processor. The DRH585G2x and associated HP options are DDR2-667 in regular and low (L) power. The DRH800Rx and associated HP options are DDR2-800 in regular and low (L) power.							
ProLiant BL480c		64GB ¹⁾	12	2GB	397411-B21	DRH667FB/2GB	2
				4GB	397413-B21	DRH667FB/4GB	2
				4GB	461828-B21	DRH667FBL/4GB	2
				8GB	397415-B21	DRH667FB/8GB	2
				8GB	466440-B21	DRH667FBL/8GB	2
				16GB	413015-B21	DRH667FB/16GB	2
				64GB	495604-B21	DRH667FB/64GB	8
¹⁾ 64GB maximum configured as 8 x 8GB DIMMs. HP's 461828-B21, 466440-B21 and Dataram's DRH667FBL/4GB, DRH667FBL/8GB are Low Power DIMMs.							

FAMILY	MODEL	MAX	SLOTS	CAPACITY	MFG #	DATARAM #	BOARDS
ProLiant BL495c G5		128GB	16 ¹⁾	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				4GB	483401-B21	DRH585G2L/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
				8GB	483403-B21	DRH585G2L/8GB	2
				16GB	408855-B21	DRH585G2/16GB	2
				64GB	495605-B21	DRH585G2/64GB	8
				4GB	497765-B21	DRH800R/4GB	2
				8GB	497767-B21	DRH800R/8GB	2
				8GB	504351-B21	DRH800RLP/8GB	2

¹⁾ Four DIMM slots per processor.
 The DRH585G2x and associated HP options are DDR2-667 in regular and low (L) power.
 The DRH800Rx and associated HP options are DDR2-800 in regular and low (L) power.

ProLiant BL680c G5		128GB	16	2GB	397411-B21	DRH667FB/2GB	2
				4GB	397413-B21	DRH667FB/4GB	2
				4GB	461828-B21	DRH667FBL/4GB	2
				8GB	397415-B21	DRH667FB/8GB	2
				8GB	466440-B21	DRH667FBL/8GB	2
				16GB	413015-B21	DRH667FB/16GB	2
				64GB	495604-B21	DRH667FB/64GB	8

DIMMs must be installed in matched pairs.
 HP's 461828-B21, 466440-B21 and Dataram's DRH667FBL/4GB, DRH667FBL/8GB are Low Power DIMMs.

ProLiant BL685c		64GB	16 ¹⁾	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2

¹⁾ Four DIMM slots per processor

ProLiant BL685c G5		128GB	16 ¹⁾	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				4GB	483401-B21	DRH585G2L/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
				8GB	483403-B21	DRH585G2L/8GB	2
				16GB	408855-B21	DRH585G2/16GB	2
				64GB	495605-B21	DRH585G2/64GB	8
				4GB	497765-B21	DRH800R/4GB	2
				8GB	497767-B21	DRH800R/8GB	2
				8GB	504351-B21	DRH800RLP/8GB	2

¹⁾ Four DIMM slots per processor.
 The DRH585G2x and associated HP options are DDR2-667 in regular and low (L) power.
 The DRH800Rx and associated HP options are DDR2-800 in regular and low (L) power.

Integrity BL860c		48GB	12	2GB	AD343A	DRH860/2GB	2
				4GB	AD344A	DRH860/4GB	2
				8GB	AD345A	DRH860/8GB	2

Double Chip Spare requires that DIMMs are loaded in like quads.
 DIMMs must be installed in decreasing capacity with the largest DIMMs installed in the smallest numbered DIMM slot.

Integrity BL870c		192GB	24	4GB	AH252A	DRH870/4GB	4
				8GB	AH253A	DRH870/8GB	4
				16GB	AH254A	DRH870/16GB	4
				32GB	AM324A	DRH870/32GB	4

DIMMs must be installed in matched sets of four.
 DIMMs must be installed in decreasing capacity with the largest DIMMs installed in the smallest numbered DIMM slot.

PROLIANT SERVERS

ProLiant DL120 G5p		8GB	4	2GB	450260-B21	DRH800U/2GB	1 ¹⁾
¹⁾ Install DIMMs in matched pairs and matched quads for best performance.							
ProLiant DL140 G2	2.8GHz, 3.4GHz, 3.6GHz	16GB	8	2GB	343056-B21	DRH380G4/2GB	2
				4GB	343057-B21	DRH380G4S/4GB	2

FAMILY	MODEL	MAX	SLOTS	CAPACITY	MFG #	DATARAM #	BOARDS
ProLiant DL140 G3		32GB	8	2GB	397411-B21	DRH667FB/2GB	2
				4GB	397413-B21	DRH667FB/4GB	2
				4GB	461828-B21	DRH667FBL/4GB	2
				8GB	397415-B21	DRH667FB/8GB	2
DIMMs must be installed in matched pairs. HP's 461828-B21 and Dataram's DRH667FBL/4GB are Low Power DIMMs.							
ProLiant DL145 G2		32GB ¹⁾	8	4GB	379300-B21	DRH385/4GB	2
				8GB	Not Offered by HP	DRH585/8GB	2
¹⁾ Four DIMM slots per processor; 16GB maximum for single processor models.							
ProLiant DL145 G3		32GB	8 ¹⁾	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
¹⁾ Four DIMM slots per processor							
ProLiant DL160 G5		64GB	8	2GB	397411-B21	DRH667FB/2GB	2
				4GB	397413-B21	DRH667FB/4GB	2
				4GB	461828-B21	DRH667FBL/4GB	2
				8GB	397415-B21	DRH667FB/8GB	2
				8GB	466440-B21	DRH667FBL/8GB	2
				16GB	413015-B21	DRH667FB/16GB	2
				64GB	495604-B21	DRH667FB/64GB	8
				4GB	484060-B21	DRH800FB/4GB	2
				8GB	484062-B21	DRH800FB/8GB	2
				HP's 461828-B21, 466440-B21 and Dataram's DRH667FBL/4GB, DRH667FBL/8GB are Low Power DIMMs.			
ProLiant DL160 G5p		64GB	16	4GB	397413-B21	DRH667FB/4GB	2
				4GB	461828-B21	DRH667FBL/4GB	2
				8GB	397415-B21	DRH667FB/8GB	2
				8GB	466440-B21	DRH667FBL/8GB	2
				4GB	484060-B21	DRH800FB/4GB	2
				8GB	484062-B21	DRH800FB/8GB	2
HP's 461828-B21, 466440-B21 and Dataram's DRH667FBL/4GB, DRH667FBL/8GB are Low Power DIMMs.							
ProLiant DL165 G5		64GB	8 ¹⁾	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				4GB	483401-B21	DRH585G2L/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
				8GB	483403-B21	DRH585G2L/8GB	2
				16GB	408855-B21	DRH585G2/16GB	2
				64GB	495605-B21	DRH585G2/64GB	8
				4GB	497765-B21	DRH800R/4GB	2
				8GB	497767-B21	DRH800R/8GB	2
				8GB	504351-B21	DRH800RLP/8GB	2
¹⁾ Four DIMM slots per processor. Best performance with identical memory configurations for both processors. The DRH585G2x and associated HP options are DDR2-667 in regular and low (L) power. The DRH800Rx and associated HP options are DDR2-800 in regular and low (L) power.							
ProLiant DL180 G5		16GB	6	2GB	408851-B21	DRH585G2/2GB	2
				4GB	461840-B21	DRH585G2S/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
Only one dual-rank kit (8GB) may be installed and it must be installed in the first bank (slots 1 and 2).							
ProLiant DL185 G5		64GB	8 ¹⁾	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				4GB	483401-B21	DRH585G2L/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
				8GB	483403-B21	DRH585G2L/8GB	2
				16GB	408855-B21	DRH585G2/16GB	2
				64GB	495605-B21	DRH585G2/64GB	8
				4GB	497765-B21	DRH800R/4GB	2
				8GB	497767-B21	DRH800R/8GB	2
8GB	504351-B21	DRH800RLP/8GB	2				
The DRH585G2x and associated HP options are DDR2-667 in regular and low (L) power. The DRH800Rx and associated HP options are DDR2-800 in regular and low (L) power.							

FAMILY	MODEL	MAX	SLOTS	CAPACITY	MFG #	DATARAM #	BOARDS
ProLiant DL320 G5		8GB	4	2GB	432806-B21	DRH320G5/2GB	1 ¹⁾
¹⁾ Except for a single DIMM in the first slot, memory must be installed in matched pairs. Three DIMMs are not supported.							
ProLiant DL320 G5p		8GB	4	2GB	450260-B21	DRH800U/2GB	1 ¹⁾
¹⁾ Install DIMMs in matched pairs to take advantage of dual-channel mode and best performance.							
ProLiant DL320s		8GB	4	2GB	432806-B21	DRH320G5/2GB	1 ¹⁾
¹⁾ Except for a single DIMM in the first slot, memory must be installed in matched pairs. Three DIMMs are not supported.							
ProLiant DL360 G3	X2400, X2800, X3060, X3200	8GB	4	2GB	300680-B21	DRH370/2048	2
				4GB	300682-B21	DRH370/4096	2
ProLiant DL360 G4	X3.0, X3.4, X3.6	8GB	4	2GB	358349-B21	DRH360G4/2GB	1 ¹⁾
¹⁾ DIMMs must be installed in matched pairs.							
ProLiant DL360 G4p		16GB	6	2GB	343056-B21	DRH380G4/2GB	2
				4GB	375004-B21	DRH380G4D/4GB	2
				4GB	343057-B21	DRH380G4S/4GB	2
				8GB	348106-B21	DRH380G4D/8GB	2
¹⁾ Except for a single DIMM in the 1st slot, odd numbered DIMMs are not supported--DIMMs must be installed in matched pairs. If using both single- and dual-rank DIMMs, the dual-rank DIMMs must be installed in slots 1 and 2. Dual-rank DIMMs are not supported in slots 5 and 6. No more than the equivalent of eight ranks are supported. The DRH380G4/2GB and DRH380G4S/4GB are single-rank. The DRH380G4D/4GB and DRH380G4D/8GB are dual-rank. The Online Spare option is not supported with the use of dual-rank DIMMs.							
ProLiant DL360 G5		64GB	8	2GB	397411-B21	DRH667FB/2GB	2
				4GB	397413-B21	DRH667FB/4GB	2
				4GB	461828-B21	DRH667FBL/4GB	2
				8GB	397415-B21	DRH667FB/8GB	2
				8GB	466440-B21	DRH667FBL/8GB	2
				16GB	413015-B21	DRH667FB/16GB	2
				64GB	495604-B21	DRH667FB/64GB	8
DIMMs must be installed in matched pairs. HP's 461828-B21, 466440-B21 and Dataram's DRH667FBL/4GB, DRH667FBL/8GB are Low Power DIMMs.							
ProLiant DL365		32GB	8	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
Four Single-Rank DIMMs per processor node provides 2-way bank interleaving. Four Dual-Rank DIMMs per processor node provides 4-way bank interleaving. Mixing Single- and Dual-Rank DIMMs on the same processor node will disable bank interleaving. The 408851-B21 (DRH585G2/2GB) contains single-rank DIMMs. All others contain dual-rank DIMMs. interleaving. Kits must be installed in decreasing capacity with the largest kits installed in the banks furthest away from each processor.							
ProLiant DL365 G5		32GB	8	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				4GB	483401-B21	DRH585G2L/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
				8GB	483403-B21	DRH585G2L/8GB	2
				4GB	497765-B21	DRH800R/4GB	2
				8GB	497767-B21	DRH800R/8GB	2
				8GB	504351-B21	DRH800RLP/8GB	2
The DRH585G2x and associated HP options are DDR2-667 in regular and low (L) power. The DRH800Rx and associated HP options are DDR2-800 in regular and low (L) power.							
ProLiant DL380 G3		12GB ¹⁾	6	2GB	300680-B21	DRH370/2048	2
				4GB	300682-B21	DRH370/4096	2
¹⁾ Older models with a 400MHz FSB (2.4GHz or 2.8GHz processor) cannot use 2GB DIMMs and are limited to 6GB maximum. Newer models with a 533MHz FSB (2.8GHz processor) can use 2GB DIMMs and can achieve 12GB maximum.							
ProLiant DL380 G4		16GB	6	2GB	343056-B21	DRH380G4/2GB	2
				4GB	375004-B21	DRH380G4D/4GB	2
				4GB	343057-B21	DRH380G4S/4GB	2
				8GB	348106-B21	DRH380G4D/8GB	2
¹⁾ Except for a single DIMM in the 1st slot, odd numbered DIMMs are not supported--DIMMs must be installed in matched pairs. If using both single- and dual-rank DIMMs, the dual-rank DIMMs must be installed in slots 1 and 2. Dual-rank DIMMs are not supported in slots 5 and 6. No more than the equivalent of eight ranks are supported. The DRH380G4/2GB and DRH380G4S/4GB are single-rank. The DRH380G4D/4GB and DRH380G4D/8GB are dual-rank. The Online Spare option is not supported with the use of dual-rank DIMMs.							

FAMILY	MODEL	MAX	SLOTS	CAPACITY	MFG #	DATARAM #	BOARDS
ProLiant DL380 G5		64GB	8	2GB	397411-B21	DRH667FB/2GB	2
				4GB	397413-B21	DRH667FB/4GB	2
				4GB	461828-B21	DRH667FBL/4GB	2
				8GB	397415-B21	DRH667FB/8GB	2
				8GB	466440-B21	DRH667FBL/8GB	2
				16GB	413015-B21	DRH667FB/16GB	2
				64GB	495604-B21	DRH667FB/64GB	8

DIMMs must be installed in matched pairs.

HP's 461828-B21, 466440-B21 and Dataram's DRH667FBL/4GB, DRH667FBL/8GB are Low Power DIMMs.

ProLiant DL385		32GB ¹⁾	8	4GB	379300-B21	DRH385/4GB	2
				8GB ²⁾	395409-B21	DRH585/8GB	2

¹⁾ Four DIMM slots per processor; 16GB maximum for single processor models.

²⁾ The Redundant Fan Option Kit (HP# 293048-B21) is required when the HP# 395409-B21 or DRH585/8GB is used.

ProLiant DL385 G2		32GB	8	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2

Four Single-Rank DIMMs per processor node provides 2-way bank interleaving. Four Dual-Rank DIMMs per processor node provides 4-way bank interleaving. Mixing Single- and Dual-Rank DIMMs on the same processor node will disable bank interleaving.

The 408851-B21 (DRH585G2/2GB) contains single-rank DIMMs. All others contain dual-rank DIMMs.

interleaving. Kits must be installed in decreasing capacity with the largest kits installed in the banks furthest away from each processor.

ProLiant DL385 G5		64GB	8	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				4GB	483401-B21	DRH585G2L/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
				8GB	483403-B21	DRH585G2L/8GB	2
				16GB	408855-B21	DRH585G2/16GB	2
		64GB	495605-B21	DRH585G2/64GB	8		

Four Single-Rank DIMMs per processor node provides 2-way bank interleaving. Four Dual-Rank DIMMs per processor node provides 4-way bank interleaving. Mixing Single- and Dual-Rank DIMMs on the same processor node will disable bank interleaving.

The 408851-B21 (DRH585G2/2GB) and 483401-B21 (DRH585G2L/4GB) contain single-rank DIMMs. All others contain dual-rank DIMMs.

Kits must be installed in decreasing capacity with the largest kits installed in the banks furthest away from each processor.

ProLiant DL385 G5p		128GB	16	4GB	497765-B21	DRH800R/4GB	2
				8GB	497767-B21	DRH800R/8GB	2
				8GB	504351-B21	DRH800RLP/8GB	2
				16GB	408855-B21	DRH585G2/16GB	2
				64GB	495605-B21	DRH585G2/64GB	8

Four Single-Rank DIMMs per processor node provides 2-way bank interleaving. Four Dual-Rank DIMMs per processor node provides 4-way bank interleaving. Mixing Single- and Dual-Rank DIMMs on the same processor node will disable bank interleaving.

The 497765-B21 (DRH800R/4GB) contains single-rank DIMMs. All others contain dual-rank DIMMs.

Kits must be installed in decreasing capacity with the largest kits installed in the banks furthest away from each processor.

The DRH585G2 and associated HP options are DDR2-667.

The DRH800Rx and associated HP options are DDR2-800 in regular and low (L) power.

ProLiant DL560	X1.5, X1.9, X2.0, X2.2 X2.5, X2.7, X2.8, X3.0	12GB	6	2GB	300680-B21	DRH370/2048	2
				4GB	300682-B21	DRH370/4096	2

ProLiant DL580 G3		64GB	16 ¹⁾	2GB	343056-B21	DRH380G4/2GB	2
				4GB	375004-B21	DRH380G4D/4GB	2
				4GB	343057-B21	DRH380G4S/4GB	2
				8GB	348106-B21	DRH380G4D/8GB	2

¹⁾ Memory is installed on 1 to 4 riser cards. Each riser card has 4 DIMM slots arranged in 2 banks.

If using both single and dual rank DIMMs, the dual rank DIMMs must be installed in the first bank.

The DRH380G4/2GB and DRH380G4S/4GB are single-rank. The DRH380G4D/4GB and DRH380G4D/8GB are dual-rank.

FAMILY	MODEL	MAX	SLOTS	CAPACITY	MFG #	DATARAM #	BOARDS
ProLiant DL580 G4		64GB	16 ¹⁾	2GB	343056-B21	DRH380G4/2GB	2
				4GB	375004-B21	DRH380G4D/4GB	2
				4GB	343057-B21	DRH380G4S/4GB	2
				8GB	348106-B21	DRH380G4D/8GB	2

¹⁾ Memory is installed on 1 to 4 riser cards. Each riser card has 4 DIMM slots arranged in 2 banks.
 If using both single and dual rank DIMMs, the dual rank DIMMs must be installed in the first bank.
 The DRH380G4/2GB and DRH380G4S/4GB are single-rank. The DRH380G4D/4GB and DRH380G4D/8GB are dual-rank.

ProLiant DL580 G5		256GB	32 ¹⁾	2GB	397411-B21	DRH667FB/2GB	2 ²⁾
				4GB	397413-B21	DRH667FB/4GB	2 ²⁾
				4GB	461828-B21	DRH667FBL/4GB	2 ²⁾
				8GB	397415-B21	DRH667FB/8GB	2 ²⁾
				8GB	466440-B21	DRH667FBL/8GB	2 ²⁾
				16GB	413015-B21	DRH667FB/16GB	2 ²⁾
				64GB	495604-B21	DRH667FB/64GB	8

¹⁾ The DL580 G5 will be configured with 4 or 8 HP Memory Expansion Boards, each containing 4 DIMM slots. For systems configured with just 4 of these HP Expansion Boards, HP offers a DL580 G5 Memory Expansion Boards Option (452179-B21). This option consists of 4 memory expansion boards with 4 DIMM slots each for a total of 16 additional DIMM slots. This brings the DL580G5 to a total of 32 DIMM slots.

²⁾ To achieve maximum memory performance and flexibility, memory should be upgraded in groups of 4 identical DIMMs.
 HP's 461828-B21, 466440-B21 and Dataram's DRH667FBL/4GB, DRH667FBL/8GB are Low Power DIMMs.

ProLiant DL585	[DDR266 PC2100 Memory Options]	128GB	32 ¹⁾	2GB	300680-B21	DRH370/2048	2
				4GB	300682-B21	DRH370/4096	2
				4GB	371049-B21	DRH585/4GB	2
				8GB	395409-B21	DRH585/8GB	2
	[DDR333 PC2700 Memory Options] ²⁾			4GB	379300-B21	DRH385/4GB	2
	[DDR400 PC3200 Memory Options] ³⁾			4GB	379300-B21	DRH385/4GB	2

¹⁾ Memory is installed on 2 to 4 processor memory boards. The processor memory boards have 8 DIMM slots, support DDR266/PC2100 at 266MHz in all 8 slots and DDR333/PC2700 at 333MHz in 6 slots.

²⁾ DDR333/PC2700 at 333MHz speeds limits DIMMs to 6 per processor memory card. An -002 processor memory board and a System ROM at a version dated July 26, 2004 (07/26/04) or later are required. Installing more than 6 DDR333/PC2700 DIMMs will cause the memory to run at 266MHz.

³⁾ DDR400/PC3200 memory is supported on a PC3200-only processor board (012567-001) with 4 DIMM slots, for a maximum memory capacity of 32GB.

All DIMMs on a particular processor memory board must be of the same capacity, but capacities may differ between processor memory boards.

ProLiant DL585 G2		256GB	32 ¹⁾	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
				16GB	408855-B21	DRH585G2/16GB	2
				64GB	495605-B21	DRH585G2/64GB	8

¹⁾ 32 DIMM slots (4 processor memory buses; 8 slots per processor memory bus)

667MHz memory performance requires no more than 4 DDR2-667 (PC2-5300) 4GB DIMMs per processor memory bus; any more will result in the memory slowing down to 533MHz

Four Single-Rank DIMMs (1GB DIMMs) per processor node provides 2-way bank interleaving. Four Dual-Rank DIMMs (2, 4 and 8GB DIMMs) per processor node provides 4-way bank interleaving. Mixing Single- and Dual-Rank DIMMs on the same processor node will disable bank interleaving. Kits must be installed in decreasing capacity with the largest kits installed in the banks furthest away from each processor.

ProLiant DL585 G5		256GB	32 ¹⁾	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				4GB	483401-B21	DRH585G2L/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
				8GB	483403-B21	DRH585G2L/8GB	2
				16GB	408855-B21	DRH585G2/16GB	2
				64GB	495605-B21	DRH585G2/64GB	8
				4GB	497765-B21	DRH800R/4GB	2
				8GB	497767-B21	DRH800R/8GB	2
				8GB	504351-B21	DRH800RLP/8GB	2

¹⁾ 32 DIMM slots (4 processor memory buses; 8 slots per processor memory bus)

The DRH585G2x and associated HP options are DDR2-667 in regular and low (L) power.

The DRH800Rx and associated HP options are DDR2-800 in regular and low (L) power.

800MHz memory bus speeds are only supported on models configured with Opteron 8384, 8382, 8380, and 8378 processors.

Memory bus speeds for 4 or fewer, 6, or 8 will operate at 800-, 667-, and 533MHz, respectively.

All other processor configurations will operate at 667MHz with up to 4 DIMMs and 533MHz when using additional DIMMs.

FAMILY	MODEL	MAX	SLOTS	CAPACITY	MFG #	DATARAM #	BOARDS
ProLiant DL785 G5		512GB	64 ¹⁾	2GB	408851-B21	DRH585G2/2GB	2
				4GB	408853-B21	DRH585G2/4GB	2
				4GB	483401-B21	DRH585G2L/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
				8GB	483403-B21	DRH585G2L/8GB	2
				16GB	408855-B21	DRH585G2/16GB	2
				64GB	495605-B21	DRH585G2/64GB	8
				4GB	497765-B21	DRH800R/4GB	2
				8GB	497767-B21	DRH800R/8GB	2
				8GB	504351-B21	DRH800RLP/8GB	2
¹⁾ The server supports 4 or 8 Processor Memory Cell Boards. Each Cell Board contains one processor socket and 8 DIMM slots. Valid configurations are 4 Cell Boards or 8 Cell Boards (32 or 64 DIMM slots). A minimum of two DIMMs (1 kit) must be installed per processor. Each Cell Board must contain the same number of DIMMs. The DRH585G2x and associated HP options are DDR2-667 in regular and low (L) power. The DRH800Rx and associated HP options are DDR2-800 in regular and low (L) power. 800MHz memory bus speeds are only supported on models configured with Opteron 8384, 8380, 8378 and 8376 processors. Memory bus speeds for 4 or fewer, 6, or 8 will operate at 800-, 667-, and 533MHz, respectively. DIMMs must be installed in matched pairs. DIMMs installed in different banks can be different capacities.							
ProLiant ML110 G4		8GB	4	2GB	432806-B21	DRH320G5/2GB	1 ¹⁾
¹⁾ Except for a single DIMM in the first slot, memory must be installed in matched pairs. Three DIMMs are not supported.							
ProLiant ML110 G5		8GB	4	2GB	450260-B21	DRH800U/2GB	1 ¹⁾
¹⁾ Install DIMMs in matched pairs to take advantage of dual-channel mode and best performance.							
ProLiant ML115		8GB	4	2GB	432806-B21	DRH320G5/2GB	1 ¹⁾
¹⁾ In memory configurations requiring 2 DIMM and 4 DIMM configurations, the memory must be paired for optimal performance.							
ProLiant ML115 G5		8GB	4	2GB	450260-B21	DRH800U/2GB	1 ¹⁾
¹⁾ Install DIMMs in matched pairs to take advantage of dual-channel mode and best performance.							
ProLiant ML150 G2	X2.8, X3.0, X3.2	8GB	4	2GB	358349-B21	DRH360G4/2GB	1 ¹⁾
¹⁾ Except for a single DIMM in the first slot, memory must be installed in matched pairs. Three DIMMs are not supported.							
ProLiant ML150 G3		8GB	4	2GB	397411-B21	DRH667FB/2GB	2
				4GB	397413-B21	DRH667FB/4GB	2
¹⁾ Except for a single DIMM in the first slot, memory must be installed in matched pairs. Three DIMMs are not supported.							
ProLiant ML150 G5		16GB	6	2GB	408851-B21	DRH585G2/2GB	2
				4GB	461840-B21	DRH585G2S/4GB	2
				8GB	408854-B21	DRH585G2/8GB	2
Only one dual-rank kit (8GB) may be installed and it must be installed in the first bank (slots 1 and 2).							
ProLiant ML310 G4		8GB	4	2GB	432806-B21	DRH320G5/2GB	1 ¹⁾
¹⁾ DIMMs do not need to be installed in matched pairs, although matched pairs will provide the best performance							
ProLiant ML310 G5		8GB	4	2GB	450260-B21	DRH800U/2GB	1 ¹⁾
ProLiant ML310 G5p							
¹⁾ Install DIMMs in matched pairs to take advantage of dual-channel mode and best performance.							
ProLiant ML350 G4p	X3.0, X3.2, X3.4	16GB	6	2GB	343056-B21	DRH380G4/2GB	2
				4GB	375004-B21	DRH380G4D/4GB	2
				4GB	343057-B21	DRH380G4S/4GB	2
				8GB	348106-B21	DRH380G4D/8GB	2
¹⁾ Except for a single DIMM in the 1st slot, odd numbered DIMMs are not supported--DIMMs must be installed in matched pairs. If using both single- and dual-rank DIMMs, the dual-rank DIMMs must be installed in slots 1 and 2. Dual-rank DIMMs are not supported in slots 5 and 6. No more than the equivalent of eight ranks are supported. The DRH380G4/2GB and DRH380G4S/4GB are single-rank. The DRH380G4D/4GB and DRH380G4D/8GB are dual-rank. The Online Spare option is not supported with the use of dual-rank DIMMs.							
ProLiant ML350 G5		32GB ¹⁾	8	2GB	397411-B21	DRH667FB/2GB	2
				4GB	397413-B21	DRH667FB/4GB	2
				4GB	461828-B21	DRH667FBL/4GB	2
				8GB	397415-B21	DRH667FB/8GB	2
				8GB	466440-B21	DRH667FBL/8GB	2
¹⁾ Maximum supported memory is 16GB for Dual-Core and 32GB on Quad-Core models.							
²⁾ Except for a single DIMM in the first slot, memory must be installed in matched pairs. Three DIMMs are not supported. HP's 461828-B21, 466440-B21 and Dataram's DRH667FBL/4GB, DRH667FBL/8GB are Low Power DIMMs.							
ProLiant ML370 G3	X2400, X2800, X3060, X3200	12GB	6	2GB	300680-B21	DRH370/2048	2
				4GB	300682-B21	DRH370/4096	2

FAMILY	MODEL	MAX	SLOTS	CAPACITY	MFG #	DATARAM #	BOARDS
ProLiant ML370 G4		16GB	8	2GB	343056-B21	DRH380G4/2GB	2
				4GB	343057-B21	DRH380G4S/4GB	2
ProLiant ML370 G5		128GB	16 ¹⁾	2GB	397411-B21	DRH667FB/2GB	2
				4GB	397413-B21	DRH667FB/4GB	2
				4GB	461828-B21	DRH667FBL/4GB	2
				8GB	397415-B21	DRH667FB/8GB	2
				8GB	466440-B21	DRH667FBL/8GB	2
				16GB	413015-B21	DRH667FB/16GB	2

¹⁾ 8 Slots per HP Memory Card: up to 2 HP Memory Cards supported.
 DIMMs must be installed in matched pairs.
 HP's 461828-B21, 466440-B21 and Dataram's DRH667FBL/4GB, DRH667FBL/8GB are Low Power DIMMs.

ProLiant ML570 G3		64GB	24 ¹⁾	2GB	343056-B21	DRH380G4/2GB	2
				4GB	375004-B21	DRH380G4D/4GB	2
				4GB	343057-B21	DRH380G4S/4GB	2
				8GB	348106-B21	DRH380G4D/8GB	2

¹⁾ Memory is installed on 1 to 4 riser cards. Each riser card has 6 DIMM slots arranged in 3 banks.
 If using both single and dual rank DIMMs, the dual rank DIMMs must be installed in the first bank.
 Dual rank DIMMs are not supported in slots 5 and 6. No more than the equivalent of eight ranks are supported.
 The DRH380G4/2GB and DRH380G4S/4GB are single-rank. The DRH380G4D/4GB and DRH380G4D/8GB are dual-rank.

ProLiant ML570 G4		64GB	24 ¹⁾	2GB	343056-B21	DRH380G4/2GB	2
				4GB	375004-B21	DRH380G4D/4GB	2
				4GB	343057-B21	DRH380G4S/4GB	2
				8GB	348106-B21	DRH380G4D/8GB	2

¹⁾ Memory is installed on 1 to 4 riser cards. Each riser card has 6 DIMM slots arranged in 3 banks.
 If using both single and dual rank DIMMs, the dual rank DIMMs must be installed in the first bank.
 Dual rank DIMMs are not supported in slots 5 and 6. No more than the equivalent of eight ranks are supported.
 The DRH380G4/2GB and DRH380G4S/4GB are single-rank. The DRH380G4D/4GB and DRH380G4D/8GB are dual-rank.

HP-UX WORKSTATIONS

C-Class	C8000	32GB	8	2GB	A8088B	DRHC8000/2GB	2
				4GB	A8089B	DRHC8000/4GB	2
				8GB	AB662A	DRHC8000/8GB	2

ALPHA WORKSTATIONS

AlphaStation	DS10 / XP900	2GB	4	1GB	3X-MS310-EA	DRQDS10E/1024	2
AlphaStation	DS15	4GB	4	1GB	3X-MS315-FA	DRHDS15/1024	2
				2GB	3X-MS315-GA	DRHDS15/2GB	2
AlphaStation	DS25	16GB	16	2GB	3X-MS350-EA	DRHDS25/2048	4
				4GB	3X-MS350-FA	DRHDS25/4GB	4

Note: With 1 memory option (4 DIMMs) installed, memory interleaving will not occur.
 With 2 identical options (8 DIMMs), 2-way interleaving occurs. With 4 identical options (16 DIMMs), 4-way interleaving occurs.

PERSONAL WORKSTATIONS

xw4300		8GB	4	1GB	PV941A	DRHXW4306E/1GB	1 ¹⁾
				2GB	PV942A	DRHXW4306E/2GB	1 ¹⁾

¹⁾ For best performance add DIMMs in matched pairs, and the total amount and type of memory installed in Channel A (slots 1 & 3) and Channel B (slots 2 & 4) should be the same. Mixing ECC and Non-ECC memory is not supported.

HP's PV94xA and Dataram's DRHXW4306E are ECC DDR2-667.

xw4400		8GB	4	1GB	PV941A	DRHXW4306E/1GB	1 ¹⁾
				2GB	PV942A	DRHXW4306E/2GB	1 ¹⁾

¹⁾ For best performance add DIMMs in matched pairs, and the total amount and type of memory installed in Channel A (slots 1 & 3) and Channel B (slots 2 & 4) should be the same. Mixing ECC and Non-ECC memory is not supported.

HP's PV94xA and Dataram's DRHXW4306E are ECC DDR2-667.

xw4550		4GB	4	1GB	PV941A	DRHXW4306E/1GB	1 ¹⁾
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¹⁾ For best performance the total amount and type of memory loaded into Channel 1 and Channel 2 should be the same and should be loaded in pairs. Mixing ECC and Non-ECC memory is not supported.

HP's PV94xA and Dataram's DRHXW4306E are ECC DDR2-667.

FAMILY	MODEL	MAX	SLOTS	CAPACITY	MFG #	DATARAM #	BOARDS
xw4600		8GB	4	1GB	PV941A	DRHXW4306E/1GB	1 ¹⁾
				2GB	PV942A	DRHXW4306E/2GB	1 ¹⁾
				2GB	GH740AA	DRHXW4600/2GB	1 ¹⁾
¹⁾ For best performance the total amount and type of memory loaded into Channel 1 and Channel 2 should be the same and should be loaded in pairs. Mixing ECC and Non-ECC memory is not supported. Mixing speeds will cause the system to run at the slower 667MHz. HP's PV94xA and Dataram's DRHXW4306E are ECC DDR2-667. HP's GH7xxAA and Dataram's DRHXW4600 are ECC DDR2-800.							
xw6000		8GB	4	2GB	313305-B21, (2x)AA657A	DRHXW6000/2048	2
				4GB	(2x)AA834A	DRHXW6000/4096	2
xw6400		16GB	4	2GB	EM161AA	DRHXW8400/2GB	1
				4GB	EM162AA	DRHXW8400/4GB	1
Except for a single DIMM in the 1st slot, DIMMs must be installed in matched pairs. Three DIMMs are not supported.							
xw6600		32GB	8	2GB	EM161AA	DRHXW8400/2GB	1 ¹⁾
				4GB	EM162AA	DRHXW8400/4GB	1 ¹⁾
¹⁾ DIMMs must be installed in matched pairs.							
xw8000		12GB	6	2GB	313305-B21, (2x)AA657A	DRHXW6000/2048	2
				4GB	(2x)AA834A	DRHXW6000/4096	2
xw8200		16GB	8	1GB	DY655A	DRHXW8200/1GB	1
				2GB	PH201A	DRHXW8200/2GB	1
xw8400		32GB	8	2GB	EM161AA	DRHXW8400/2GB	1
				4GB	EM162AA	DRHXW8400/4GB	1
Except for a single DIMM in the 1st slot, DIMMs must be installed in matched pairs. Three DIMMs are not supported.							
xw8600	without riser cards	32GB	8	2GB	EM161AA	DRHXW8400/2GB	1
				4GB	EM162AA	DRHXW8400/4GB	1
				2GB	KY113AA	DRHXW800FB/2GB	1
	with riser cards	128GB	16	2GB	EM161AA	DRHXW8400/2GB	1
				4GB	EM162AA	DRHXW8400/4GB	1
				8GB	GM112AA	DRHXW8600/8GB	1
DDR2-800 DRHXW800FB/xGB and corresponding HP options are supported only with 1600-MHz Front Sided Bus (FSB) processors. DIMMs must be ordered and installed in matched pairs on the system board and in quads on the riser cards.							
xw9300		32GB ¹⁾	8	2GB ³⁾	PP656A	DRHXW9300/2GB	1 ²⁾
				8GB ³⁾	EK739AA	DRHXW9300/8GB	2
¹⁾ Four DIMM slots per processor; 16GB maximum for single processor models. ²⁾ DIMMs must be ordered and installed in matched pairs. ³⁾ A memory cooling duct (HP# EA789AA) is required with the use of 2GB or 4GB DIMMs.							

DATARAM

Product Announcement

DRHXW800FB/2GB, DRHXW800FB/4GB Speedier DDR2-800 Memory Upgrades to Improve the Performance of your HP xw8600 Workstation

January 13, 2009—Dataram today announced the immediate availability of new high-performance, PC2-6400 2GB and 4GB FB-DIMMs for Hewlett-Packard's HP xw8600 Workstation.

Dataram's DRHXW800FB/2GB and DRHXW800FB/4GB each contain a single DDR2-800 FB-DIMM, equivalent to HP's KY113AA and FS376AA respectively.

HP xw8600 Memory Configurations

The xw8600 workstation may be purchased with minimal memory from HP. With these models, memory is supported via 8 FB-DIMM slots on the system board, and can now use the faster DDR2-800 speed 512MB, 1GB and 2GB capacity FB-DIMMs. 4GB DDR2-800 and 8GB (any speed) FB-DIMMs are not supported on the system board.

HP xw8600 workstation models purchased with a larger amount of memory (i.e. 16GB consisting of 8 x 2GB FB-DIMMs, or more) and dual-processors, will contain a more powerful power supply (1050W) and four riser cards each containing 4 FB-DIMM slots. These riser cards support all FB-DIMM capacities and speeds. All FB-DIMMs must be installed in matched pairs. Do not mix DDR2-800 and DDR2-667 speeds within the system.

DDR2-800 memory options are supported only with 1600MHz Front Side Bus (FSB) processors. For slower models Dataram offers a compatible line of DDR2-667 FB-DIMM memory upgrades.

Dataram Memory Options for the HP xw8600 Workstation

	Dataram PN	HP PN	Description
NEW!!	DRHXW800FB/2GB	KY113AA	2GB (1x2GB DDR2-800 FB-DIMMs)
NEW!!	DRHXW800FB/4GB	FS376AA	4GB (1x4GB DDR2-800 FB-DIMMs)
	DRHXW8400/2GB	EM161AA	2GB (1x2GB DDR2-667 FB-DIMMs)
	DRHXW8400/4GB	EM162AA	4GB (1x4GB DDR2-667 FB-DIMMs)
	DRHXW8600/8GB	GM112AA	8GB (1x8GB DDR2-667 FB-DIMMs)



DATARAM

The Best Choice in Memory

800.DATARAM | usasales@dataram.com

USA – Corporate Headquarters

DATARAM Corporation
186 Princeton-Hightstown Road
West Windsor, NJ 08550

Tel: 1.800.DATARAM
800.328.2726
609.799.0071
Fax: 609.799.6734
Mail: P.O. Box 7528
Princeton, NJ 08543-7528
Email: usasales@dataram.com
usasupport@dataram.com

Europe

Denmark, Aarhus

Tel +45 70 212 212

France, Boulogne-Billancourt

Tel +33 1 55 60 23 65

Germany, Munich

Tel + 49 89 309096-0

Sweden, Stockholm

Tel +46 (0) 8 594 727 70

United Kingdom, Harrow

Tel +44 20 8861 8336

Email: eusales@dataram.com
eusupport@dataram.com

ASIA

Japan, Tokyo

Tel +81 3 3512 8666

Email: apsales@dataram.com
support@dataram.com

Customer Support

Customer Support representatives are available for Asia, Europe and the USA to help with detailed technical information, installation questions and troubleshooting.

For the latest information, please consult Dataram's Memory Configurator and Product Support FAQ at <http://www.dataram.com>. Dataram memory products are covered by a lifetime warranty. Complete warranty information is also available on Dataram's website.

Prior to returning products to Dataram, please contact Customer Support via email or telephone to obtain an RMA (Return Material Authorization) tracking number

USA (and all other countries)

Tel: +1 800-599-0071
+1 609-799-0071
Fax: +1 609-799-6734
Email: usasupport@dataram.com

Europe

Tel: +45 70 212 217
Fax: +45 70 212 216
Email: eusupport@dataram.com

Asia

Japan: +81 3 3512 8666
Email: support@dataram.com

About Dataram

Founded in 1967, Dataram is a worldwide leader in the design and manufacture of reliable, high capacity and innovative memory solutions. Dataram provides customized memory solutions for OEMs and memory upgrades for leading brands including HP, IBM, SGI, Sun Microsystems, Dell, Intel and AMD Opteron. For more information about Dataram's memory offerings, visit www.dataram.com