

GE-link to this document:

<http://www.goldeneggs.fi/documents/GE-COMPARE-BLADE-A.pdf>

GOLDEN EGGS

Visual Cook Book For: x86 Blade Servers

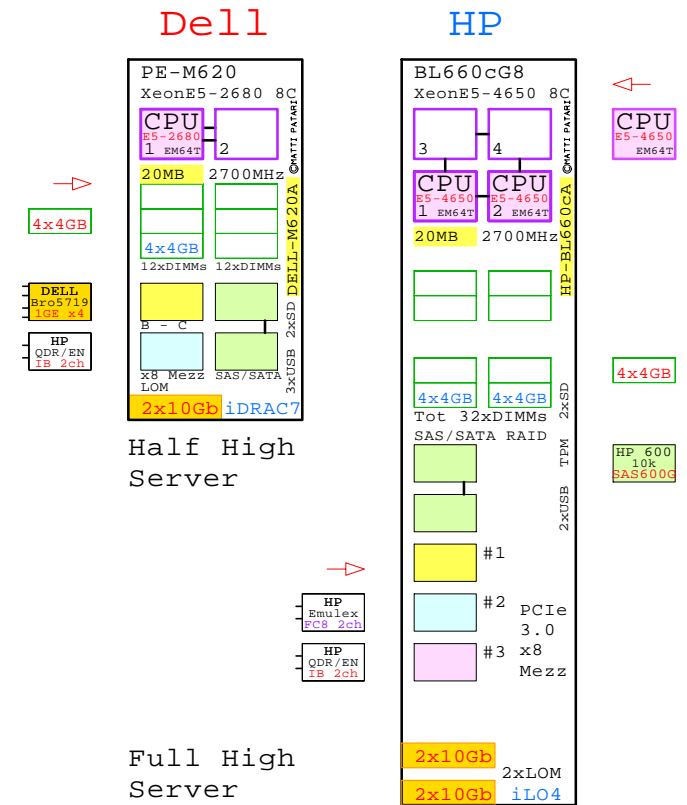
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- 3 - Compare Blade Server Enclosures
- 4 - Verical Servers:
 - 4 - Dell PowerEdge VRTX and Servers **New**
 - 5 - Dell PowerEdge M1000e and Servers
 - 6 - HP ProLiant c7000 and Servers
 - 7 - HP Integrity c7000 and IA64 Servers **New**
 - 8 - Fujitsu Primergy BX900 S2 and Servers

Horizontal Servers:

- 9 - IBM Flex Systems and Servers
- 10 - IBM NeXtScale Systems nx360 M4 **Very New!**
- 11 - Cisco UCS 5108 and Servers

Low Wattage Servers:

- 12 - HP ProLiant Moonshot 1500 and Servers **New**
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Half High Server

Full High Server

This document is a collection of available x86 Blade Servers. It is intended for global system planning purposes. A picture talks all languages.

Created by:
Matti.Patari@Kolumbus.Fi Helsinki

Golden Eggs Home:
<http://www.goldeneggs.fi>

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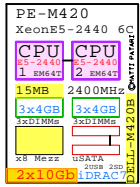
GOLDEN EGGS Visuals™ Helsinki	28-Jan-2014	GE-COMPARE-BLADE-A
	Matti.Patari@Kolumbus.Fi	

Compare x86 Blade Server Systems
GOLDEN EGGS Visuals, Helsinki

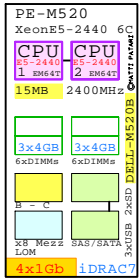
First rev 10-Feb-2013

Compare x86 Blade Server Systems

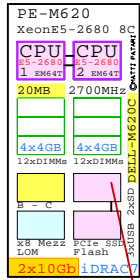
Dell Blades: 2P-2P-2P-4P



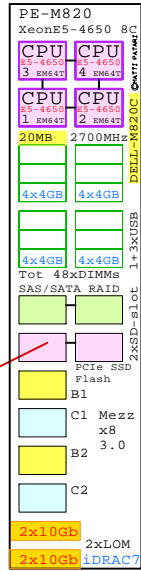
E5-2400



E5-2400



E5-2600

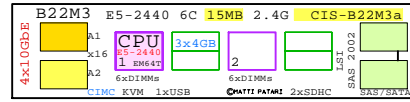


E5-4600

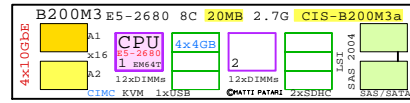
Advanced Flash SSD:
 - PCIe 3.0
 - Hot-Plug



Cisco Blades: 2P-2P-4P

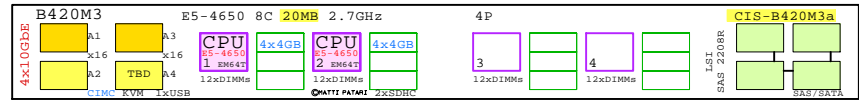


E5-2400

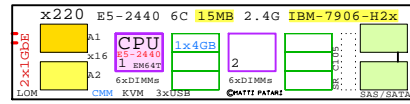


E5-2600

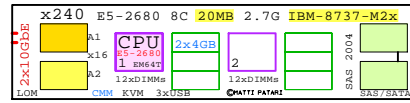
E5-4600



IBM Blades: 2P-2P-4P + 2P-4P

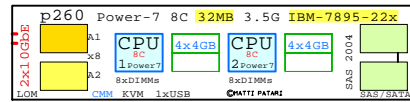
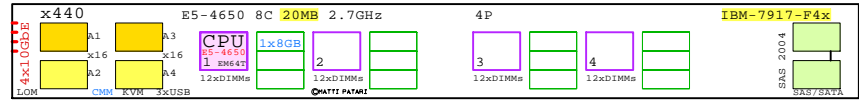


E5-2400



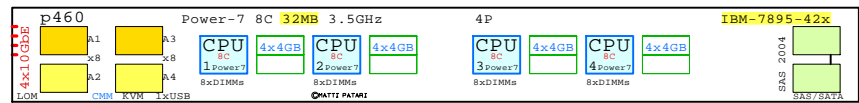
E5-2600

E5-4600

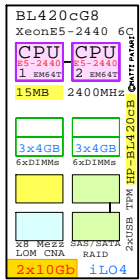


Power-7

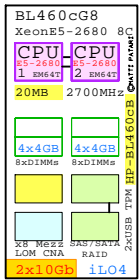
Power-7



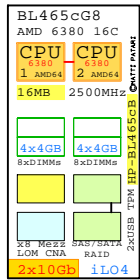
HP Blades: 2P-2P-2P-4P



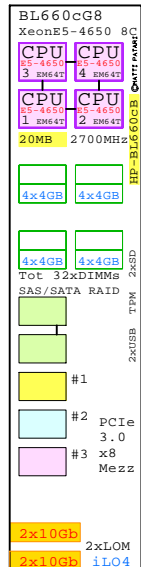
E5-2400



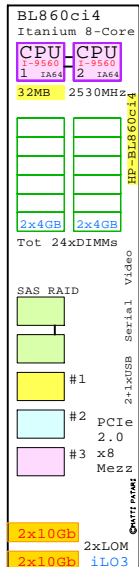
E5-2600



AMD 6380

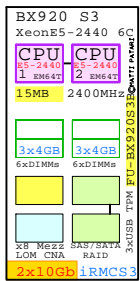


E5-4600

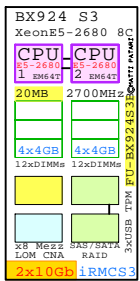


Itanium

Fujitsu Blades: 2P-2P



E5-2400



E5-2600

GoldenEggs Choice goes to Dell:
 -PCIe 3.0
 -Flash
 -Hot-Plug

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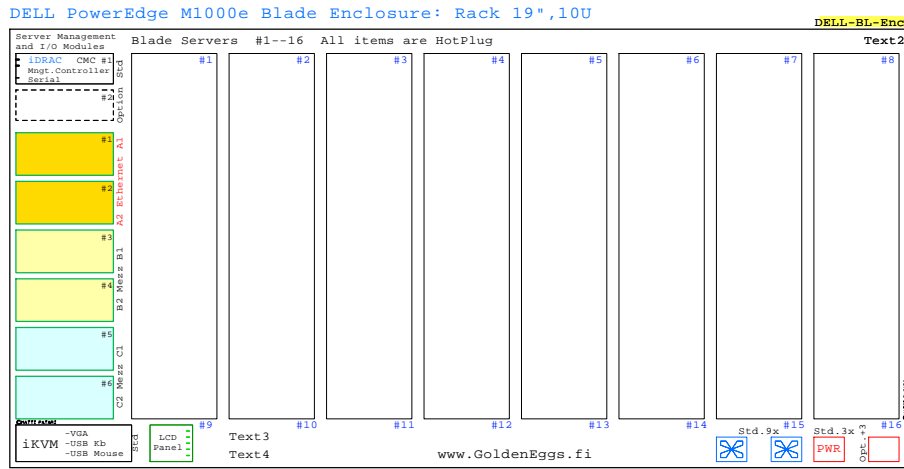
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Matti.Patari@Kolumbus.Fi		

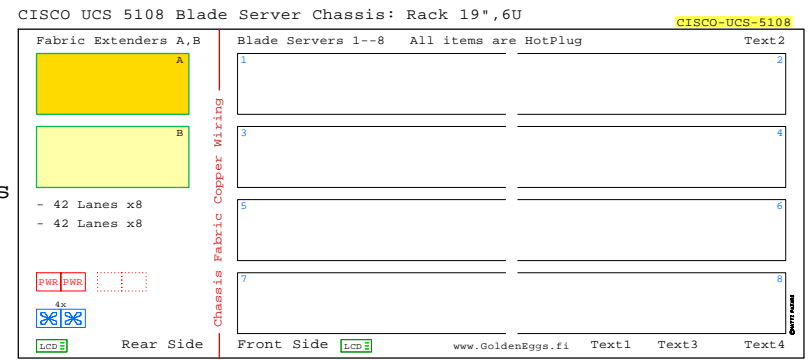
Compare x86 Blade Server Nodes

Compare x86 Blade Server Nodes
 GOLDEN EGGS Visuals, Helsinki

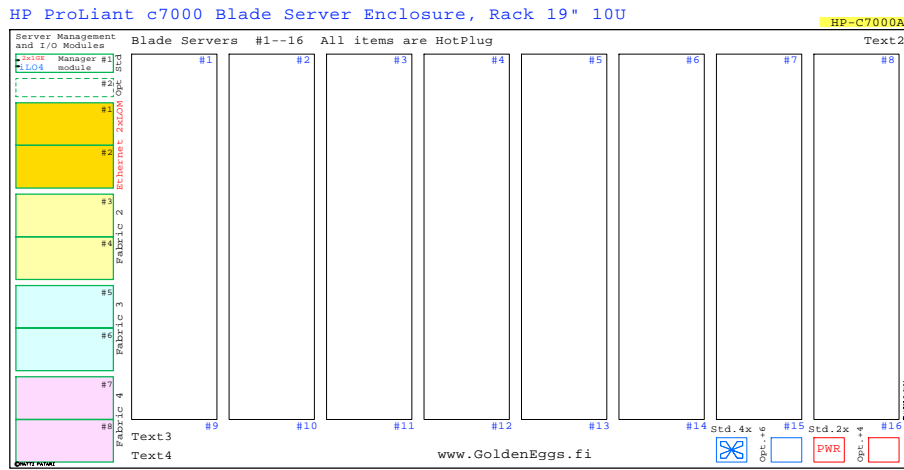
Dell:
8-16
Nodes
3x
Fabrics



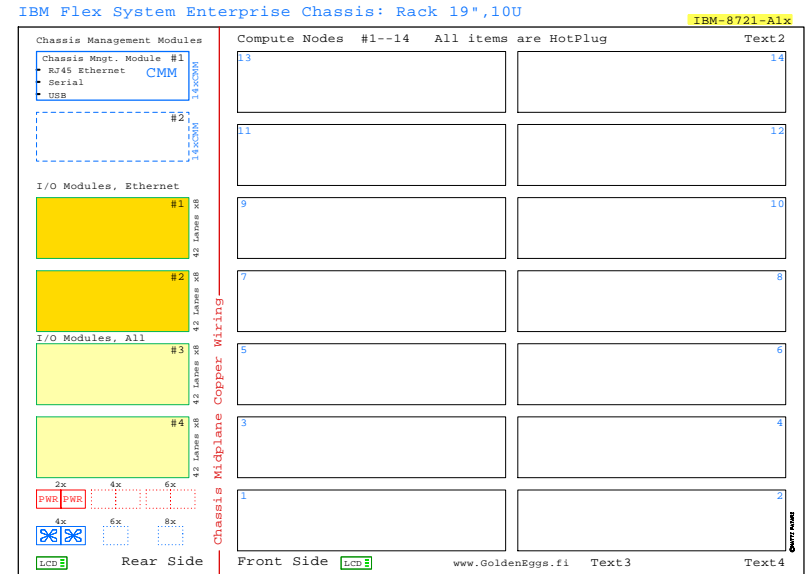
Cisco:
4-8
Nodes
2x
Fabric
Extenders



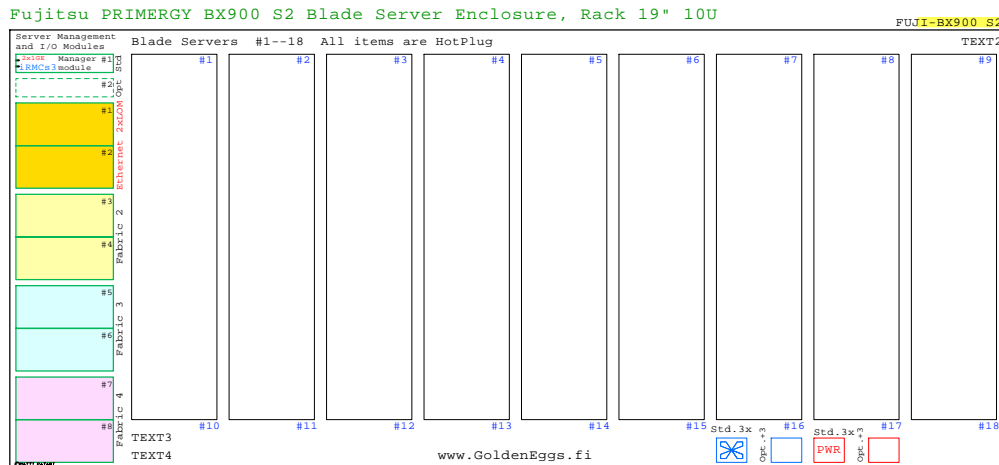
HP:
8-16
Nodes
4x
Fabrics



IBM:
7-14
Nodes
2x
Fabrics



Fujitsu
9-18
Nodes
4x
Fabrics



GoldenEggs Choice goes to IBM Flex:
-Effective fabric solution
-No 19"node size squeezing
-Horizontal nodes,free to grow

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GOLDEN EGGS Visuals™ Helsinki 10-Feb-2013 GE-COMPARE-BLADE-3 Matti.Patari@Rolumbus.Fi

Compare x86 Blade Enclosures

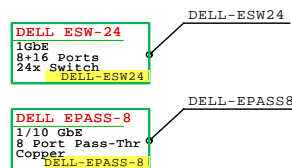
Compare x86 Blade Enclosures
GOLDEN EGGS Visuals, Helsinki

DELL PowerEdge Blade Servers and VRTX Enclosure, Intel

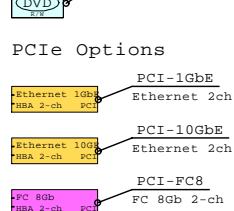
Link to this document: <http://www.goldeneggs.fi/documents/GE-DELL-BLADE-VRTX.pdf>

Enclosure Options

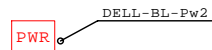
Ethernet I/O modules



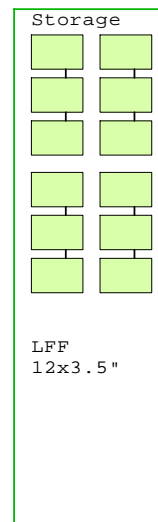
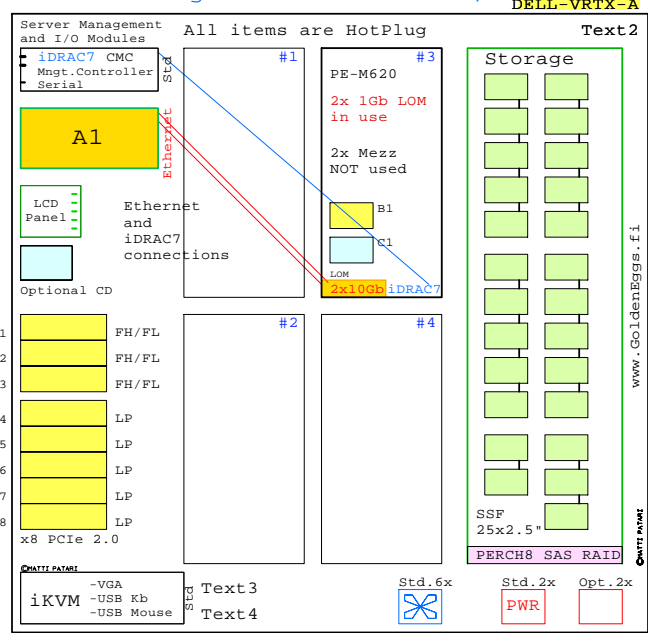
PCIe Options



2x Power Supply



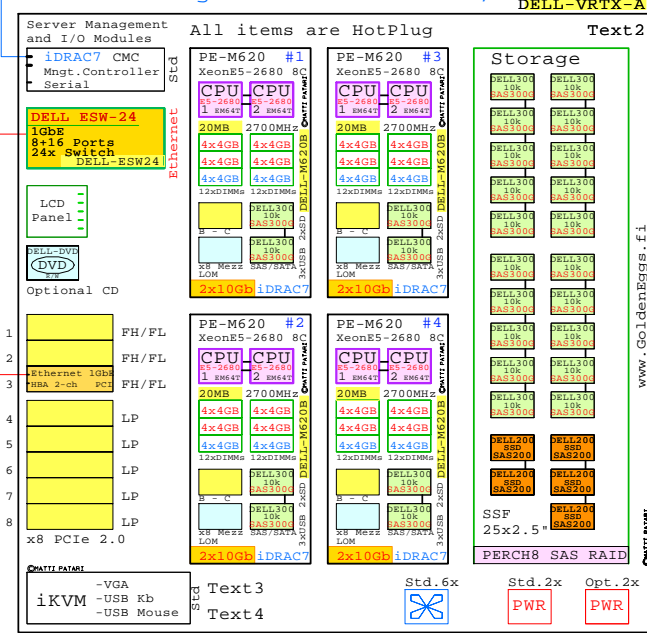
DELL PowerEdge VRTX Blade Tower, 5U



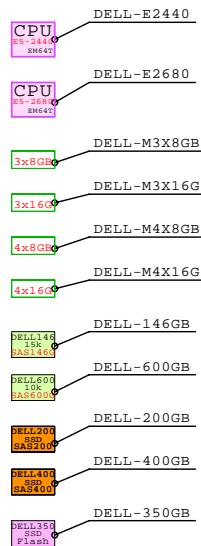
Optional 3.5" LFF Storage

GE CMC

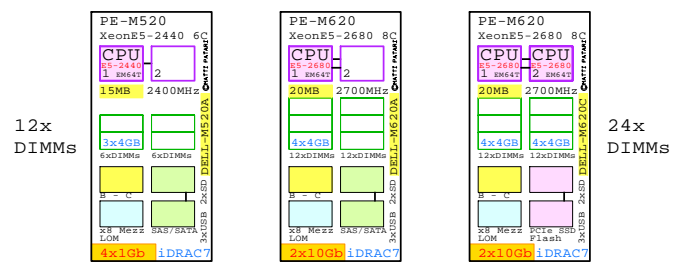
DELL PowerEdge VRTX Blade Tower, 5U



Blade Server Options



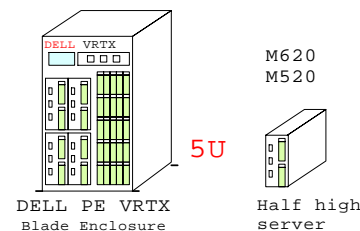
M520/2400 M620/2600 M620/2600 /Flash



Half High Blades

BOM of the example system above

Part Number	Qty	Description
DELL-200GB	5	Dell 200GB SATA SSD hot-plug disk 2.5"
DELL-300GB	28	DELL 300GB SAS 10000r hot-plug disk 2.5"
DELL-BL-Pw2	1	DELL Blade VRTX 2xPower kit
DELL-DVD	1	DELL CD-RW/DVD-ROM Option kit, slimline
DELL-ESW24	1	DELL 8+16x 1GbE Switch VRTX 1GbE
DELL-M4X4GB	16	DELL 4x4GB Blade DIMM Memory
DELL-M620B	4	DELL M620 2x E5-2680 8C 2P 2.7GH-20MB 32
DELL-VRTX-A	1	Dell VRTX Enclosure 4xBlade, 25x 2.5" SFF
PCI-1GbE	1	Ethernet 2x 1GbE PCI HBA



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 GOLDEN EGGS Visuals™ Helsinki
 16-Jun-2013 GE-DELL-BLADE-VRTX
 Matti.Patari@Kolumbus.Fi

DELL PowerEdge Blade Servers and M1000e Enclosure, Intel

Link to this document: <http://www.goldeneggs.fi/documents/GE-DELL-BLADE-A.pdf>

Enclosure Options

2nd Management Module

iDRAC CMC Mngt. Controller Ser. DELL-BL-CMC

Ethernet I/O modules, A-C

Ethernet I/O Modules	Blade I/O Adapters
DELL F10 MXL 10/40 GbE 56 10GbE Port xxxxxx DELL-F10MXL	DELL-57810S 57810S BroadCom 10GbE
DELL M8024-k 10GbE 24 Ports bbbbbb DELL-M8024-k	DELL-X520-k X520-k Intel 10GbE
DELL M6348 1 GbE 48 Ports yyyyyy DELL-M6348	DELL-BC5719 5719 BroadCom 1GbE
DELL EPASS-k 1/10 GbE 16 Port Pass-Thr Copper DELL-EPASS-k	

Fibre Channel I/O Modules, B-C

DELL M5424 FC8 SAN Switch Brocade 8/16 DELL-M5424	DELL-FC8-E LPel205 Emulex FC8
DELL M4424 FC4 SAN Switch Brocade 8/16 DELL-M4424	DELL-FC8-Q QME2572 Qlogic FC4

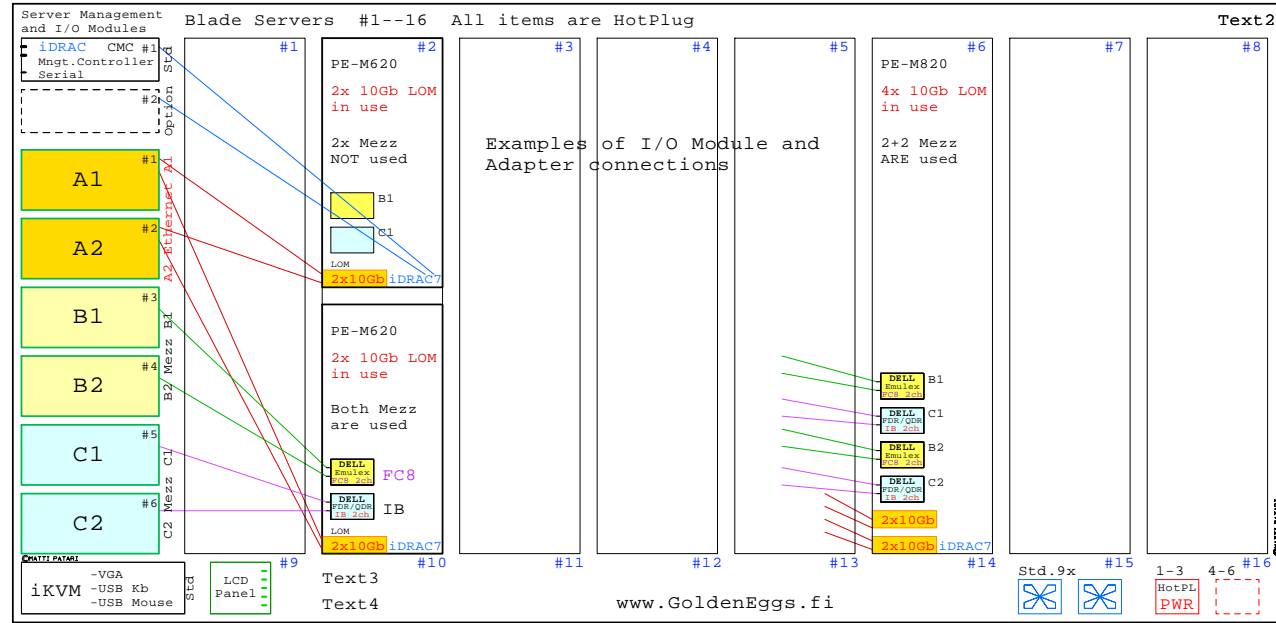
Infiniband I/O Modules, B-C

DELL M2401G IB Switch Mellanox FDR/QDR DELL-M2401G	DELL-IB-FDR xxxxxx Mellanox IB
DELL M3601Q IB Switch Mellanox QDR/DDR DELL-M3601Q	DELL-IB-QDR xxxxxx Mellanox IB

Kitt of 3x Power Supplies

HotPL
PWR

DELL PowerEdge M1000e Blade Enclosure: Rack 19", 10U

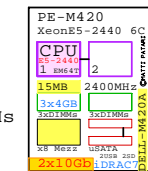


DELL-BL-Enc

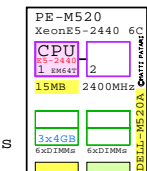
Blade Server Options

CPU E5-2440 E5647	DELL-E2440
CPU E5-2680 E5647	DELL-E2680
CPU E5-4650 E5647	DELL-E4650
3x8GB	DELL-M3X8GB
3x16GB	DELL-M3X16GB
4x8GB	DELL-M4X8GB
4x16GB	DELL-M4X16GB
DELL148 150 SAS16GB	DELL-146GB
DELL600 300 SAS60GB	DELL-600GB
DELL200 800 SAS200GB	DELL-200GB
DELL400 800 SAS400GB	DELL-400GB
DELL350 800 SAS350GB	DELL-350GB

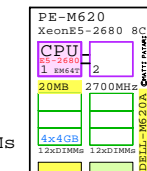
M420/2400



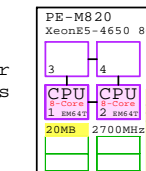
M520/2400



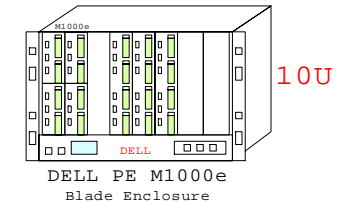
M620/2600



M820/4600



HotPL
PWR



Enclosure and Server Blades on this page.

Part Number	Qty	Description
DELL-BL-Enc	1	Dell Blade M1000e Enclosure 8/16x 10U
DELL-M420A	1	DELL M420 1x E5-2440 6C 2P 2.4GH-15MB 12
DELL-M520A	1	DELL M520 1x E5-2440 6C 2P 2.4GH-15MB 12
DELL-M620A	1	DELL M620 1x E5-2680 8C 2P 2.7GH-20MB 16
DELL-M820A	1	DELL M820 2x E5-4650 8C 4P 2.7GH-20MB 32

Four CPUs	Four Disk	Full High Blade
48x DIMMs	2+2 Mezz	2xLOM
1+3xUSB	2x10Gb iDRAC7	2x10Gb iDRAC7
2xSD		
PCIe 3.0		

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		Matti.Patari@Kolumbus.Fi

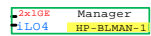
Dell Blade Server M1000e Family
GOLDEN EGGS Visuals, Helsinki

HP ProLiant Blade Servers and c7000 Enclosure, Intel & AMD

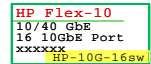
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Enclosure Options

2nd Management Module

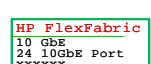


Ethernet I/O modules, A-C

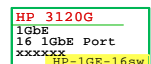


Blade I/O Adapters

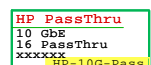
HP-10E-2mzB
530M
BroadCom 10GbE



HP-10E-2mzE
552M
Emulex 10GbE



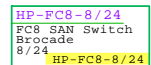
HP-1GE-4mzI
I350
Intel 1GbE



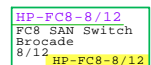
Ethernet



Fibre Channel I/O Modules, B-C



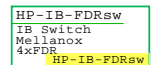
HP-FC8-Emz
LPe1205
Emulex FC8



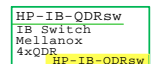
HP-FC8-Qmz
QMB2572
Qlogic FC8

Fibre Channel

Infiniband I/O Modules, B-C



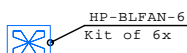
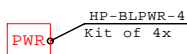
HP-IB-FDRmz
FDR 10/40Gb
Mellanox IB



HP-IB-QDRmz
QDR 10Gb
Mellanox IB

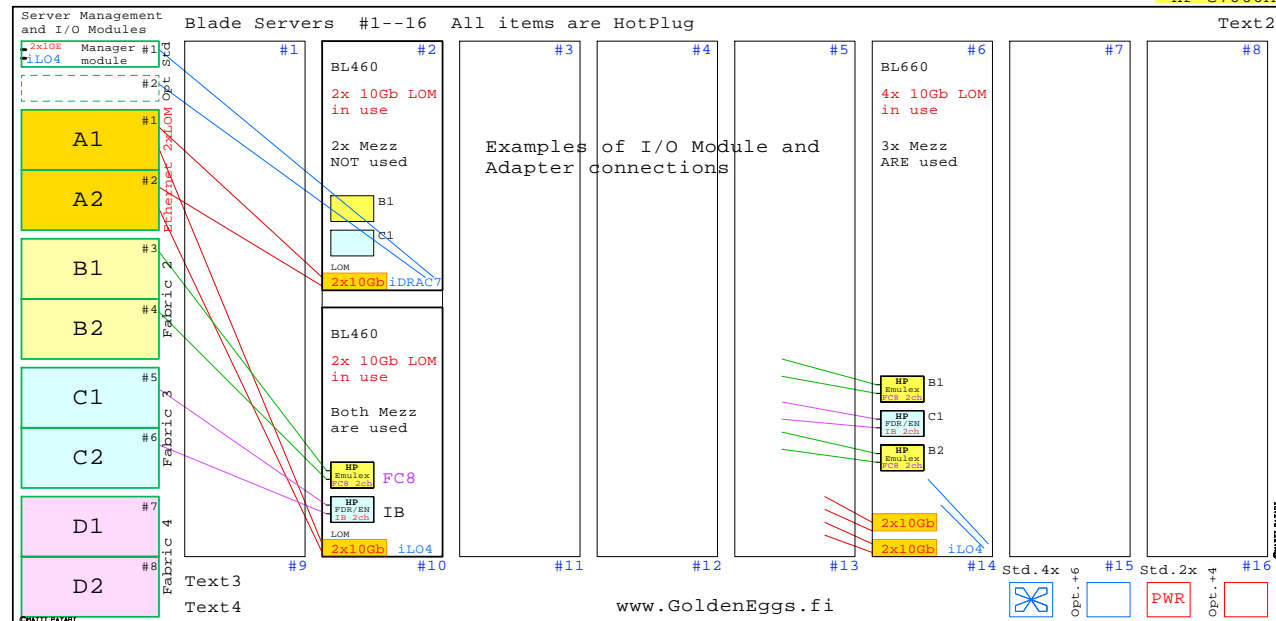
Infini Band

Optional Power and Fans

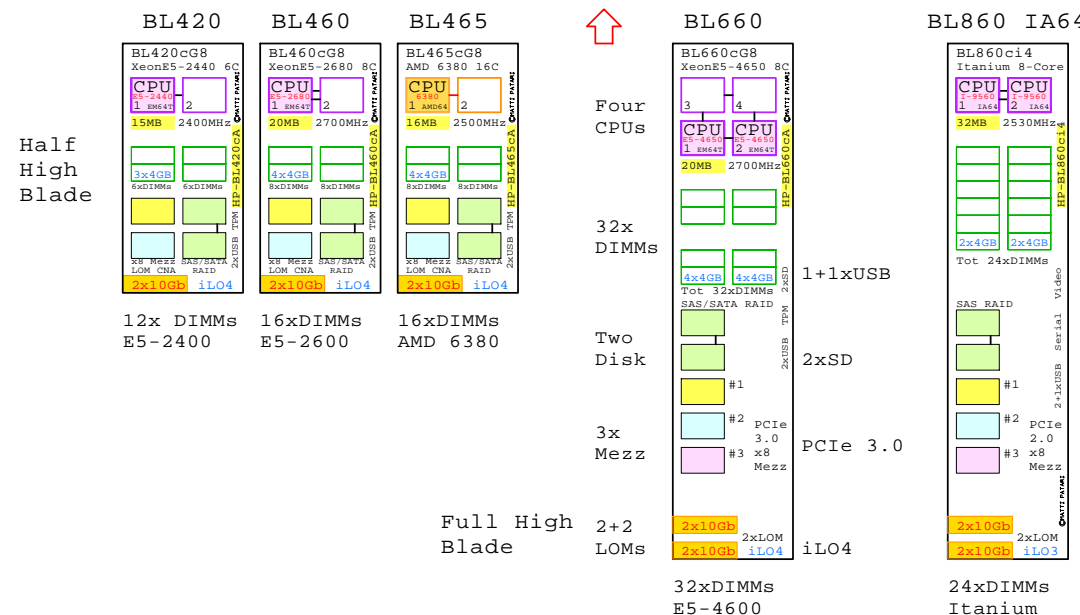
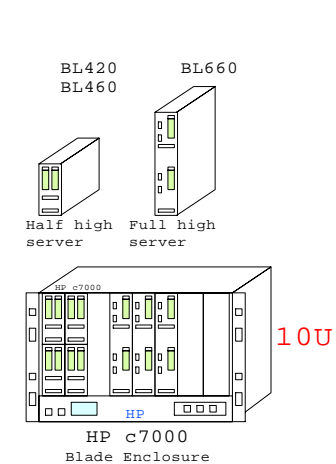
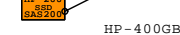
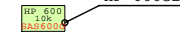
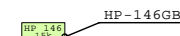
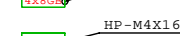
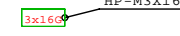
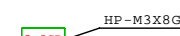
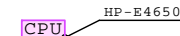
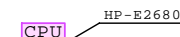
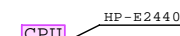


HP ProLiant c7000 Blade Server Enclosure, Rack 19" 10U

HP-C7000A



Blade Server Options



HP ProLiant Blade Servers and c7000 Enclosure, Intel & AMD

GoldenEggs Home: <http://www.goldeneggs.fi>

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GOLDEN EGGS Visuals™ Helsinki	01-Mar-2013	GE-HP-BLADE-A
	Matti.Patari@Kolumbus.Fi	

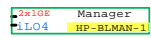
HP x86 Blade Server c7000 Family
GOLDEN EGGS Visuals, Helsinki

HP Itanium IA64 Blade Servers and c7000 Enclosure

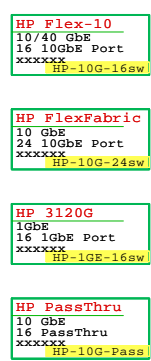
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Enclosure Options

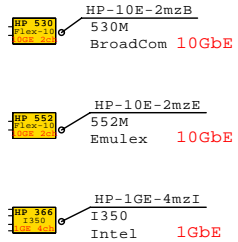
2nd Management Module



Ethernet I/O modules, A-C

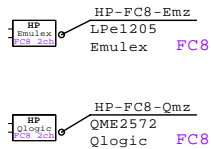
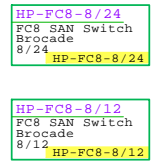


Blade I/O Adapters



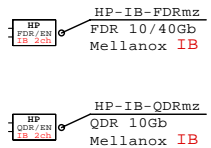
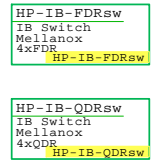
Ethernet

Fibre Channel I/O Modules, B-C



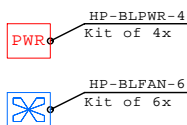
Fibre Channel

Infiniband I/O Modules, B-C



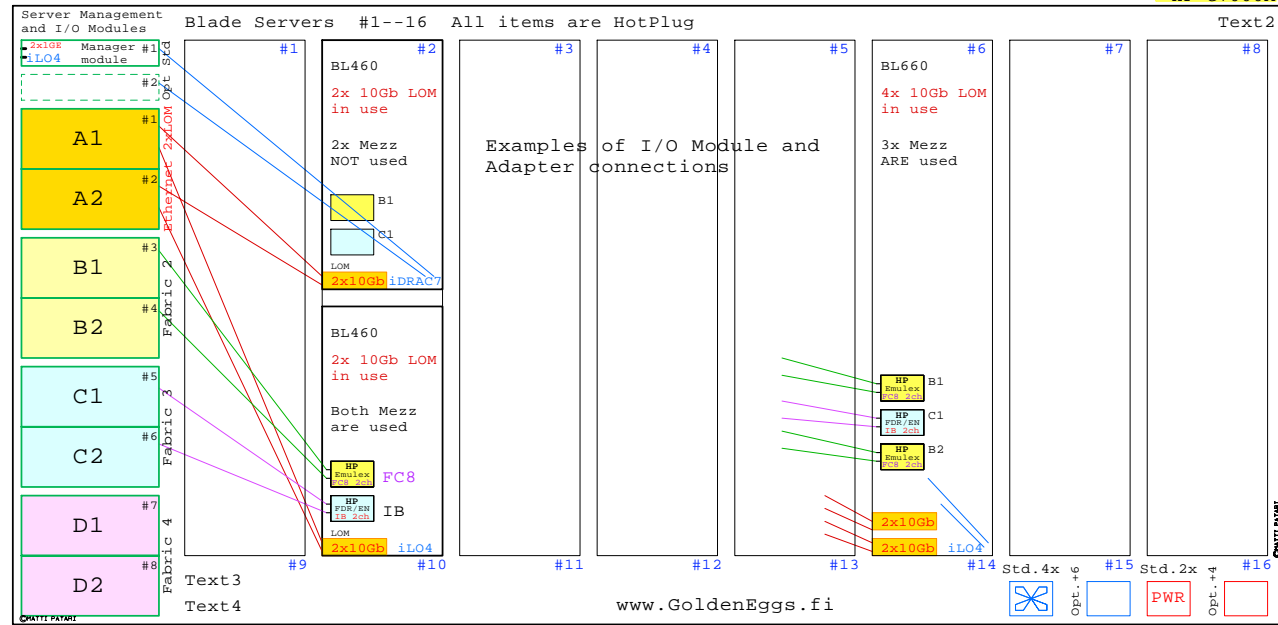
Infini Band

Optional Power and Fans

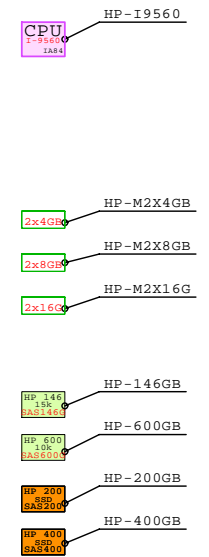


HP ProLiant c7000 Blade Server Enclosure, Rack 19" 10U

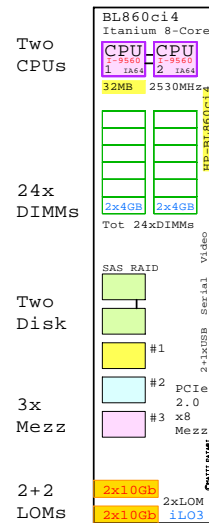
HP-C7000A



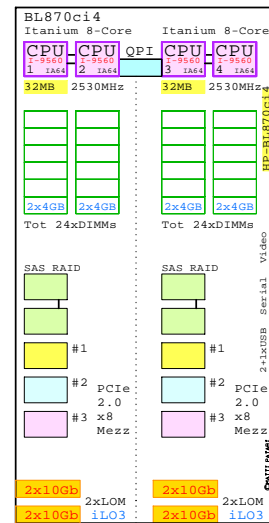
Blade Server Options



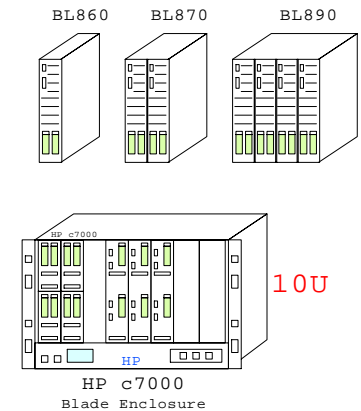
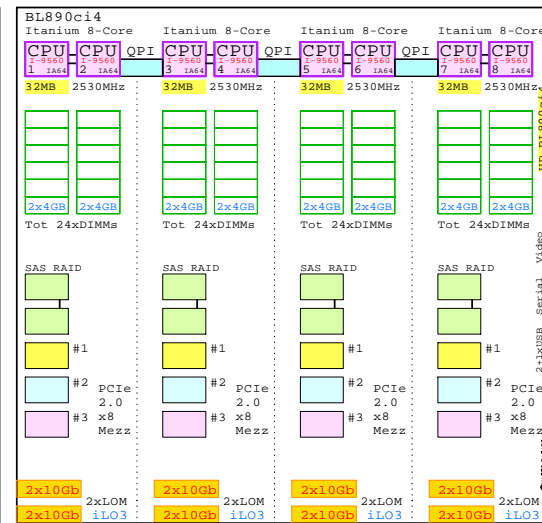
BL860 IA64 2P



BL870 IA64 4P



BL890 IA64 8P



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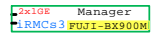
GOLDEN EGGS Visuals™ Helsinki	01-Mar-2013	GE-HP-BLADE-IA64
	Matti.Patari@Kolumbus.Fi	

Fujitsu Primergy Blade Servers and BX900 S2 Enclosure, Intel

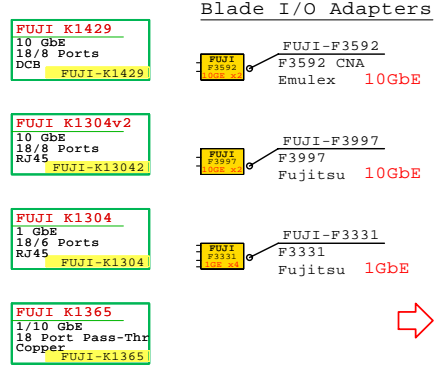
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Enclosure Options

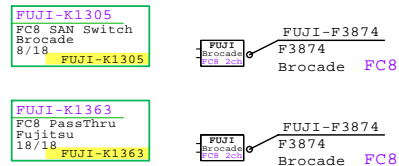
2nd Management Module



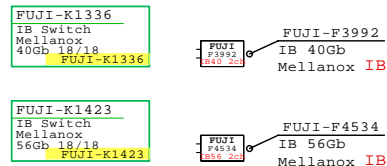
Ethernet I/O modules, A-C



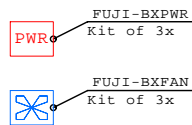
Fibre Channel I/O Modules, B-C



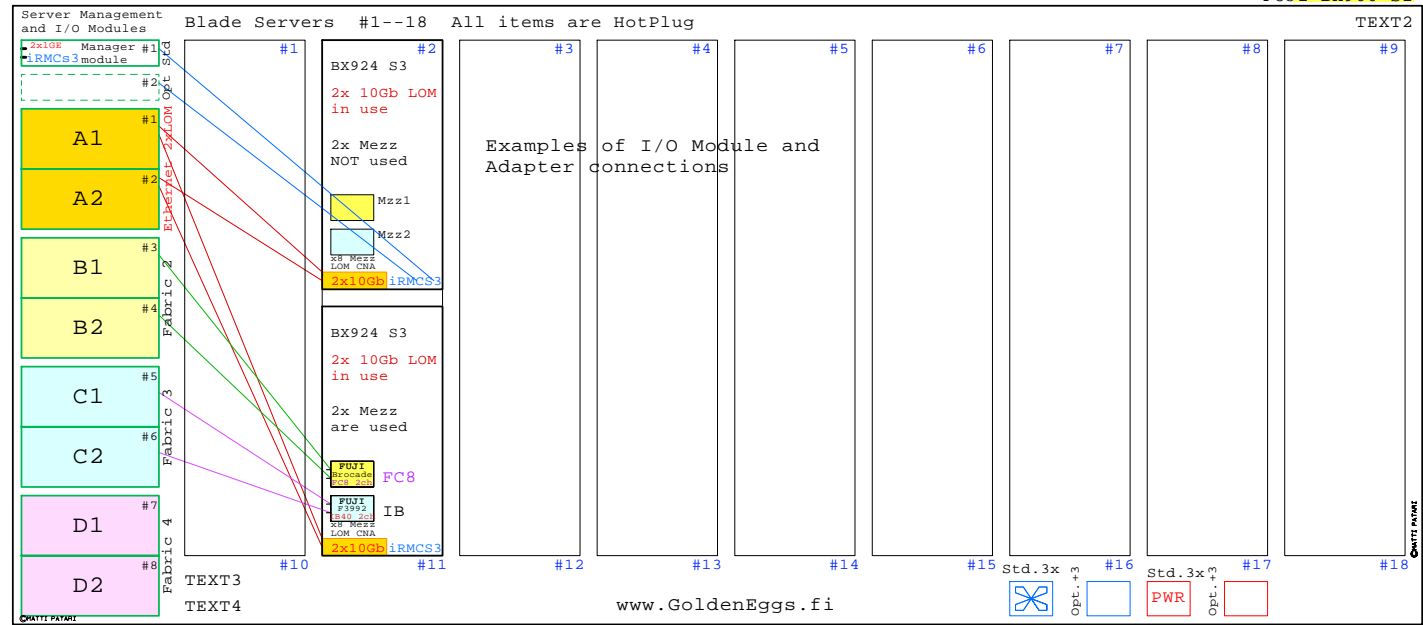
Infiniband I/O Modules, B-D



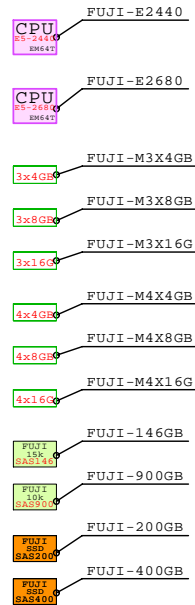
Optional Power and Fans



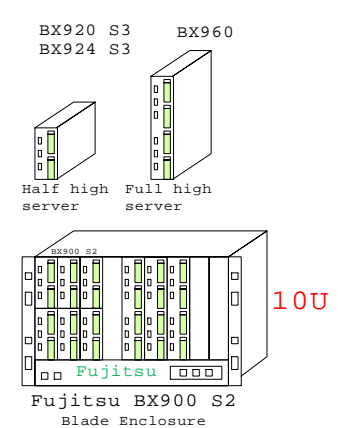
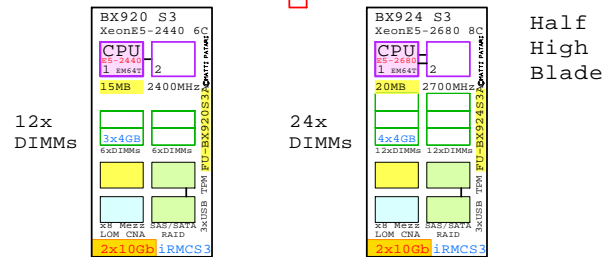
Fujitsu PRIMERGY BX900 S2 Blade Server Enclosure, Rack 19" 10U



Server Options



BX920-S3/2400 vs BX924-S3/2600



Enclosure and Server Blades on this page.

Part Number	Qty	Description
FU-BX900S2	1	Fuji BX900 S2 Blade Encl 10U for 18x Bla
FU-BX920S3A	1	Fuji BX920-S3 1x E5-2440 6C 2P 2.4GH-15M
FU-BX924S3A	1	Fuji BX924-S3 1x E5-2680 8C 2P 2.7GH-20M

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Fujitsu Primergy Blade Family
GOLDEN EGGS Visuals, Helsinki

IBM Blade Flex Systems Chassis and Compute Nodes, x86 and Power7

Link to this document: <http://www.goldeneggs.fi/documents/GE-IBM-BLADE-A.pdf>

Chassis Options:

2nd Manager Module

Chassis Mngt. Module	
RJ45 Ethernet	CMM
Serial	
USB	IBM-68Y7030

Ethernet

I/O Modules, #1-#4

IBM CN4093	10GbE Scal CN Switch	10x <---> 14x	Scale:14,28,42	IBM-00D5823
------------	----------------------	---------------	----------------	-------------

IBM EN4093	10GbE Scalable Switch	10x <---> 14x	Scale:14,28,42	IBM-49Y4270
------------	-----------------------	---------------	----------------	-------------

IBM EN2092	1GbE Scalable Switch	10x <---> 14x	Scale:14,28	IBM-49Y4294
------------	----------------------	---------------	-------------	-------------

IBM EN4091	10GbE Pass-thru	14x <---> 14x	Support on 1GbE	IBM-88Y6043
------------	-----------------	---------------	-----------------	-------------

Fibre Channel

I/O Modules, #3-#4

IBM FC3171	FC SAN 8Gb Switch	6x <---> 14x	IBM	IBM-69Y1930
------------	-------------------	--------------	-----	-------------

IBM FC5022	FC SAN 16Gb Scal-Swit	20x <---> 28x	Brocade	IBM-88Y6374
------------	-----------------------	---------------	---------	-------------

IBM FC3171	FC SAN 8Gb Pass-thru	6x <---> 14x	IBM	IBM-69Y1934
------------	----------------------	--------------	-----	-------------

Infiniband

I/O Modules, #3-#4

IBM IB6131	InfiniBand Switch	18xQDR <---> 14x	FDR upgrade available	IBM-90Y3450
------------	-------------------	------------------	-----------------------	-------------

Node I/O Adapters

IBM-90Y3554	CN4054 Emulex	10GbE
-------------	---------------	-------

IBM-49Y7900	EN2024 Broadcom	1GbE
-------------	-----------------	------

IBM-90Y3554	CN4054 Emulex	10GbE
-------------	---------------	-------

IBM-90Y3466	EN4132 Mellanox	10GbE
-------------	-----------------	-------

IBM-49Y7900	EN2024 Broadcom	1GbE
-------------	-----------------	------

10GbE	
1GbE	

IBM-95Y2375	FC3052 Emulex	FC8
-------------	---------------	-----

IBM-69Y1938	FC3172 Qlogic	FC8
-------------	---------------	-----

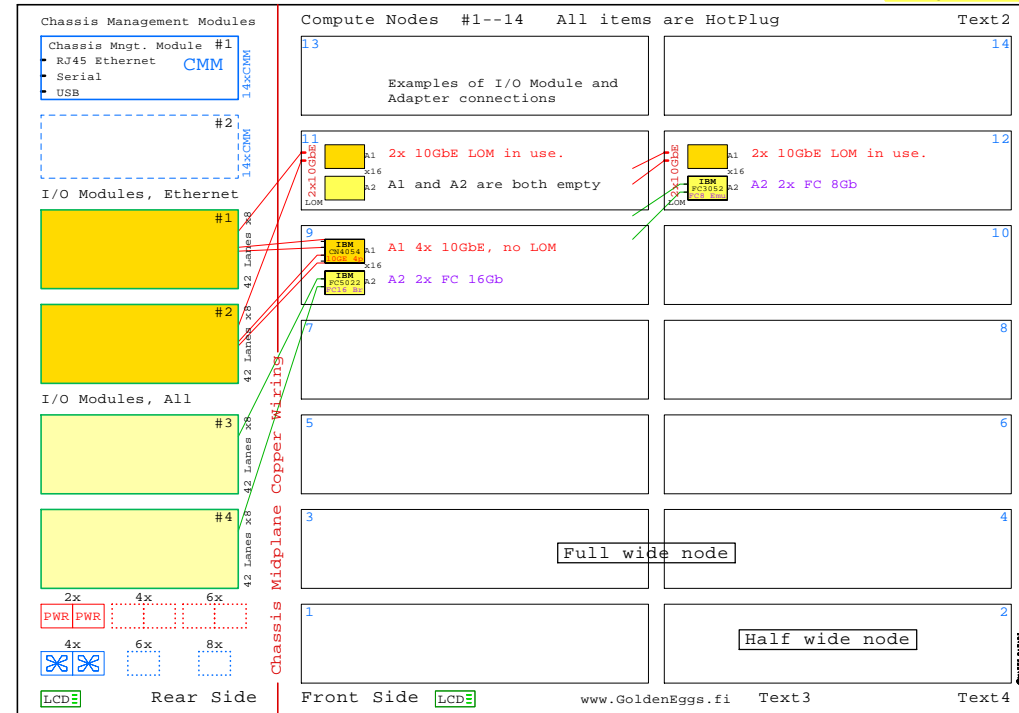
IBM-88Y6370	FC5022 Brocade	FC16
-------------	----------------	------

FC8	
-----	--

IBM-90Y3454	IB6132 Mellanox	IB
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IBM Flex System Enterprise Chassis: Rack 19",10U

IBM-8721-A1x



IBM-43W9049	One Power Supply
IBM-43W9078	Fan Pair

Compute Nodes, Full Wide, 4P

LOM	4x 10GbE	IBM-7917-P4x	x440	x86	4P
-----	----------	--------------	------	-----	----

LOM	4x 10GbE	IBM-7895-42x	x460	P7	4P
-----	----------	--------------	------	----	----

Chassis and Compute Nodes on this page

Part Number	Qty	Description
IB-68Y8588	1	IBM Flex Storage Expansion Node BL
IB-7895-22x	1	IBM Flex p260 2P 8C Power7 32MB 32G 2x10
IB-7895-42x	1	IBM Flex p460 4P 8C Power-7 32MB 64G 4x1
IB-7906-H2x	1	IBM Flex x220 2P 6C E5-2440-15MB 4G 1x1G
IB-7917-P4x	1	IBM Flex x440 4P 8C E5-4650-20MB 8G 4x10
IB-81Y8983	1	IBM Flex PCIe 2.0 Expansion Node BL
IB-8721-A1x	1	IBM Flex System Enterprise Chassis 10U 1
IB-8731-A1G	1	IBM Flex FSMN 2P 8C E5-2650-20MB 8G 2x10
IB-8737-M2x	1	IBM Flex x240 2P 8C E5-2680-20MB 8G 2x10

Compute Nodes, Half Wide, 2P

LOM	2x 10GbE	IBM-8737-M2x	x240	x86	2P
-----	----------	--------------	------	-----	----

LOM	2x 1GbE	IBM-7906-H2x	x220	x86	2P
-----	---------	--------------	------	-----	----

LOM	2x 10GbE	IBM-7895-22x	x260	P7	2P
-----	----------	--------------	------	----	----

Manager Node, Half Wide, 2P

LOM	2x 10GbE	IBM-8731-A1G	FSMN	x86	2P
-----	----------	--------------	------	-----	----

PCIe 2.0 Expansion Node

Bolted to Adjacent Node	PCIe Expansion Node	IBM-81Y8983	PCIe Exp.
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Storage Expansion Node

Bolted to Adjacent Node	Storage Expans. Node	IBM-68Y8588	PCIe Stora Exp.
-------------------------	----------------------	-------------	-----------------

Compute Node Options:

CPU E5-2440	IBM-90Y4796	E5-2440
-------------	-------------	---------

CPU E5-2680	IBM-81Y5188	E5-2680
-------------	-------------	---------

CPU E5-4650	IBM-90Y9072	E5-4650
-------------	-------------	---------

4x4GB	IBM-M4X4GB	
-------	------------	--

4x8GB	IBM-M4X8GB	
-------	------------	--

4x16GB	IBM-M4X16GB	
--------	-------------	--

4x32GB	IBM-M4X32GB	
--------	-------------	--

M5115 8x SATA	IBM-90Y4390	M5115 For A1
---------------	-------------	--------------

H1135 SAS 2004	IBM-90Y4750	
----------------	-------------	--

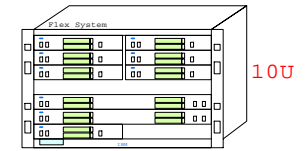
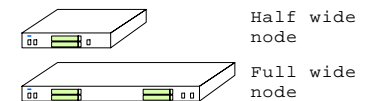
81Y9674 300GB 15k HDD 2.5"	IBM-81Y9670	
----------------------------	-------------	--

IBM-43W7718 200GB SSD 2.5"	IBM-43W7718	
----------------------------	-------------	--

IBM-43W7746 200GB SSD 1.8"	IBM-43W7746	
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Kit 8x SSD	IBM-8X-SSD	8x SSD cable kit used with M5115
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IBM 94Y5960 Tesla M2093	IBM-94Y5960	Tesla N2093 Nvidia
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26-Mar-2013

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IBM Blade Flex System GoldenEggs GOLDEN EGGS Visuals, Helsinki

IBM Blade Flex Systems Chassis and Compute Nodes, x86

Link to this document: <http://www.goldeneggs.fi/documents/GE-IBM-BLADE-A.pdf>

Chassis Options:

2nd Manager Module

Chassis Mngt. Module	CMM
RJ45 Ethernet	
Serial	
USB	IBM-68Y7030

Ethernet I/O Modules #1-#4

IBM EN4093R	10Gb Scalable Switch Ext 16x<-->42x Int 16=14x10Gb +2x40Gb	IBM-95Y3309
-------------	--	-------------

IBM EN4091	10GbE Pass-thru 14x <--> 14x Support on 10GbE	IBM-88Y6043
------------	---	-------------

FC I/O Modules #3-#4

IBM FC5022	FC SAN 16Gb Scal-Swit 20x <--> 28x Brocade	IBM-88Y6374
------------	--	-------------

IBM-43W9049	One Power Supply
-------------	------------------

IBM-43W9078	Fan Pair
-------------	----------

Node I/O Adapters

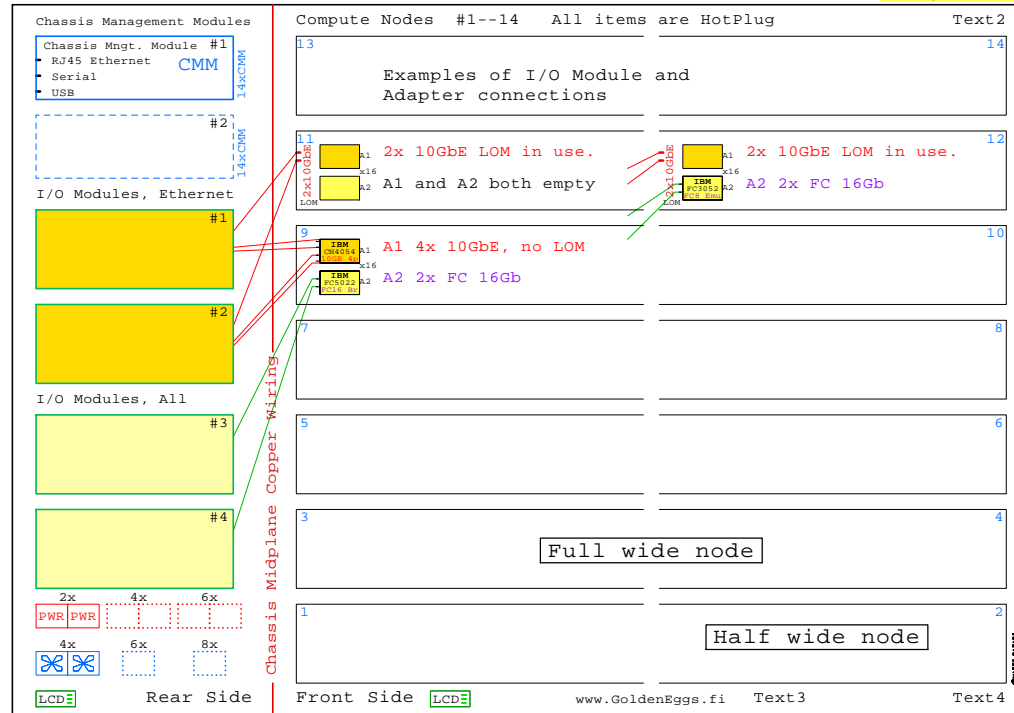
IBM-00Y3306	CN4054R	10GbE
IBM-88Y5920	CN4022	10GbE

10GbE
1GbE

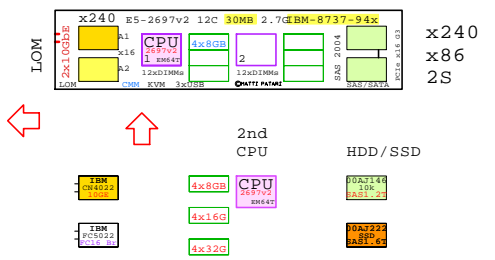


IBM Flex System Enterprise Chassis: Rack 19",10U

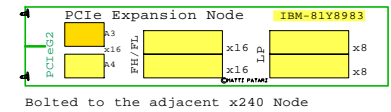
IBM-8721-A1x



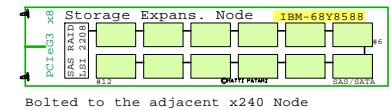
Compute Nodes,Half Wide, E5v2 2S



PCIe 2.0 Expansion Node



Storage Expansion Node



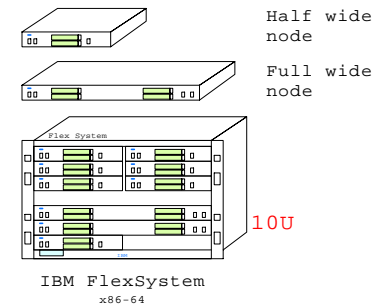
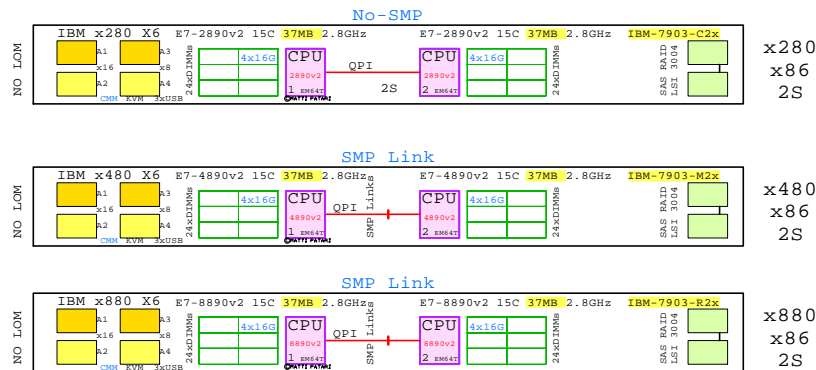
Chassis and Options

Part Number	Qty	Description
IB-8721-A1x	1	IBM Flex System Enterprise Chassis 10U 1
IBM-43W9049	1	IBM Flex System One Power Supply 2500W
IBM-43W9078	1	IBM Flex System 80mm Fan Module Pair
IBM-68Y7030	1	IBM Flex CMM Chassis Manager Module
IBM-88Y6043	1	IBM Flex EN4091 10GbE/1GbE Pass-thru
IBM-88Y6374	1	IBM Flex FC5022 FC 16Gb Scal-Switch Broc
IBM-95Y3309	1	IBM Flex EN4093R 10Gb Scalable Switch

Blade Servers and Options

Part Number	Qty	Description
IB-68Y8588	1	IBM Flex Storage Expansion Node BL
IB-7903-C2x	1	IBM Flex x280X6 2P 15C E7-2890v2-37MB 64
IB-7903-M2x	1	IBM Flex x480X6 2P 15C E7-4890v2-37MB 64
IB-7903-R2x	1	IBM Flex x880X6 2P 15C E7-8890v2-37MB 64
IB-81Y8983	1	IBM Flex PCIe 2.0 Expansion Node BL
IB-8737-94x	1	IBM Flex x240 2P 12C E5-2697v2-30MB 32G
IBM-00AJ146	1	IBM 1.2TB SAS 10k 6Gbps hotP 2.5" HDD
IBM-00AJ222	1	IBM 1.6TB SAS SSD MLC hot-plug 2.5"
IBM-00Y2849	1	IBM Xeon E5-2697v2 12C 30MB 2.7GHz Proce
IBM-00Y3306	1	IBM Flex CN4054R 10GbE 4po VirtAdapter
IBM-88Y5920	1	IBM Flex CN4022 10Gb 2po Converged Adapt
IBM-88Y6370	1	IBM Flex FC5022 FC 16Gb 2po Adapt Brocad
IBM-M4X16GB	1	IBM Flex 4x 16GB Blade DIMM Memory kit
IBM-M4X32GB	1	IBM Flex 4x 32GB Blade DIMM Memory kit
IBM-M4X8GB	1	IBM Flex 4x 8GB Blade DIMM Memory kit

Compute Nodes,Full Wide, E7v2 2S-4S-8S



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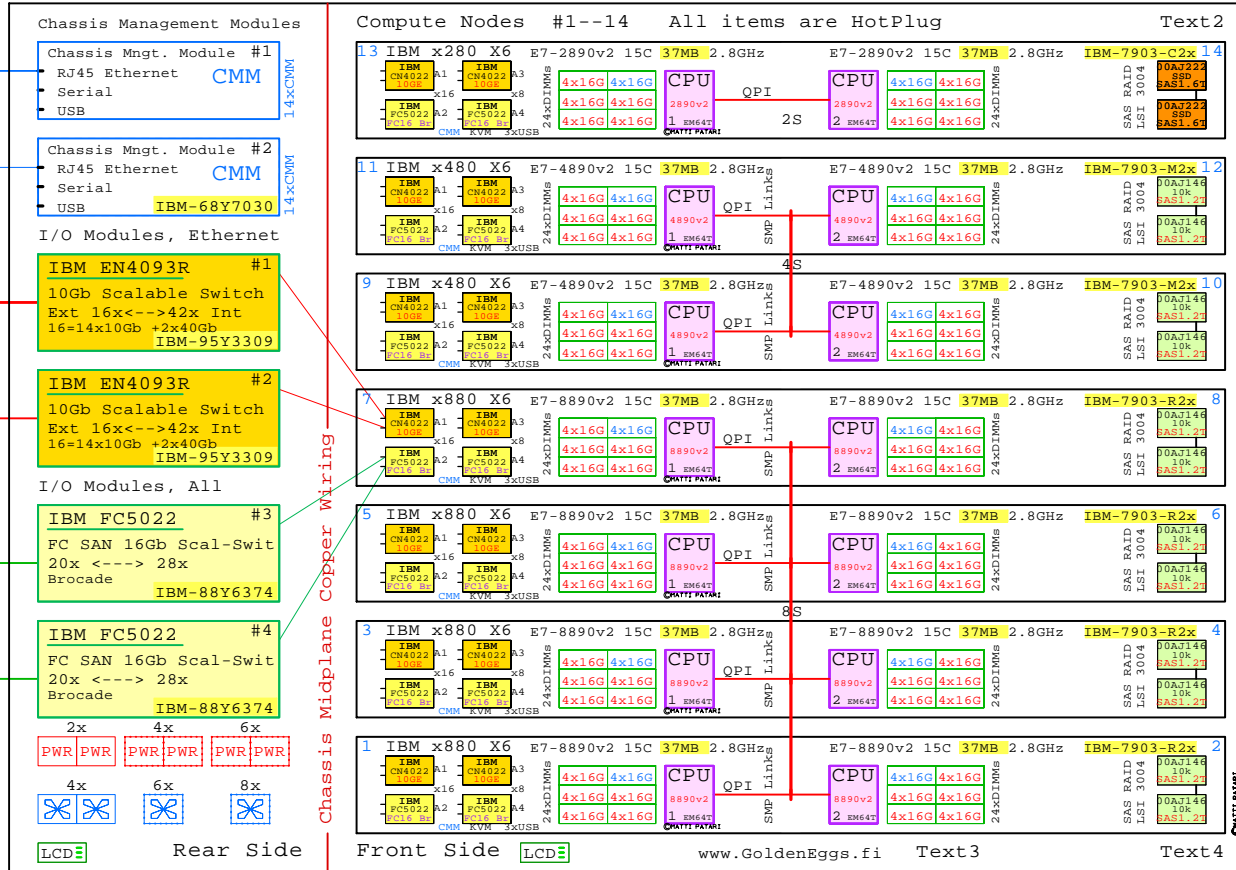
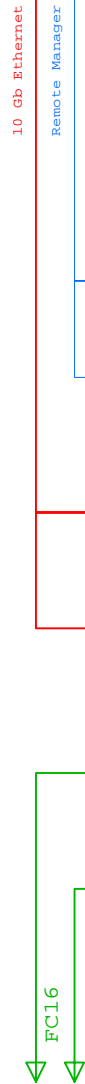
26-Aug-2014

IBM Flex Systems X6 2S-4S-8S Xeon E7v2 Blade Servers

Link to this document: <http://www.goldeneggs.fi/documents/GE-IBM-BLADE-8SA.pdf>

IBM Flex System Enterprise Chassis: Rack 19", 10U

IBM-8721-A1x



2-Socket Server

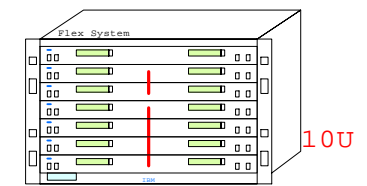
- 2x E7-2890v2 15C 2.8GHz
- 4x PCIe 3.0 I/O Slots
- 48x 16GB =768GB
- 2x 1.6TB HDD/SSD

4-Socket Server

- 4x E7-4890v2 15C 2.8GHz
- 8x PCIe 3.0 I/O Slots
- 96x 16GB =1536GB
- 4x 1.2TB HDD/SSD

8-Socket Server

- 8x E7-8890v2 15C 2.8GHz
- 16x PCIe 3.0 I/O Slots
- 192x 16GB =3072GB
- 8x 1.2TB HDD/SSD



IBM FlexSystem x86-64

Chassis and Options

Part Number	Qty	Description
IB-8721-A1x	1	IBM Flex System Enterprise Chassis 10U 1
IBM-43W9049	4	IBM Flex System One Power Supply 2500W
IBM-43W9078	2	IBM Flex System 80mm Fan Module Pair
IBM-68Y7030	1	IBM Flex CMM Chassis Manager Module
IBM-88Y6374	2	IBM Flex FC5022 FC 16Gb Scal-Switch Broc
IBM-95Y3309	2	IBM Flex EN4093R 10Gb Scalable Switch

Flex X6 Blade Servers and Options

Part Number	Qty	Description
IBM-7903-C2x	1	IBM Flex x280X6 2P 15C E7-2890v2-37MB 64
IB-7903-M2x	2	IBM Flex x480X6 2P 15C E7-4890v2-37MB 64
IB-7903-R2x	4	IBM Flex x880X6 2P 15C E7-8890v2-37MB 64
IBM-00AJ146	12	IBM 1.2TB SAS 10k 6Gbps hotP 2.5" HDD
IBM-00AJ222	2	IBM 1.6TB SAS SSD MLC hot-plug 2.5"
IBM-00Y3871	1	IBM Flex X6 4-Socket Scalability Connect
IBM-00Y3874	1	IBM Flex X6 8-Socket Scalability Connect
IBM-88Y5920	14	IBM Flex CN4022 10Gb 2po Converged Adapt
IBM-88Y6370	14	IBM Flex FC5022 FC 16Gb 2po Adapt Brocad
IBM-M4X16GB	70	IBM Flex 4x 16GB Blade DIMM Memory kit

21-Aug-2014

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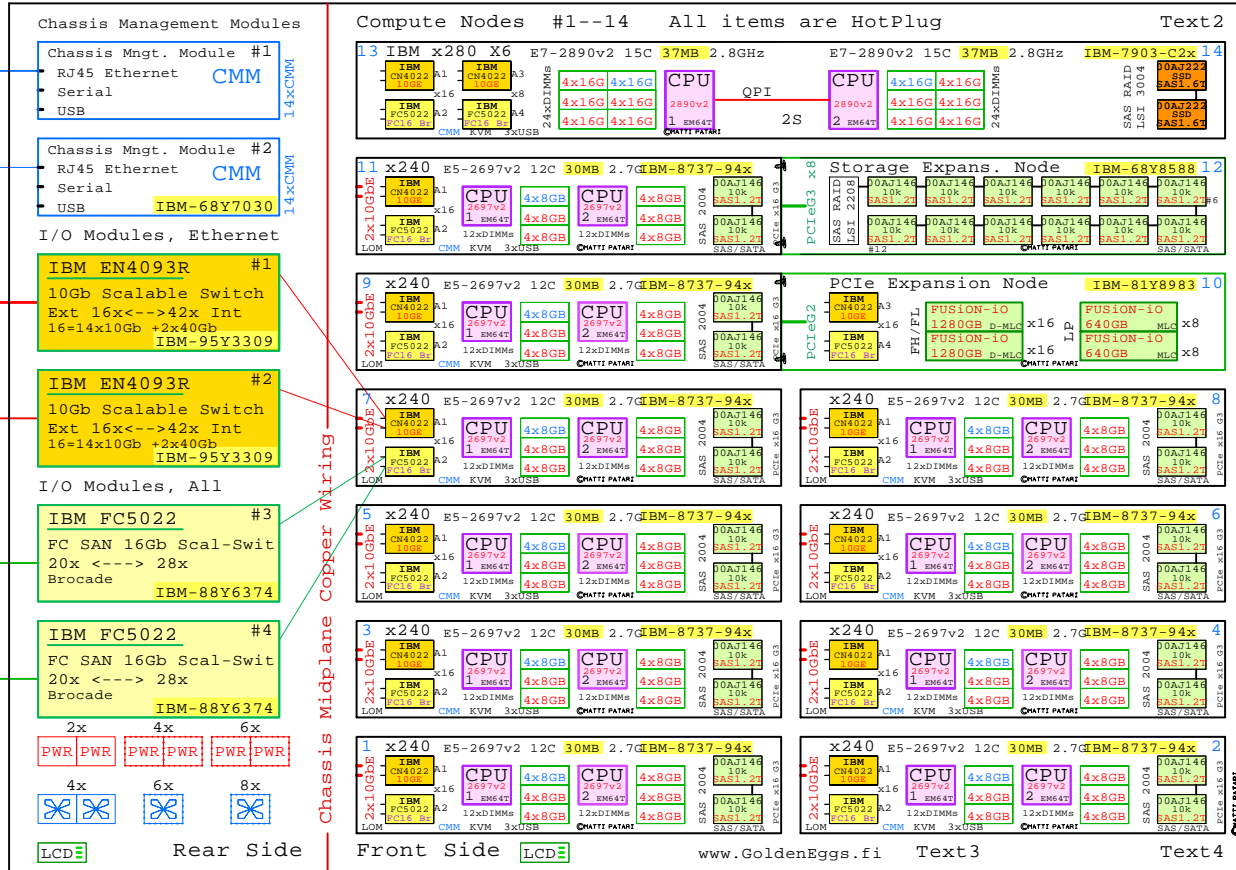
IBM Flex Systems X6 E7v2 2S-4S-8S
GOLDEN EGGS Visuals, Helsinki

IBM Flex Systems 2S Xeon E5v2 and E7v2 Blade Servers

Link to this document: <http://www.goldeneggs.fi/document/GE-IBM-BLADE-2SA.pdf>

IBM Flex System Enterprise Chassis: Rack 19", 10U

IBM-8721-A1x

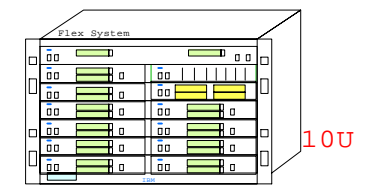


x280 X6 2-Socket Server
 -2x E7-2890v2 15C 2.8GHz
 -4x PCIe 3.0 I/O Slots
 -48x 16GB =768GB
 -2x 1.6TB HDD/SSD

x240 2-Socket Server and Storage Expansion

x240 2-Socket Server and PCIe 3.0 Expansion

8x x240 2-Socket Server
 -2x E5-2697v2 12C 2.7GHz
 -2x PCIe 3.0 I/O Slots
 -24x 8GB =192GB
 -2x 1.2TB HDD/SSD



IBM FlexSystem x86-64

Chassis and Options

Part Number	Qty	Description
IB-8721-A1x	1	IBM Flex System Enterprise Chassis 10U 1
IBM-43W9049	4	IBM Flex System One Power Supply 2500W
IBM-43W9078	2	IBM Flex System 80mm Fan Module Pair
IBM-68Y7030	1	IBM Flex CMM Chassis Manager Module
IBM-88Y6374	2	IBM Flex FC5022 FC 16Gb Scal-Switch Broc
IBM-95Y3309	2	IBM Flex EN4093R 10Gb Scalable Switch

Flex Blade Servers and Options

Part Number	Qty	Description
F-1280MLCD	2	Fusion-io 1280GB ioDrive MLC Duo FH/HL
F-640BMLC	2	Fusion-io 640GB ioDrive MLC HH/HL
IB-68Y8588	1	IBM Flex Storage Expansion Node BL
IB-7903-C2x	1	IBM Flex x280X6 2P 15C E7-2890v2-37MB 64
IB-81Y8983	1	IBM Flex PCIe 2.0 Expansion Node BL
IB-8737-94x	10	IBM Flex x240 2P 12C E5-2697v2-30MB 32G
IBM-00AJ146	32	IBM 1.2TB SAS 10k 6Gbps hotP 2.5" HDD
IBM-00AJ222	2	IBM 1.6TB SAS SSD MLC hot-plus 2.5"
IBM-00Y2849	10	IBM Xeon E5-2697v2 12C 30MB 2.7GHz Proce
IBM-88Y5920	13	IBM Flex CN4022 10Gb 2po Converged Adapt
IBM-88Y6370	13	IBM Flex FC5022 FC 16Gb 2po Adapt Brocad
IBM-M4X16GB	10	IBM Flex 4x 16GB Blade DIMM Memory kit
IBM-M4X8GB	50	IBM Flex 4x 8GB Blade DIMM Memory kit

21-Aug-2014

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		Matti.Patari@Kolumbus.Fi

IBM Blade NeXtScale System Enclosure and Compute Nodes,x86




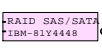
Link to this document: <http://www.goldeneggs.fi/documents/GE-IBM-BLADE-NEXT.pdf>

Server Options




Memory: 4+4 DIMMS

-  IBM-00D5028
4GB RDIMM
-  IBM-00D5040
8GB RDIMM
-  IBM-00D5048
16GB RDIMM
-  IBM-46W0761
32GB LRDIMM

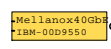
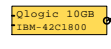
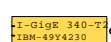
Disk Drives: One, 2, 4, 8

-  IBM-00AD025
4TB 3.5" HDD SATA
-  IBM-00AD040
1TB 2.5" HDD SATA
-  IBM-00W1227
256GB 1.8" SSD SATA
-  IBM-81Y4448
ServerRAID M115 HBA

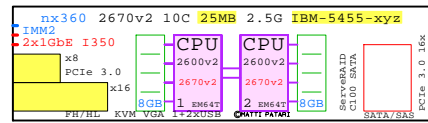
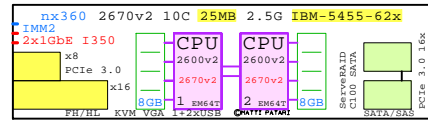
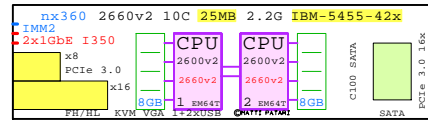
Mezzanine I/O:

-  IBM-90Y6454
Dual Port 10GbE SFP+
10GbE
-  IBM-00AM476
Dual Port FDR10/QDR
IB
-  IBM-00D4143
Dual Port FDR
IB

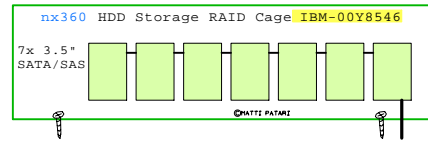
PCIe HBA I/O:

-  Mellanox40GbE
IBM-00D9550
40 Gb Ethernet
40GbE
-  QLogic 10GbE
IBM-42C1800
10 Gb Ethernet
-  IBM-49Y4230
1Gb Ethernet

Compute Servers nx360 M4



Storage Expansion

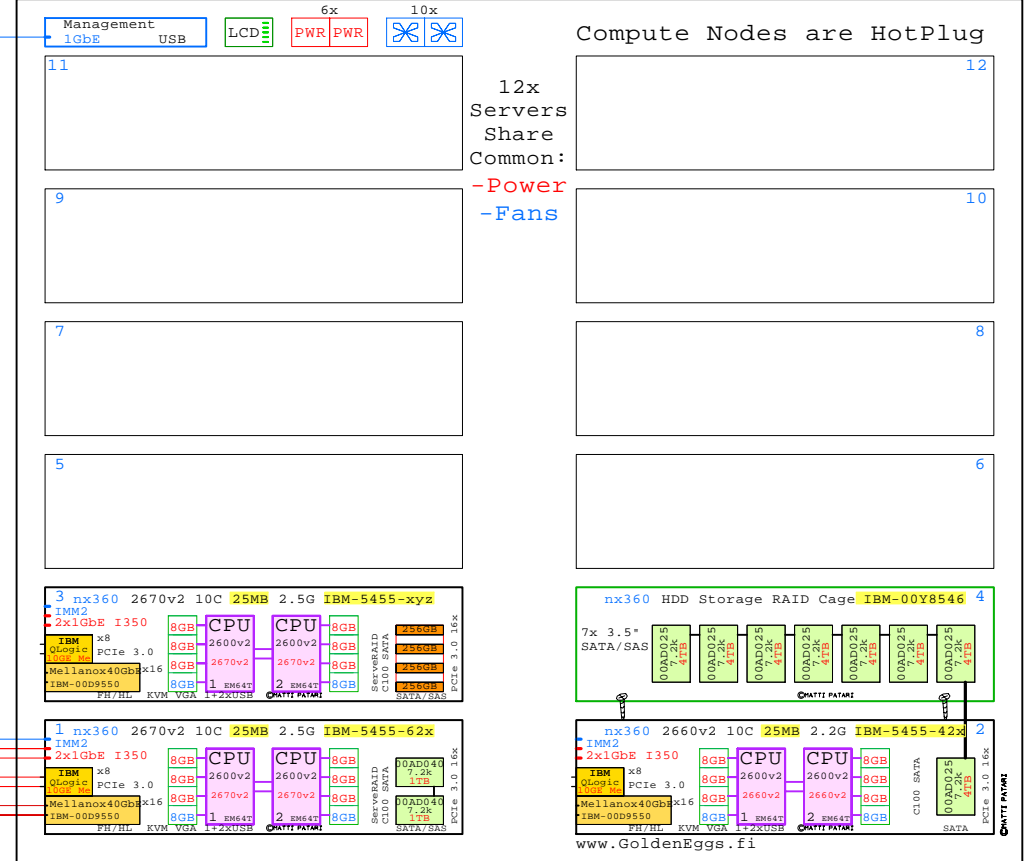


BOM of the example Enclosure, right

Part Number	Qty	Description
IB-00Y8546	1	IBM Next 7x3.5" HDD RAID cage
IB-5455-42x	1	IBM Next nx360 2P 10C 2660v2 25MB 2.2GH
IB-5455-62x	1	IBM Next nx360 2P 10C 2670v2 25MB 2.5GH
IB-5455-xyz	1	IBM Next nx360 2P 10C 2670v2 25MB 2.5GH
IB-5456-A2x	1	IBM NeXtScale System Enclosure 6U 19"
IBM-00AD025	8	IBM 4TB 7.2K 6Gbps SATA 3.5" HDD NextSca
IBM-00AD040	2	IBM 1TB 7.2K 6Gbps SATA 2.5" HDD NextSca
IBM-00D5040	18	IBM 8GB DDR3 1866MHz LP RDIMM
IBM-00D9550	3	IBM Mellanox 40GbE Dual-Port HBA
IBM-00W1227	4	IBM 256GB SATA SSD 1.8" MLC Enterprise
IBM-90Y6454	3	IBM QLogic 2-Port 10GbE SFP+

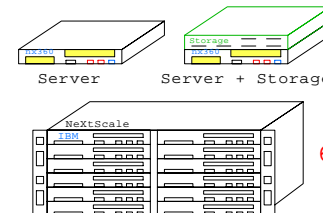
System Enclosure n1200

IBM NeXtScale System Enclosure: Rack 19" 6U **IBM-5456-A2x**



Compute Nodes are HotPlug

12x Servers Share Common:
-Power
-Fans



IBM NeXtScale
x86-64

06-Feb-2014

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IBM NeXtScale Blade System x86
GOLDEN EGGS Visuals, Helsinki

Cisco UCS Blade Chassis and Server Nodes, x86

Link to this document: <http://www.goldeneggs.fi/documents/GE-CISCO-BLADE-A.pdf>

Happy New Year 2013.



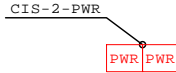
UCS 6200
Fabric Interconnect

Chassis Options:

Fabric Extenders

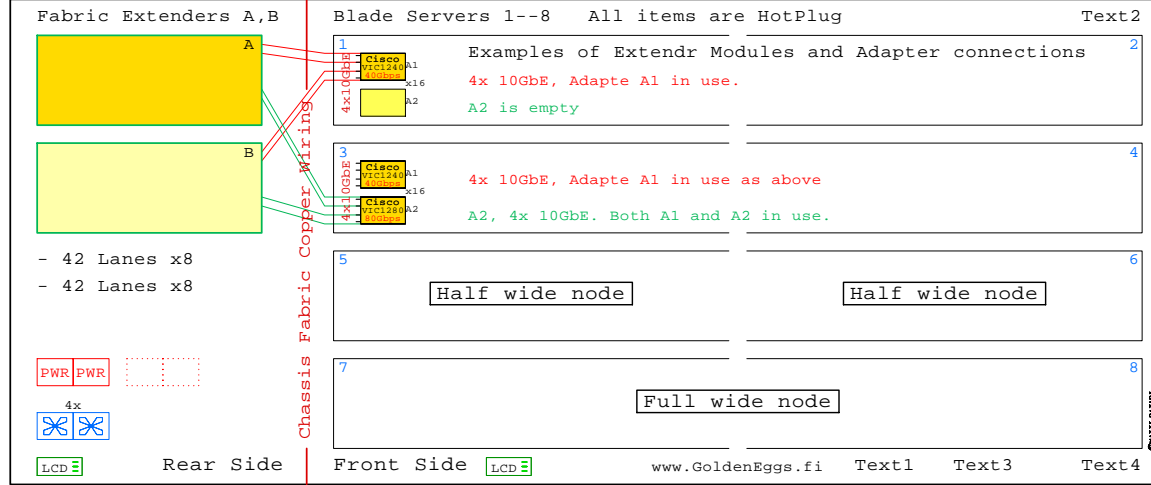
UCS 2208XP
Fabric Extender 80Gbps
Eight Ports Up
8x4 ports 10GE FCoE
CIS-2208XP

UCS 2204XP
Fabric Extender 40Gbps
Four Ports Up
8x2 ports 10GE FCoE
CIS-2204XP



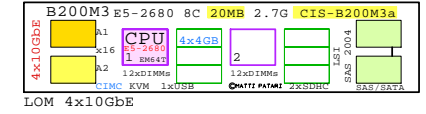
CISCO UCS 5108 Blade Server Chassis: Rack 19",6U

CISCO-UCS-5108

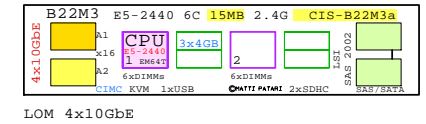


Server Nodes, Half Wide, 2P

B200-M3



B22-M3



Server I/O Adapters

CIS-VIC1240
40GbE

CIS-VIC1280
80GbE

Server Node Options:

CIS-E52440
CPU E5-2440

CIS-E52680
CPU E5-2680

CIS-E54650
CPU E5-4650

CIS-M3X4GB
3x4GB

CIS-M3X8GB
3x8GB

CIS-M3X16G
3x16G

CIS-M4X4GB
4x4GB

CIS-M4X8GB
4x8GB

CIS-M4X16G
4x16G

CIS-M4X32G
4x32G

CIS-146G-25
Cisco 146GB 15k
HDD 2.5"

CIS-300G-25
Cisco 300GB 15k
HDD 2.5"

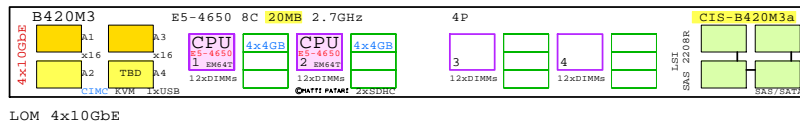
CIS-900G-25
Cisco 900GB 10k
HDD 2.5"

CIS-100G-25
Cisco 100GB 10k
SSD 2.5"

CIS-200G-25
Cisco 200GB 10k
SSD 2.5"

Server Nodes, Full Wide, 4P

B420-M3

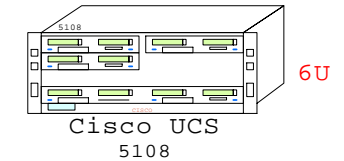


Chassis Options and Compute Nodes on this page

Part Number	Qty	Description
CIS-2-PWR	1	Cisco UCS Blade System 2x Power Supply
CIS-2204XP	1	Cisco UCS 2204XP Blade Fabric Extender
CIS-2208XP	1	Cisco UCS 2208XP Blade Fabric Extender
CIS-B200M3a	1	Cisco UCS B200M3 2P 8C E5-2680-20MB 16G
CIS-B22M3a	1	Cisco UCS B22M3 2P 6C E5-2440-15MB 12G 4
CIS-B420M3a	1	Cisco UCS B440M3 4P 8C E5-4650-20MB 32G
CIS-C5108A	1	Cisco UCS 5108 Blade Server Chassis 6U
CIS-VIC1240	1	Cisco UCS VIC 1240 Virtual Interf. Card
CIS-VIC1280	1	Cisco UCS VIC 1280 Virtual Interf. Card

Half wide server

Full wide server



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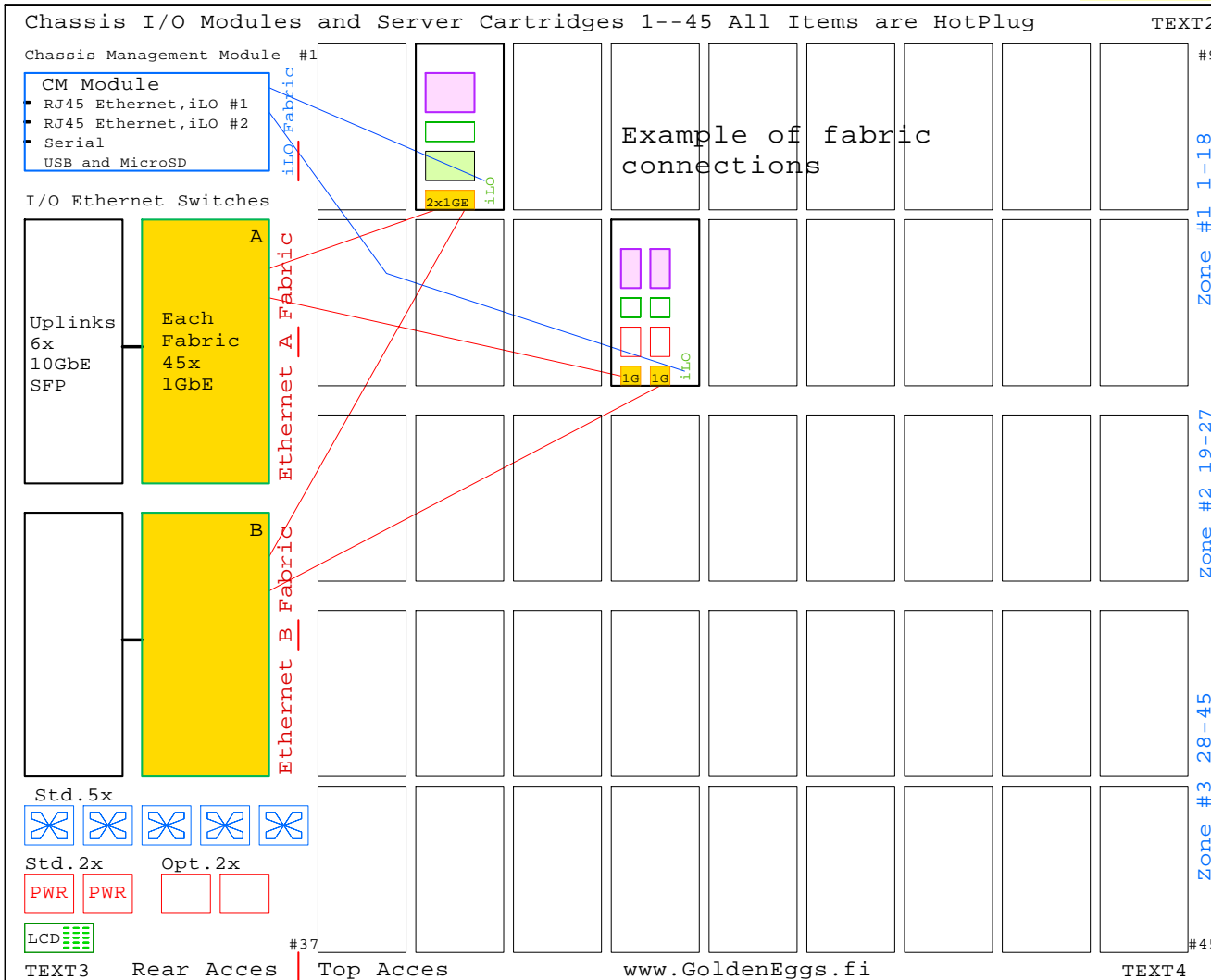
10-Jan-2013

HP ProLiant Moonshot 1500 low wattage system

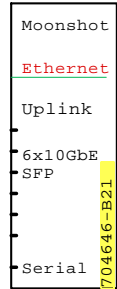
Link to this document: <http://www.goldeneggs.fi/documents/GE-HP-MOONSHOT-A.pdf>

HP ProLiant Moonshot 1500 Server Chassis, Rack 19" 5U

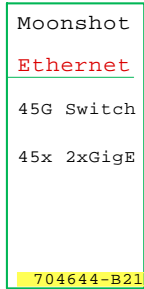
700350-B21



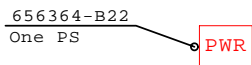
Uplink Module



Switch Module



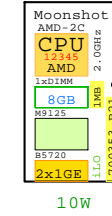
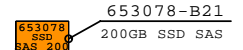
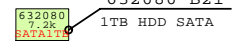
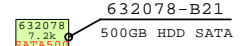
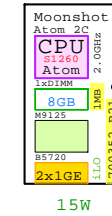
Power Supply



Draft GoldenEggs

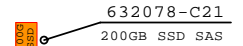
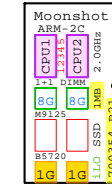
Server Cartridges

Single Node Options

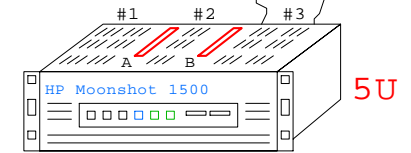
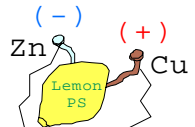


Dual Node

Two independent nodes



Low Wattage



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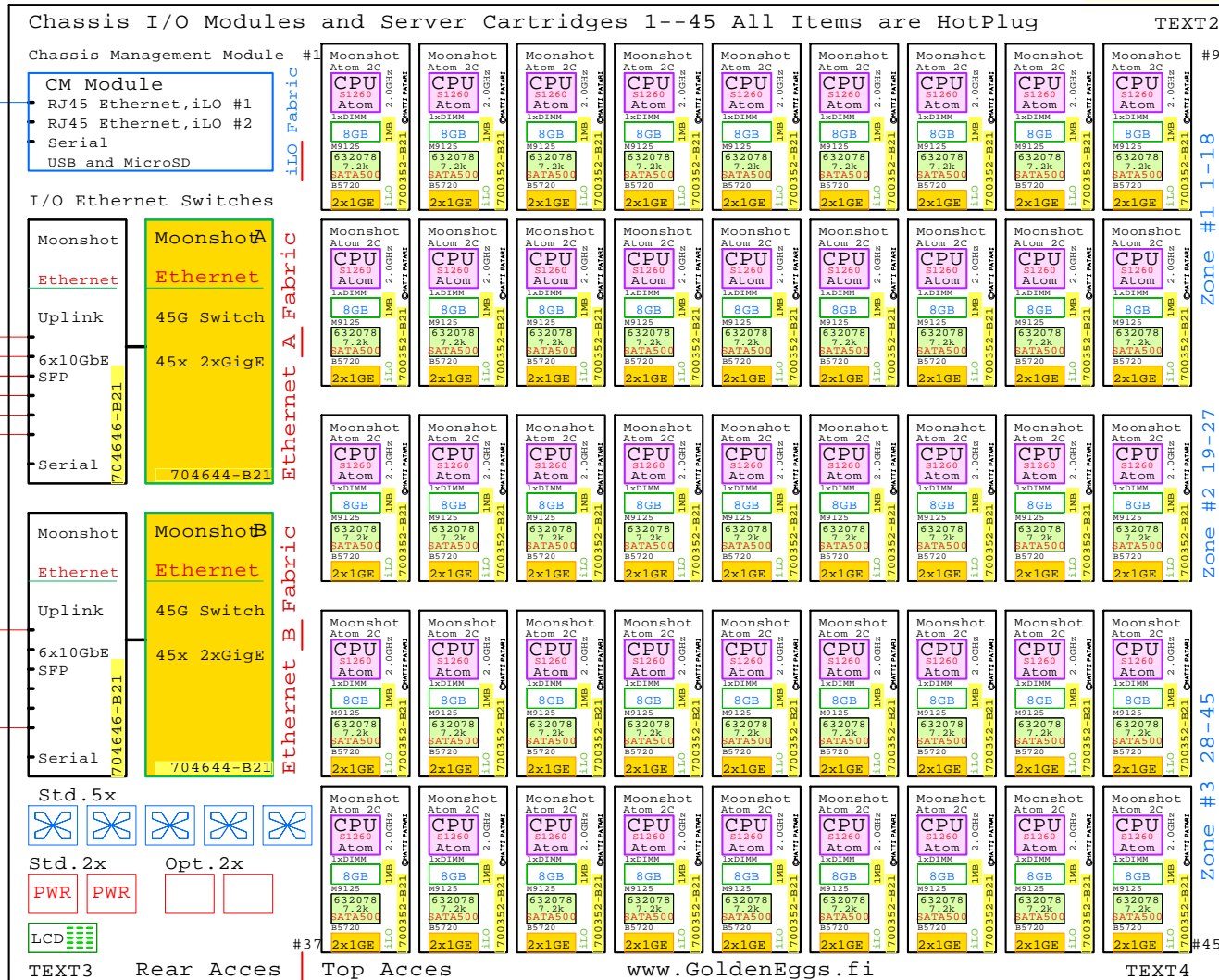
HP Moonshot 1500 low wattage sys.
GOLDEN EGGS Visuals, Helsinki

HP ProLiant Moonshot 1500 low wattage system

Link to this document: <http://www.goldeneggs.fi/documents/GE-HP-MOONSHOT-A.pdf>

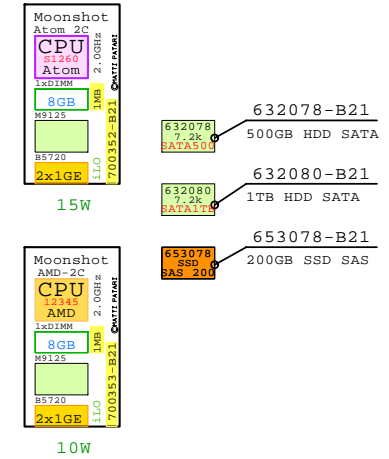
HP ProLiant Moonshot 1500 Server Chassis, Rack 19" 5U

700350-B21



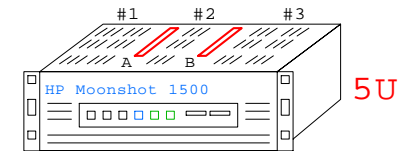
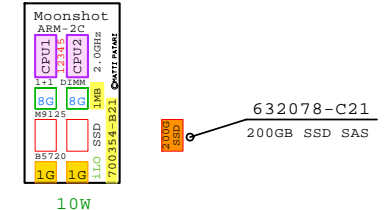
Server Cartridges

Single Node Options



Dual Node

Two independent nodes



This system of 45x Atom servers

Part Number	Qty	Description
632078-B21	45	HP 500GB 6G 7.2k 2.5" SATA HDD
700350-B21	1	HP Moonshot 1500 Chassis
700352-B21	45	HP Moonshot Atom S1260-2C 2GHz 8GB No Di
704644-B21	2	HP Moonshot 45G Switch Module Kit
704646-B21	2	HP Moonshot 6SFP Uplink Module Kit

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		Matti.Patari@Kolumbus.Fi

HP Moonshot 1500 low wattage sys.
GOLDEN EGGS Visuals, Helsinki

Welcome to GoldenEggs x86 Visual Configurations

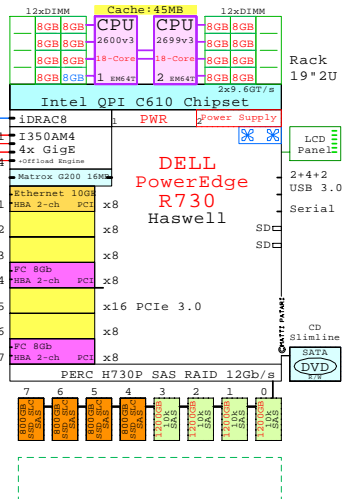
<http://www.goldeneggs.fi>

A picture is worth of one thousand words.
It talks all languages.

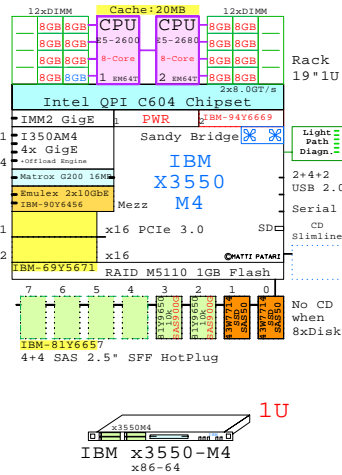
x86-64 servers: **Dell** **IBM** **HP** **Fujitsu** **SUN** **Acer** **Lenovo** and **Cisco**

4x Gigabit E
Remote Manager

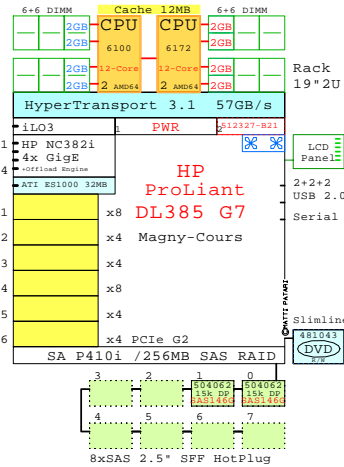
Intel Xeon E5-2699v3 x86-64
2300MHz 2P 18-Core **DELL-R730-A**



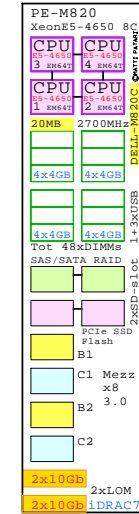
Intel Xeon E5-2680 x86-64
2700MHz 2P 8-Core **IBM-7914-L2x**



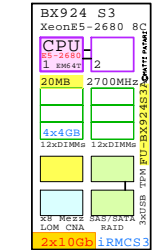
AMD Opteron 6172 x86-64
2100MHz 2P 12-Core **573088-421 EU**



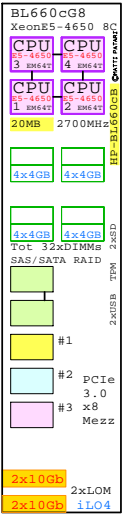
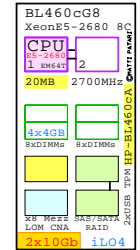
Dell Blades



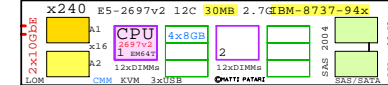
Fujitsu



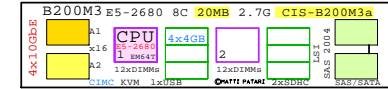
HP Blades



IBM Blades



Cisco Blades



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Helsinki Finland

Older GoldenEggs sites:

<http://h18000.www1.hp.com/info/GECPQA/>

<http://www.openvms.org/pages.php?page=GoldenEggs>

GE-links to x86 COMPARE Pictures:

New <http://www.goldeneggs.fi/documents/GE-COMP-E52600V3-A.pdf>

<http://www.goldeneggs.fi/documents/GE-COMP-E74800V2-A.pdf>

<http://www.goldeneggs.fi/documents/GE-COMPARE-BLADE-A.pdf>

<http://www.goldeneggs.fi/documents/GE-INT-E5-MAP-A.pdf>

GE-link to GE 25 Year-Book

<http://www.goldeneggs.fi/documents/GE-25-YEAR-BOOK.pdf>

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First rev 18-Apr-13