

# Oracle Hardware ECCN Matrix

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## [Oracle Cloud at Customer](#)

### [Oracle Cloud Machine](#)

Product	# Servers	Processor Type & Number	APP in WT	ECCN / License Exception
Oracle Cloud Machine Model 1080	30x compute nodes	Each with 2x Intel® Xeon® E5-2699 v3 18-core 2.3-GHz Processors	0.39744 WT	5A002.a.1 ENC 740.17(b)(1)
Oracle Cloud Machine Model 576	16x compute nodes	Each with 2x Intel® Xeon® E5-2699 v3 18-core 2.3-GHz Processors	0.39744 WT	5A002.a.1 ENC 740.17(b)(1)
Oracle Cloud Machine Model 288	8x compute nodes	Each with 2x Intel® Xeon® E5-2699 v3 18-core 2.3-GHz Processors	0.39744 WT	5A002.a.1 ENC 740.17(b)(1)

### [Oracle Database Exadata Cloud Machine X6-2](#)

Product	# Servers	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Cloud Machine Full Rack	8 Database Servers	Each with 2x Intel® Xeon® E5-2699 v4 22-core 2.2-GHz Processors	0.46464 WT	5A002.a.1 ENC 740.17(b)(1)
Exadata Cloud Machine Half Rack	4 Database Servers	Each with 2x Intel® Xeon® E5-2699 v4 22-core 2.2-GHz Processors	0.46464 WT	5A002.a.1 ENC 740.17(b)(1)
Exadata Cloud	2 Database	Each with 2x Intel® Xeon® E5-2699	0.46464 WT	5A002.a.1

Machine 1/4 Rack	Servers	v4 22-core 2.2-GHz Processors		ENC 740.17(b)(1)
Exadata Cloud Machine 8th Rack	2 Database Servers	Each with 2x Intel® Xeon® E5-2699 v4 22-core 2.2-GHz Processors	0.46464 WT	5A002.a.1 ENC 740.17(b)(1)

### [Oracle Big Data Cloud Machine](#)

Product	# Compute/Storage Nodes	ECCN / License Exception
Big Data Cloud Machine X6-2 Full Rack	18	5A002.a.1 ENC 740.17(b)(1)
Big Data Cloud Machine X6-2 Starter Rack	6	5A002.a.1 ENC 740.17(b)(1)

### [Oracle Exadata Database Machine](#)

#### Exadata Database Machine X7-8

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Database Machine X7-8	2 to 3 Database Servers each with 8x Intel® Xeon® Platinum P-8168 Processors 24-core 2.7-GHz	4.97664 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

#### Exadata Database Machine X7-2

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Database Machine X7-2 Full Rack	8 Database Servers, each with 2x Intel® Xeon® Platinum P-8160 Processors, 24-core, 2.1-GHz	0.64512 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Database Machine X7-2 Half Rack	4 Database Servers, each with 2x Intel® Xeon® Platinum P-8160 Processors, 24-core, 2.1-GHz	0.64512 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Database Machine X7-2 Quarter Rack	2 Database Servers, each with 2x Intel® Xeon® Platinum P-8160 Processors, 24-core, 2.1-GHz	0.64512 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Database Machine X7-2 Eighth Rack	2 Database Servers, each with 2x Intel® Xeon® Platinum P-8160 Processors, 24-core, 2.1-GHz	0.64512 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

#### Exadata Storage Expansion Rack X7-2

Product	Processor Type & Number	ECCN / License Exception
Exadata Storage Expansion Rack X7-2	4 - 19 Exadata Storage Servers X7-2L, each with 2x Intel® Xeon® Silver S-4114 10-core, 2.2-GHz Processors	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

#### Exadata Database Machine SL6 SPARC Linux

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Database Machine SL6	Up to 10 Database Servers, each with (2) SPARC M7 32-core 4.13 GHz processors	0.1586 WT	5A002.a.1 ENC 740.17(b)(1)

**Exadata Database Machine X6-8**

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Database Machine X6-8	2 or 4 database servers each with 8x Intel® Xeon® E7-8895 v3 Processors 18-core 2.6-GHz	1.79712 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

**Exadata Database Machine X6-2**

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Database Machine X6-2 Full Rack	8 database servers, each with 2x 22-core Intel® Xeon® E5-2699 v4 Processors 2.2-GHz	0.46464 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Database Machine X6-2 Half Rack	4 database servers, each with 2x 22-core Intel® Xeon® E5-2699 v4 Processors 2.2-GHz	0.46464 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Database Machine X6-2 Quarter Rack	2 database servers, each with 2x 22-core Intel® Xeon® E5-2699 v4 Processors 2.2-GHz	0.46464 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Database Machine X6-2 Eighth Rack	2 database servers, each with 2x 22-core Intel® Xeon® E5-2699 v4 Processors 2.2-GHz	0.46464 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

**Exadata Storage Expansion Rack X6-2**

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Storage Expansion Rack X6-2 Max Config	19 Exadata Storage Servers X6-2, each with 2x Intel® Xeon® 10-core E5-2630 v4 Processors 2.2 GHz	0.2112 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Storage Expansion Rack X6-2 Quarter Rack	4 Exadata Storage Servers X6-2, each with 2x Intel® Xeon® 10-core E5-2630 v4 Processors 2.2 GHz	0.2112 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Storage Expansion Rack X6-2 Single Server	1 Exadata Storage Servers X6-2, with 2x Intel® Xeon® 10-core E5-2630 v4 Processors 2.2 GHz	0.2112 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

**Exadata Database Machine X5-8**

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Database Machine X5-8	2-4 database servers each with 8x 18-core Intel® Xeon® E7-8895 v3 Processors 2.6-GHz	1.79712 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

**Exadata Database Machine X5-2**

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Database Machine X5-2 Full Rack	8 database servers, each with 2x 18-core Intel® Xeon® E5-2699 v3 Processors 2.3-GHz	0.39744 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

Exadata Database Machine X5-2 Half Rack	4 database servers, each with 2x 18-core Intel® Xeon® E5-2699 v3 Processors 2.3-GHz	0.39744 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Database Machine X5-2 Quarter Rack	2 database servers, each with 2x 18-core Intel® Xeon® E5-2699 v3 Processors 2.3-GHz	0.39744 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Database Machine X5-2 Eighth Rack	2 database servers, each with 2x 18-core Intel® Xeon® E5-2699 v3 Processors 2.3-GHz	0.39744 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

#### Exadata Storage Expansion Rack X5-2

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Storage Expansion Rack X5-2 Max Config	19 Exadata Storage Servers X5-2, each with 2x Intel® Xeon® 8-core E5-2630 v3 Processors 2.4 GHz	0.18432 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Storage Expansion Rack X5-2 Quarter Rack	4 Exadata Storage Servers X5-2, each with 2x Intel® Xeon® 8-core E5-2630 v3 Processors 2.4 GHz	0.18432 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

#### Exadata Database Machine X4-8

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Database Machine X4-8	2 x Database Servers, each with 8x 15-core Intel® Xeon® E7-8895 v2 Processors 2.8-GHz	0.8064 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

#### Exadata Database Machine X4-2

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Database Machine X4-2 Full Rack	8x Database Servers, each with 2x 12-core Intel® Xeon® E5-2697 v2 Processors 2.7-GHz	0.15552 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Database Machine X4-2 Half Rack	4x Database Servers, each with 2x 12-core Intel® Xeon® E5-2697 v2 Processors 2.7-GHz	0.15552 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Database Machine X4-2 Quarter Rack	2x Database Servers, each with 2x 12-core Intel® Xeon® E5-2697 v2 Processors 2.7-GHz	0.15552 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Database Machine X4-2 Eighth Rack	2x Database Servers, each with 2x 12-core Intel® Xeon® E5-2697 v2 Processors 2.7-GHz	0.15552 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

#### Exadata Storage Expansion Rack X4-2

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Storage Expansion Rack X4-2 Full Rack	18x Exadata Storage Servers X4-2, each with 2x six-core Intel® Xeon® 6-core E5-2630 v2 Processors 2.6 GHz	0.07488 WT	5A002.a.1 ENC 740.17(b)(1) G075495

Exadata Storage Expansion Rack X4-2 Half Rack	9x Exadata Storage Servers X4-2, each with 2x six-core Intel® Xeon® 6-core E5-2630 v2 Processors 2.6 GHz	0.07488 WT	5A002.a.1 ENC 740.17(b)(1) G075495
Exadata Storage Expansion Rack X4-2 Quarter Rack	4x Exadata Storage Servers X4-2, each with 2x six-core Intel® Xeon® 6-core E5-2630 v2 Processors 2.6 GHz	0.07488 WT	5A002.a.1 ENC 740.17(b)(1) G075495

### Exadata Database Machine X3-2

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Database Machine X3-2 Full Rack	8x Database Servers, each with 2x 8-core Intel® Xeon® E5-2690 Processors 2.9-GHz	0.11136 WT	5A002.a.1 ENC 740.17(b)(1) G075495
Exadata Database Machine X3-2 Half Rack	4x Database Servers, each with 2x 8-core Intel® Xeon® E5-2690 Processors 2.9-GHz	0.11136 WT	5A002.a.1 ENC 740.17(b)(1) G075495
Exadata Database Machine X3-2 Quarter Rack	2 x Database Servers, each with 2x 8-core Intel® Xeon® E5-2690 Processors 2.9-GHz	0.11136 WT	5A002.a.1 ENC 740.17(b)(1) G075495
Exadata Database Machine X3-2 Eighth Rack	2 x Database Servers, each with 2x 8-core Intel® Xeon® E5-2690 Processors 2.9-GHz	0.11136 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

### Exadata Database Machine X3-8

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Database Machine X3-8	2 x Exadata Database Servers, each with 8x ten-core Intel® Xeon® E7-8870 Processors 2.4-GHz	0.2304 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

### Exadata Storage Expansion Rack X3-2

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Storage Expansion Rack X3-2 Full Rack	18x Exadata Storage Servers X3-2, each with 2 six-core Intel® Xeon® E5-2630L Processors 2.0 GHz.	0.0576 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Storage Expansion Rack X3-2 Half Rack	9x Exadata Storage Servers X3-2, each with 2 six-core Intel® Xeon® E5-2630L Processors 2.0 GHz.	0.0576 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Storage Expansion Rack X3-2 Quarter Rack	4x Exadata Storage Servers X3-2, each with 2 six-core Intel® Xeon® E5-2630L Processors 2.0 GHz.	0.0576 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

### Exadata Database Machine X2-2

Product	Processor Type & Number	APP in WT	ECCN / License Exception
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Exadata Database Machine X2-2 Full Rack	8x Database Servers, each with 2 six-core Intel® Xeon® X5675 Processors 3.06-GHz	0.04415 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Database Machine X2-2 Half Rack	4x Database Servers, each with 2 six-core Intel® Xeon® X5675 Processors 3.06-GHz	0.04415 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Database Machine X2-2 Quarter Rack	2x Database Servers, each with 2 six-core Intel® Xeon® X5675 Processors 3.06-GHz	0.04415 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

### Exadata Database Machine X2-8

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Database Machine X2-8	2 x Exadata Database Servers, each with 8x 10-core Intel® Xeon® E7-8870 Processors 2.4-GHz	0.2304 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

### Exadata Storage Expansion Rack X2-2

Product	Processor Type & Number	APP in WT	ECCN / License Exception
Exadata Storage Expansion Full Rack	18x Exadata Storage Servers X2-2, each with 2 six-core Intel® Xeon® L5640 Processors 2.26 GHz.	0.03643 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Storage Expansion Half Rack	9 x Exadata Storage Servers X2-2, each with 2 six-core Intel® Xeon® L5640 Processors 2.26 GHz.	0.03643 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495
Exadata Storage Expansion Quarter Rack	4x Exadata Storage Servers, each with 2 six-core Intel® Xeon® L5640 Processors 2.26 GHz.	0.03643 WT	5A002.a.1 ENC 740.17(b)(1) CCATS G075495

## [Oracle Exalogic Elastic Cloud](#)

### Exalogic Elastic Cloud X6-2

Product	# Servers	Processor Type & Number	APP in WT	ECCN / License Exception
Exalogic Elastic Cloud X6-2 Full Rack	30x compute nodes	Each with 2x Intel® Xeon® E5-2699 v4 22-core 2.2-GHz Processors	0.46464 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic Elastic Cloud X6-2 Half Rack	16x compute nodes	Each with 2x Intel® Xeon® E5-2699 v4 22-core 2.2-GHz Processors	0.46464 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic Elastic Cloud X6-2 Quarter Rack	8x compute nodes	Each with 2x Intel® Xeon® E5-2699 v4 22-core 2.2-GHz Processors	0.46464 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic Elastic Cloud X6-2 Eighth Rack	4x compute nodes	Each with 2x Intel® Xeon® E5-2699 v4 22-core 2.2-GHz Processors	0.46464 WT	5A002.a.1 ENC 740.17(b)(1)

### Exalogic Elastic Cloud X5-2

Product	# Servers	Processor Type & Number	APP in WT	ECCN / License Exception
Exalogic Elastic Cloud X5-2 Full Rack	30x compute nodes	Each with 2x Intel® Xeon® E5-2699 v3 18-core 2.3-GHz Processors	0.39744 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic Elastic Cloud X5-2 Half Rack	16x compute nodes	Each with 2x Intel® Xeon® E5-2699 v3 18-core 2.3-GHz Processors	0.39744 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic Elastic Cloud X5-2 Quarter Rack	8x compute nodes	Each with 2x Intel® Xeon® E5-2699 v3 18-core 2.3-GHz Processors	0.39744 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic Elastic Cloud X5-2 Eighth Rack	4x compute nodes	Each with 2x Intel® Xeon® E5-2699 v3 18-core 2.3-GHz Processors	0.39744 WT	5A002.a.1 ENC 740.17(b)(1)

### Exalogic Elastic Cloud X4-2

Product	# Servers	Processor Type & Number	APP in WT	ECCN / License Exception
Exalogic Elastic Cloud X4-2 Full Rack	30x compute nodes (servers)	Each with 2x 12-core Intel® Xeon® E5-2697 v2 Processors 2.7-GHz	0.15552 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic Elastic Cloud X4-2 Half Rack	16x compute nodes (servers)	Each with 2x 12-core Intel® Xeon® E5-2697 v2 Processors 2.7-GHz	0.15552 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic Elastic Cloud X4-2 Quarter Rack	8x compute nodes (servers)	Each with 2x 12-core Intel® Xeon® E5-2697 v2 Processors 2.7-GHz	0.15552 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic Elastic Cloud X4-2 Eighth Rack	4x compute nodes (servers)	Each with 2x 12-core Intel® Xeon® E5-2697 v2 Processors 2.7-GHz	0.15552 WT	5A002.a.1 ENC 740.17(b)(1)

### Exalogic Elastic Cloud X3-2

Product	# Servers	Processor Type & Number	APP in WT	ECCN / License Exception
Exalogic Elastic Cloud X3-2 Full Rack	30x compute nodes (servers)	Each with 2x 8-core Intel® Xeon® E5-2690 Processors 2.9-GHz	0.11136 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic Elastic Cloud X3-2 Half Rack	16x compute nodes (servers)	Each with 2x 8-core Intel® Xeon® E5-2690 Processors 2.9-GHz	0.11136 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic Elastic Cloud X3-2 Quarter Rack	8x compute nodes (servers)	Each with 2x 8-core Intel® Xeon® E5-2690 Processors 2.9-GHz	0.11136 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic Elastic Cloud X3-2 Eighth Rack	4x compute nodes (servers)	Each with 2x 8-core Intel® Xeon® E5-2690 Processors 2.9-GHz	0.11136 WT	5A002.a.1 ENC 740.17(b)(1)



## Exalogic Elastic Cloud X2-2

Product	# Servers	Processor Type & Number	APP in WT	ECCN / License Exception
Exalogic X2-2 Full Rack	30 X4170 M2	Each with 2 six-core Intel® Xeon® X5675 Processors 3.06-GHz	0.04415 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic X2-2 Half Rack	16 X4170 M2	Each with 2 six-core Intel® Xeon® X5675 Processors 3.06-GHz	0.04415 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic X2-2 Quarter Rack	8 X4170 M2	Each with 2 six-core Intel® Xeon® X5675 Processors 3.06-GHz	0.04415 WT	5A002.a.1 ENC 740.17(b)(1)
Exalogic X2-2 Eighth Rack	4 X4170 M2	Each with 2 six-core Intel® Xeon® X5675 Processors 3.06-GHz	0.04415 WT	5A002.a.1 ENC 740.17(b)(1)

## [Oracle Exalytics In-Memory Machine](#)

Product	Processor Type & Number	APP in WT	ECCN / Eligible LE
<b>Oracle Exalytics In-Memory Machine X6-4</b>			
Oracle Exalytics In-Memory Machine X6-4	4 Intel® Xeon® 18-core 2.6 GHz E7-8895v3 processors	0.89856 WT	5A002.a.1 ENC 740.17(b)(1)
<b>Oracle Exalytics In-Memory Machine X5-4</b>			
Oracle Exalytics In-Memory Machine X5-4	4 Intel® Xeon® 18-core 2.6 GHz E7-8895v3 processors	0.89856 WT	5A002.a.1 ENC 740.17(b)(1)
<b>Oracle Exalytics In-Memory Machine X4-4</b>			
Oracle Exalytics In-Memory Machine X4-4	4 Intel® Xeon® 15-core 2.8 GHz E7-8895v2 processors	0.4032 WT	5A002.a.1 ENC 740.17(b)(1)
<b>Oracle Exalytics In-Memory Machine X3-4</b>			
Oracle Exalytics In-Memory Machine X3-4	4 Intel® Xeon® 10-core 2.4 GHz E7-4870	0.1152 WT	5A002.a.1 ENC 740.17(b)(1)
<b>Oracle Exalytics In-Memory Machine X2-4</b>			
Oracle Exalytics In-Memory Machine X2-4	4 Intel® Xeon® 10-core 2.4 GHz E7-4870	0.1152 WT	5A002.a.1 ENC 740.17(b)(1)
<b>Oracle Exalytics In-Memory Machine T5-8</b>			
Oracle Exalytics In-Memory Machine T5-8	8x 16-core 3.6 GHz SPARC T5 processors	0.2765 WT	5A002.a.1 ENC 740.17(b)(1)

## [Oracle SuperCluster](#)

### Oracle SuperCluster M8

Product	Processor Type & Number	APP in WT	ECCN / License Exception
SuperCluster M8	with 4x 32-core 5.1-GHz SPARC M8 Processors	0.3917 WT	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085

SuperCluster M8	with 8x 32-core 5.1-GHz SPARC M8 Processors	0.7834 WT	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085
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### Oracle SuperCluster M7

Product	Processor Type & Number	APP in WT	ECCN / License Exception
SuperCluster M7	with 2x 32-core 4.13-GHz SPARC M7 Processors	0.1586 WT	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085
SuperCluster M7	with 4x 32-core 4.13-GHz SPARC M7 Processors	0.3172 WT	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085
SuperCluster M7	with 8x 32-core 4.13-GHz SPARC M7 Processors	0.6344 WT	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085

### Oracle SuperCluster M6-32

Product	Processor Type & Number	APP in WT	ECCN / License Exception
SuperCluster M6-32 Minimum Configuration	with 16x 12-core SPARC M6 Processors 3.6-GHz	0.4147 WT	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085
SuperCluster M6-32 Maximum Configuration	with 32x 12-core SPARC M6 Processors 3.6-GHz	0.8294 WT	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085

### Oracle SuperCluster T5-8

Product	Processor Type & Number	APP in WT	ECCN / License Exception
SuperCluster T5-8 Half Rack	with 4x 16-core SPARC T5 Processors 3.6-GHz	0.1382 WT	5A002.a.1 / ENC 740.17(b)(1)
SuperCluster T5-8 Full Rack	with 8x 16-core SPARC T5 Processors 3.6-GHz	0.2765 WT	5A002.a.1 / ENC 740.17(b)(1)

### SPARC SuperCluster T4-4

Product	Processor Type & Number	APP in WT	ECCN / License Exception
SPARC SuperCluster T4-4 Half Rack	2x SPARC T4-4 Servers, each with 4 x eight-core SPARC T4 Processors 3.0-GHz	0.0576 WT	5A002.a.1 ENC 740.17(b)(1)
SPARC SuperCluster T4-4 Full Rack	4 x SPARC T4-4 Servers, each with 4 x eight-core SPARC T4 Processors 3.0-GHz	0.0576 WT	5A002.a.1 ENC 740.17(b)(1)

### [Oracle MiniCluster](#)

#### Oracle MiniCluster S7-2

Product	Processor Type & Number	APP in WT	ECCN / License Exception
MiniCluster S7-2	2 Oracle SPARC S7-2 servers, each with 2x 8-core 4.27-GHz SPARC S7 processors	0.041 WT	5A002.a.1 / ENC 740.17(b)(1)

## [Oracle Big Data Appliance](#)

### Oracle Big Data Appliance X7-2

Product	Processor Type & Number	APP in WT	ECCN / Eligible LE
Oracle Big Data Appliance X7-2 Full Rack	18x compute/storage nodes, each with 2 Intel® Xeon® Platinum P-8160 24-core 2.1 GHz processors	0.64512 WT	5A002.a.1 ENC 740.17(b)(1)
Oracle Big Data Appliance X7-2 Starter Rack	6x compute/storage nodes, each with 2 Intel® Xeon® Platinum P-8160 24-core 2.1 GHz processors	0.64512 WT	5A002.a.1 ENC 740.17(b)(1)

### Oracle Big Data Appliance X6-2

Product	Processor Type & Number	APP in WT	ECCN / Eligible LE
Oracle Big Data Appliance X6-2 Full Rack	18x compute/storage nodes, each with 2 Intel® Xeon® 22-core 2.2 GHz E5-2699 v4 processors	0.46464 WT	5A002.a.1 ENC 740.17(b)(1)
Oracle Big Data Appliance X6-2 Starter Rack	6x compute/storage nodes, each with 2 Intel® Xeon® 22-core 2.2 GHz E5-2699 v4 processors	0.46464 WT	5A002.a.1 ENC 740.17(b)(1)

### Oracle Big Data Appliance X5-2

Product	Processor Type & Number	APP in WT	ECCN / Eligible LE
Oracle Big Data Appliance X5-2 Full Rack	18x compute/storage nodes, each with 2 Intel® Xeon® 18-core 2.3 GHz E5-2699 V3 processors	0.39744 WT	5A002.a.1 ENC 740.17(b)(1)
Oracle Big Data Appliance X5-2 Starter Rack	6x compute/storage nodes, each with 2 Intel® Xeon® 18-core 2.3 GHz E5-2699 V3 processors	0.39744 WT	5A002.a.1 ENC 740.17(b)(1)

### Oracle Big Data Appliance X4-2

Product	Processor Type & Number	APP in WT	ECCN / Eligible LE
Oracle Big Data Appliance X4-2 Full Rack	18x server nodes per Appliance, each with 2 Intel® Xeon® 8-core 2.6 GHz E5-2650 V2 processors	0.09984 WT	5A002.a.1 ENC 740.17(b)(1)
Oracle Big Data Appliance X4-2 Starter Rack	6x server nodes per Appliance, each with 2 Intel® Xeon® 8-core 2.6 GHz E5-2650 V2 processors	0.09984 WT	5A002.a.1 ENC 740.17(b)(1)

### Oracle Big Data Appliance X3-2

Product	Processor Type & Number	APP in WT	ECCN / Eligible LE
Oracle Big Data Appliance X3-2	18x server nodes per Appliance, each with 2 Intel® Xeon® 8-core 2.2-GHz E5-2660	0.08448 WT	5A002.a.1 ENC 740.17(b)(1)
Oracle Big Data Appliance	18x server nodes per Appliance, each with 2 Intel® Xeon® 6-core 3.06-GHz X5675	0.0883 WT	5A002.a.1 ENC 740.17(b)(1)

## [Oracle Database Appliance](#)

### Oracle Database Appliance X7-2

Product	Processor Type & Number	APP in WT	ECCN / Eligible LE
Oracle Database Appliance X7-2S	1 server node, with 1 Intel® Xeon® Silver 4114 10-core 2.2-GHz processor	0.0528 WT	5A992.c/NLR
Oracle Database Appliance X7-2M	1 server node, with 2 Intel® Xeon® Gold 6140 18-core 2.3-GHz processor	0.7949 WT	5A992.c/NLR
Oracle Database Appliance X7-2HA	2 server nodes, each with 2 Intel® Xeon® Gold 6140 18-core 2.3-GHz processors	0.7949 WT	5A992.c/NLR

### Oracle Database Appliance X6-2

Product	Processor Type & Number	APP in WT	ECCN / Eligible LE
Oracle Database Appliance X6-2S	1 server node, with 1 Intel® Xeon® 10-core 2.2-GHz E5-2630 v4 processor	0.1056 WT	5A992.c/NLR
Oracle Database Appliance X6-2M	1 server node, with 2 Intel® Xeon® 10-core 2.2-GHz E5-2630 v4 processors	0.2112 WT	5A992.c/NLR
Oracle Database Appliance X6-2L	1 server node, with 2 Intel® Xeon® 10-core 2.2-GHz E5-2630 v4 processors	0.2112 WT	5A992.c/NLR
Oracle Database Appliance X6-2HA	2 server nodes, each with 2 Intel® Xeon® 10-core 2.2-GHz E5-2630 v4 processors	0.2112 WT	5A992.c/NLR

### Oracle Database Appliance X5-2

Product	Processor Type & Number	APP in WT	ECCN / Eligible LE
Oracle Database Appliance X5-2	2 server nodes per system, each with 2 Intel® Xeon® 18-core 2.3-GHz E5-2699 v3	0.39744 WT	5A992.c/NLR

### Oracle Database Appliance X4-2

Product	Processor Type & Number	APP in WT	ECCN / Eligible LE
Oracle Database Appliance X4-2	2 server nodes per system, each with 2 Intel® Xeon® 12-core 2.7-GHz E5-2697 v2	0.15552 WT	5A992.c/NLR

### Oracle Database Appliance X3-2

Product	Processor Type & Number	APP in WT	ECCN / Eligible LE
Oracle Database Appliance X3-2	2 server nodes per system, each with 2 Intel® Xeon® 8-core 2.9-GHz E5-2690	0.11136 WT	5A992.c/NLR

## [Oracle Private Cloud Appliance](#)

Product	Processor Type & Number	APP in WT	ECCN / Eligible LE
Oracle Private Cloud Appliance X5-2	0 to 25 Compute Nodes. 2 Controller Nodes, each with 2 Intel® Xeon® 18-core 2.3-GHz E5-2699 v3 processors.	0.39744 WT	5A002.a.1 ENC 740.17(b)(1)

Oracle Virtual Compute Appliance X4-2	2 to 25 Compute Nodes. 2 Controller Nodes, each with 2 Intel® Xeon® 8-core 2.6-GHz E5-2650 v2 processors.	0.09984 WT	5A002.a.1 ENC 740.17(b)(1)
Oracle Virtual Compute Appliance X3-2	2 to 25 Compute Nodes. 2 Controller Nodes, each with 2 Intel® Xeon® 8-core 2.2-GHz E5-2660 processors	0.08448 WT	5A002.a.1 ENC 740.17(b)(1)

### [Oracle Zero Data Loss Recovery Appliance](#)

Product	Processor Type & Number	APP in WT	ECCN / Eligible LE
<b>Oracle Zero Data Loss Recovery Appliance X7</b>			
Oracle Zero Data Loss Recovery Appliance X7	2x compute servers, each with 2 Intel® Xeon® Platinum P-8160 24-core 2.1-GHz processors	0.6451 WT	5A002.a.1 ENC 740.17(b)(1)
<b>Oracle Zero Data Loss Recovery Appliance X6</b>			
Oracle Zero Data Loss Recovery Appliance X6	2x compute servers, each with 2 Intel® Xeon® 22-core 2.2-GHz E5-2699 v4 processors	0.46464 WT	5A002.a.1 ENC 740.17(b)(1)
<b>Oracle Zero Data Loss Recovery Appliance X5</b>			
Oracle Zero Data Loss Recovery Appliance X5	2x compute servers, each with 2 Intel® Xeon® 18-core 2.3-GHz E5-2699 V3 processors	0.39744 WT	5A002.a.1 ENC 740.17(b)(1)
<b>Oracle Zero Data Loss Recovery Appliance X4</b>			
Oracle Zero Data Loss Recovery Appliance X4	2x compute servers, each with 2 Intel® Xeon® 12-core 2.7-GHz E5-2697 V2 processors	0.1555 WT	5A002.a.1 ENC 740.17(b)(1)

### SPARC Servers

#### [SPARC M8-8 Server](#)

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
SPARC M8-8 Server	2 SPARC M8 32-core processors	5.0-GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085	0.192 WT
SPARC M8-8 Server	8 SPARC M8 32-core processors	5.0-GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085	0.768 WT

#### [SPARC M7-8 Server](#)

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
SPARC M7-8 Server	2 SPARC M7 32-core processors	4.13-GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085	0.1586 WT
SPARC M7-8 Server	8 SPARC M7 32-core processors	4.13-GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085	0.6344 WT

#### [SPARC M7-16 Server](#)

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
SPARC M7-16 Server	4 SPARC M7 32-core processors	4.13-GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085	0.3172 WT

SPARC M7-16 Server	8 SPARC M7 32-core processors	4.13-GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085	0.6344 WT
SPARC M7-16 Server	16 SPARC M7 32-core processors	4.13-GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085	1.2687 WT

### [SPARC M6-32 Server](#)

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
SPARC M6-32 Server	2 SPARC M6 12-core processors	3.6-GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085	0.0518 WT
SPARC M6-32 Server	8 SPARC M6 12-core processors	3.6-GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085	0.2074 WT
SPARC M6-32 Server	32 SPARC M6 12-core processors	3.6-GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085	0.8294 WT

### [SPARC M5-32 Server](#)

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
SPARC M5-32 Server	8 SPARC M5 6-core processors	3.6-GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085	0.1037 WT
SPARC M5-32 Server	32 SPARC M5 6-core processors	3.6-GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G145085	0.4147 WT

### [SPARC S7 Servers](#)

#### SPARC S7-2 Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
SPARC S7-2 Server	1x SPARC S7 8-core processor	4.27-GHz	5A992.c / NLR	0.0205 WT
SPARC S7-2 Server	2x SPARC S7 8-core processors	4.27-GHz	5A992.c / NLR	0.041 WT

#### SPARC S7-2L Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
SPARC S7-2L Server	2x SPARC S7 8-core processors	4.27-GHz	5A992.c / NLR	0.041 WT

### [SPARC T-Series Servers](#)

#### SPARC T8 Servers

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
SPARC T8-1 Server	1 SPARC M8 32-core processors	5.0-GHz	5A992.c / NLR	0.096 WT

SPARC T8-2 Server	2x SPARC M8 32-core processors	5.0-GHz	5A992.c / NLR	0.192 WT
SPARC T8-4 Server	4x SPARC M8 32-core processors	5.0-GHz	5A992.c / NLR	0.384 WT

### SPARC T7 Servers

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
SPARC T7-1 Server	1 SPARC M7 32-core processors	4.13-GHz	5A992.c / NLR	0.0793 WT
SPARC T7-2 Server	2x SPARC M7 32-core processors	4.13-GHz	5A992.c / NLR	0.1586 WT
SPARC T7-4 Server	4x SPARC M7 32-core processors	4.13-GHz	5A992.c / NLR	0.3172 WT

### SPARC T5 Servers

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
SPARC T5-2 Server	2 SPARC T5 16-core processors	3.6-GHz	5A992.c / NLR, CCATS G141797	0.0691 WT
SPARC T5-4 Server	4 SPARC T5 16-core processors	3.6-GHz	5A992.c / NLR, CCATS G141797	0.1382 WT
SPARC T5-8 Server	4 SPARC T5 16-core processors	3.6-GHz	5A992.c / NLR, CCATS G141797	0.1382 WT
SPARC T5-8 Server	8 SPARC T5 16-core processors	3.6-GHz	5A992.c / NLR, CCATS G141797	0.2765 WT

### SPARC T4 Servers

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
SPARC T4-1 Server	1 SPARC T4 8-core processor	2.85-GHz	5A992.c / NLR, CCATS G141797	0.0137 WT
SPARC T4-2 Server	2 SPARC T4 8-core processors	2.85-GHz	5A992.c / NLR, CCATS G141797	0.0274 WT
SPARC T4-4 Server	4 SPARC T4 8-core processor	3.0-GHz	5A992.c / NLR, CCATS G141797	0.0576 WT

### SPARC T3 Servers

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
SPARC T3-1 Server	1 SPARC T3 16-core processor	1.65-GHz	5A992.c / NLR, CCATS G141797	0.0158 WT
SPARC T3-2 Server	2 SPARC T3 16-core processors	1.65-GHz	5A992.c / NLR, CCATS G141797	0.0317 WT

SPARC T3-4 Server	2 SPARC T3 16-core processors	1.65-GHz	5A992.c / NLR, CCATS G141797	0.0317 WT
SPARC T3-4 Server	4 SPARC T3 16-core processors	1.65-GHz	5A992.c / NLR, CCATS G141797	0.0634 WT

#### Sun SPARC Enterprise T5120 Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
T5120	1 UltraSPARC T2 4-core processor	1.2-GHz	5A992.c / NLR, CCATS G141797	0.00144 WT
T5120	1 UltraSPARC T2 6-core processor	1.2-GHz	5A992.c / NLR, CCATS G141797	0.00216 WT
T5120	1 UltraSPARC T2 8-core processor	1.2-GHz	5A992.c / NLR, CCATS G141797	0.00288 WT
T5120	1 UltraSPARC T2 8-core processor	1.4-GHz	5A992.c / NLR, CCATS G141797	0.00336 WT
T5120	1 UltraSPARC T2 8-core processor	1.6-GHz	5A992.c / NLR, CCATS G141797	0.00384 WT

#### Sun SPARC Enterprise T5140 Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
T5140	2 UltraSPARC T2 Plus 4-core processors	1.2-GHz	5A992.c / NLR, CCATS G141797	0.00288 WT
T5140	2 UltraSPARC T2 Plus 6-core processors	1.2-GHz	5A992.c / NLR, CCATS G141797	0.00432 WT
T5140	2 UltraSPARC T2 Plus 8-core processors	1.2-GHz	5A992.c / NLR, CCATS G141797	0.00576 WT
T5140	2 UltraSPARC T2 Plus 8-core processor	1.4-GHz	5A992.c / NLR, CCATS G141797	0.00672 WT

#### Sun SPARC Enterprise T5240 Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
T5240	2 UltraSPARC T2 Plus 4-core processors	1.2-GHz	5A992.c / NLR, CCATS G141797	0.00288 WT
T5240	2 UltraSPARC T2 Plus 6-core processors	1.2-GHz	5A992.c / NLR, CCATS G141797	0.00432 WT
T5240	2 UltraSPARC T2 Plus 8-core processors	1.2-GHz	5A992.c / NLR, CCATS G141797	0.00576 WT
T5240	2 UltraSPARC T2 Plus 8-core processor	1.4-GHz	5A992.c / NLR, CCATS G141797	0.00672 WT
T5240	2 UltraSPARC T2 Plus 8-core processor	1.6-GHz	5A992.c / NLR, CCATS G141797	0.00768 WT



### Sun SPARC Enterprise T5440 Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
T5440	4 UltraSPARC T2 Plus 8-core processors	1.2-GHz	5A992.c / NLR, CCATS G141797	0.01152 WT
T5440	4 UltraSPARC T2 Plus 8-core processors	1.4-GHz	5A992.c / NLR, CCATS G141797	0.01344 WT
T5440	4 UltraSPARC T2 Plus 8-core processors	1.6-GHz	5A992.c / NLR, CCATS G141797	0.01536 WT

### Sun SPARC Enterprise T5220 Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
T5220	1 UltraSPARC T2 4-core processor	1.2-GHz	5A992.c / NLR, CCATS G141797	0.00144 WT
T5220	1 UltraSPARC T2 8-core processor	1.2-GHz	5A992.c / NLR, CCATS G141797	0.00288 WT
T5220	1 UltraSPARC T2 8-core processor	1.4-GHz	5A992.c / NLR, CCATS G141797	0.00336 WT
T5220	1 UltraSPARC T2 8-core processor	1.6-GHz	5A992.c / NLR, CCATS G141797	0.00384 WT

### [Fujitsu SPARC M12 Servers](#)

#### Fujitsu SPARC M12-1 Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
M12-1	1 SPARC64 XII (6-core)	3.2 GHz	5A992.c / NLR	0.09216 WT

#### Fujitsu SPARC M12-2 Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
M12-2	1 SPARC64 XII (12-core)	3.9 GHz	5A992.c / NLR	0.11232 WT
M12-2	2 SPARC64 XII (12-core)	3.9 GHz	5A992.c / NLR	0.22464 WT

**Fujitsu SPARC M12-2S Server** - A modular system that can have from 1 up to 16 building blocks. Each building block has 2 SPARC64 XII processors. Maximum Adjusted Peak Performance does not exceed 12.5 Weighted TeraFLOPs. All configurations are classified 5A002.a.1, eligible for export under License Exception ENC 740.17(b)(1).

#### APP based on SPARC64 XII 12-core CPUs

Product	# of Building Blocks	Processor Type, Number & Frequency	ECCN / Eligible License Exception	APP in WT
M12-2S	1	2x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.2448 WT

M12-2S	2	4x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.4896 WT
M12-2S	3	6x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.7344 WT
M12-2S	4	8x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.9792 WT
M12-2S	5	10x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	1.2240 WT
M12-2S	6	12x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	1.4688 WT
M12-2S	7	14x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	1.7136 WT
M12-2S	8	16x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	1.9584 WT
M12-2S	9	18x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	2.2032 WT
M12-2S	10	20x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	2.4480 WT
M12-2S	11	22x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	2.6928 WT
M12-2S	12	24x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	2.9376 WT
M12-2S	13	26x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	3.1824 WT
M12-2S	14	28x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	3.4272 WT
M12-2S	15	30x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	3.6720 WT
M12-2S	16	32x SPARC64 XII 12-core 4.25 GHz	5A002.a.1 / ENC 740.17(b)(1)	3.9168 WT

## [Fujitsu M10 Servers](#)

### Fujitsu M10-1 Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
M10-1	1 SPARC64 X (16-core)	2.8 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.10752 WT
M10-1	1 SPARC64 X+ (16-core)	3.2 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.12288 WT
M10-1	1 SPARC64 X+ (16-core)	3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.14208 WT
M10-1	1 SPARC64 X+ (8-core)	3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.07104 WT

### Fujitsu M10-4 Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
M10-4	2 SPARC64 X (16-core)	2.8 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.21504 WT
M10-4	4 SPARC64 X (16-core)	2.8 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.43008 WT
M10-4	2 SPARC64 X+ (16-core)	3.4 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.26112 WT
M10-4	4 SPARC64 X+ (16-core)	3.4 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.52224 WT
M10-4	2 SPARC64 X+ (8-core)	3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.14208 WT
M10-4	4 SPARC64 X+ (8-core)	3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.28416 WT
M10-4	2 SPARC64 X+ (16-core)	3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.28416 WT
M10-4	4 SPARC64 X+ (16-core)	3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.56832 WT

**Fujitsu M10-4S Server** - A modular system that can have from 1 up to 16 building blocks. Each building block can have 2 or 4 SPARC64 X or X+ processors. Maximum Adjusted Peak Performance does not exceed 12.5 Weighted TeraFLOPs. All configuration are classified 5A002.a.1, eligible for export under License Exception ENC 740.17(b)(1).

**APP based on SPARC64 X 16-core CPUs**

<b>Product</b>	<b># of Building Blocks</b>	<b>Processor Type, Number &amp; Frequency</b>	<b>ECCN / Eligible License Exception</b>	<b>APP in WT</b>
M10-4S	1	4x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.4608 WT
M10-4S	2	8x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.9216 WT
M10-4S	3	12x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	1.3824 WT
M10-4S	4	16x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	1.8432 WT
M10-4S	5	20x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	2.3040 WT
M10-4S	6	24x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	2.7648 WT
M10-4S	7	28x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	3.2256 WT
M10-4S	8	32x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	3.6864 WT
M10-4S	9	36x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	4.1472 WT
M10-4S	10	40x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	4.6080 WT
M10-4S	11	44x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	5.0688 WT
M10-4S	12	48x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	5.5296 WT
M10-4S	13	52x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	5.9904 WT
M10-4S	14	56x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	6.4512 WT
M10-4S	15	60x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	6.9120 WT
M10-4S	16	64x SPARC64 X 16-core 3.0 GHz	5A002.a.1 / ENC 740.17(b)(1)	7.3728 WT

**APP based on SPARC64 X+ 16-core CPUs**

<b>Product</b>	<b># of Building Blocks</b>	<b>Processor Type, Number &amp; Frequency</b>	<b>ECCN / Eligible License Exception</b>	<b>APP in WT</b>
M10-4S	1	4x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.56832 WT
M10-4S	2	8x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	1.13664 WT
M10-4S	3	12x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	1.70496 WT
M10-4S	4	16x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	2.27328 WT
M10-4S	5	20x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	2.84160 WT
M10-4S	6	24x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	3.40992 WT
M10-4S	7	28x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	3.97824 WT
M10-4S	8	32x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	4.54656 WT
M10-4S	9	36x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	5.11488 WT
M10-4S	10	40x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	5.68320 WT
M10-4S	11	44x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	6.25152 WT
M10-4S	12	48x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	6.81984 WT
M10-4S	13	52x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	7.38816 WT
M10-4S	14	56x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	7.95648 WT
M10-4S	15	60x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	8.52480 WT
M10-4S	16	64x SPARC64 X+ 16-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	9.09312 WT

### APP based on SPARC64 X+ 8-core CPUs

Product	# of Building Blocks	Processor Type, Number & Frequency	ECCN / Eligible License Exception	APP in WT
M10-4S	1	4x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.28416 WT
M10-4S	2	8x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.56832 WT
M10-4S	3	12x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	0.85248 WT
M10-4S	4	16x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	1.13664 WT
M10-4S	5	20x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	1.42080 WT
M10-4S	6	24x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	1.70496 WT
M10-4S	7	28x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	1.98912 WT
M10-4S	8	32x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	2.27328 WT
M10-4S	9	36x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	2.55744 WT
M10-4S	10	40x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	2.84160 WT
M10-4S	11	44x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	3.12576 WT
M10-4S	12	48x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	3.40992 WT
M10-4S	13	52x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	3.69408 WT
M10-4S	14	56x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	3.97824 WT
M10-4S	15	60x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	4.26240 WT
M10-4S	16	64x SPARC64 X+ 8-core 3.7 GHz	5A002.a.1 / ENC 740.17(b)(1)	4.54656 WT

### SPARC Enterprise M-Series Servers

#### SPARC Enterprise M3000 Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
M3000	1 SPARC64 VII	2.75 GHz	5A002.a.1 ENC 740.17(b)(1) CCATS G066946	0.0132 WT
M3000	1 SPARC64 VII+	2.86 GHz	5A002.a.1 ENC 740.17(b)(1) CCATS G066946	0.0137 WT

#### Sun SPARC Enterprise M4000 Servers

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
M4000	4 SPARC64 VI	2.15 GHz	5A002.a.1 ENC 740.17(b)(1) CCATS G050094	0.0206 WT
M4000	4 SPARC64 VII	2.53 GHz	5A002.a.1 ENC 740.17(b)(1) CCATS G066946	0.0486 WT
M4000	4 SPARC64 VII+	2.66 GHz	5A002.a.1 ENC 740.17(b)(1) CCATS G066946	0.0511 WT

#### Sun SPARC Enterprise M5000 Servers

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
M5000	8 SPARC64 VI	2.15 GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G066946	0.0413 WT
M5000	8 SPARC64 VII	2.53 GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G066946	0.0972 WT

M5000	8 SPARC64 VII+	2.66 GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G066946	0.1021 WT
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### Sun SPARC Enterprise M8000 Servers

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
M8000	16 SPARC64 VI	2.28 GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G050094	0.0876 WT
M8000	16 SPARC64 VI	2.4 GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G050094	0.0922 WT
M8000	16 SPARC64 VII	2.88 GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G066946	0.2212 WT
M8000	16 SPARC64 VII+	3.0 GHz	5A002.a.1 / ENC 740.17(b)(3) CCATS G066946	0.2304 WT

### Sun SPARC Enterprise M9000 Servers

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
M9000	64 SPARC64 VI	2.28 GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G050094	0.35 WT
M9000	64 SPARC64 VI	2.4 GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G050094	0.369 WT
M9000	64 SPARC64 VII	2.88 GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G066946	0.885 WT
M9000	64 SPARC64 VII+	3.0 GHz	5A002.a.1 / ENC 740.17(b)(1) CCATS G066946	0.922 WT

## [Oracle x86 Servers](#)

### Oracle Server X7-2

Product	Clock Speed	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Oracle Server X7-2	2.1 GHz	1 Intel® Xeon® Platinum 8160, 24 cores	5A992.c / NLR	0.32256 WT
Oracle Server X7-2	2.1 GHz	2 Intel® Xeon® Platinum 8160, 24 cores	5A992.c / NLR	0.64512 WT
Oracle Server X7-2	2.3 GHz	1 Intel® Xeon® Gold 6140, 18 cores	5A992.c / NLR	0.39744 WT
Oracle Server X7-2	2.3 GHz	2 Intel® Xeon® Gold 6140, 18 cores	5A992.c / NLR	0.79488 WT
Oracle Server X7-2	2.2 GHz	1 Intel® Xeon® Silver 4114, 10 cores	5A992.c / NLR	0.0528 WT
Oracle Server X7-2	2.2 GHz	2 Intel® Xeon® Silver 4114, 10 cores	5A992.c / NLR	0.1056 WT
Oracle Server X7-2	3.4 GHz	1 Intel® Xeon® Gold 6128, 6 cores	5A992.c / NLR	0.19584 WT
Oracle Server X7-2	3.4 GHz	2 Intel® Xeon® Gold 6128, 6 cores	5A992.c / NLR	0.39168 WT

### Oracle Server X7-2L

Product	Clock Speed	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Oracle Server X7-2L	2.7 GHz	1 Intel® Xeon® Platinum 8168, 24 cores	5A992.c / NLR	0.62208 WT
Oracle Server X7-2L	2.7 GHz	2 Intel® Xeon® Platinum 8168, 24 cores	5A992.c / NLR	1.24416 WT
Oracle Server X7-2L	2.1 GHz	1 Intel® Xeon® Platinum 8160, 24 cores	5A992.c / NLR	0.32256 WT
Oracle Server X7-2L	2.1 GHz	2 Intel® Xeon® Platinum 8160, 24 cores	5A992.c / NLR	0.64512 WT
Oracle Server X7-2L	2.3 GHz	1 Intel® Xeon® Gold 6140, 18 cores	5A992.c / NLR	0.39744 WT

Oracle Server X7-2L	2.3 GHz	2 Intel® Xeon® Gold 6140, 18 cores	5A992.c / NLR	0.79488 WT
Oracle Server X7-2L	2.2 GHz	1 Intel® Xeon® Silver 4114, 10 cores	5A992.c / NLR	0.0528 WT
Oracle Server X7-2L	2.2 GHz	2 Intel® Xeon® Silver 4114, 10 cores	5A992.c / NLR	0.1056 WT
Oracle Server X7-2L	3.4 GHz	1 Intel® Xeon® Gold 6128, 6 cores	5A992.c / NLR	0.19584 WT
Oracle Server X7-2L	3.4 GHz	2 Intel® Xeon® Gold 6128, 6 cores	5A992.c / NLR	0.39168 WT

#### Oracle Server X6-2

Product	Clock Speed	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Oracle Server X6-2	2.2 GHz	1 Intel® Xeon® E5-2699 v4, 22 cores	5A992.c / NLR	0.23232 WT
Oracle Server X6-2	2.2 GHz	2 Intel® Xeon® E5-2699 v4, 22 cores	5A992.c / NLR	0.46464 WT
Oracle Server X6-2	2.6 GHz	1 Intel® Xeon® E5-2690 v4, 14 cores	5A992.c / NLR	0.17472 WT
Oracle Server X6-2	2.6 GHz	2 Intel® Xeon® E5-2690 v4, 14 cores	5A992.c / NLR	0.34944 WT
Oracle Server X6-2	2.2 GHz	1 Intel® Xeon® E5-2630 v4, 10 cores	5A992.c / NLR	0.1056 WT
Oracle Server X6-2	2.2 GHz	2 Intel® Xeon® E5-2630 v4, 10 cores	5A992.c / NLR	0.2112 WT
Oracle Server X6-2	3.4 GHz	1 Intel® Xeon® E5-2643 v4, 6 cores	5A992.c / NLR	0.09792 WT
Oracle Server X6-2	3.4 GHz	2 Intel® Xeon® E5-2643 v4, 6 cores	5A992.c / NLR	0.19584 WT

#### Oracle Server X6-2L

Product	Clock Speed	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Oracle Server X6-2L	2.2 GHz	1 Intel® Xeon® E5-2699 v4, 22 cores	5A992.c / NLR	0.23232 WT
Oracle Server X6-2L	2.2 GHz	2 Intel® Xeon® E5-2699 v4, 22 cores	5A992.c / NLR	0.46464 WT
Oracle Server X6-2L	2.6 GHz	1 Intel® Xeon® E5-2690 v4, 14 cores	5A992.c / NLR	0.17472 WT
Oracle Server X6-2L	2.6 GHz	2 Intel® Xeon® E5-2690 v4, 14 cores	5A992.c / NLR	0.34944 WT
Oracle Server X6-2L	2.2 GHz	1 Intel® Xeon® E5-2630 v4, 10 cores	5A992.c / NLR	0.1056 WT
Oracle Server X6-2L	2.2 GHz	2 Intel® Xeon® E5-2630 v4, 10 cores	5A992.c / NLR	0.2112 WT
Oracle Server X6-2L	3.4 GHz	1 Intel® Xeon® E5-2643 v4, 6 cores	5A992.c / NLR	0.09792 WT
Oracle Server X6-2L	3.4 GHz	2 Intel® Xeon® E5-2643 v4, 6 cores	5A992.c / NLR	0.19584 WT

#### Oracle Server X5-8

Product	Clock Speed	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Oracle Server X5-8	2.6 GHz	4 Intel® Xeon® 18-core E7-8895 v3	5A992.c / NLR	0.89856 WT
Oracle Server X5-8	2.6 GHz	8 Intel® Xeon® 18-core E7-8895 v3	5A992.c / NLR	1.79712 WT

#### Oracle Server X5-4

Product	Clock Speed	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Oracle Server X5-4	2.6 GHz	2 Intel® Xeon® 18-core E7-8895 v3	5A992.c / NLR	0.44928 WT

Oracle Server X5-4	2.6 GHz	4 Intel® Xeon® 18-core E7-8895 v3	5A992.c / NLR	0.89856 WT
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#### Oracle Server X5-2

Product	Clock Speed	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Oracle Server X5-2	2.3 GHz	2 Intel® Xeon® 18-core E5-2699 v3	5A992.c / NLR	0.39744 WT
Oracle Server X5-2	2.6 GHz	2 Intel® Xeon® 12-core E5-2690 v3	5A992.c / NLR	0.29952 WT
Oracle Server X5-2	2.6 GHz	2 Intel® Xeon® 10-core E5-2660 v3	5A992.c / NLR	0.24960 WT
Oracle Server X5-2	2.4 GHz	2 Intel® Xeon® 8-core E5-2630 v3	5A992.c / NLR	0.18432 WT

#### Oracle Server X5-2L

Product	Clock Speed	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Oracle Server X5-2L	2.3 GHz	2 Intel® Xeon® 18-core E5-2699 v3	5A992.c / NLR	0.39744 WT
Oracle Server X5-2L	2.6 GHz	2 Intel® Xeon® 12-core E5-2690 v3	5A992.c / NLR	0.29952 WT
Oracle Server X5-2L	2.6 GHz	2 Intel® Xeon® 10-core E5-2660 v3	5A992.c / NLR	0.24960 WT
Oracle Server X5-2L	2.4 GHz	2 Intel® Xeon® 8-core E5-2630 v3	5A992.c / NLR	0.18432 WT

#### Sun Server X4-8

Product	Clock Speed	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Sun Server X4-8	2.8 GHz	4 Intel® Xeon® 15-core E7-8895 v2	5A992.c / NLR	0.4032 WT
Sun Server X4-8	2.8 GHz	8 Intel® Xeon® 15-core E7-8895 v2	5A992.c / NLR	0.8064 WT

#### Sun Server X4-4

Product	Clock Speed	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Sun Server X4-4	2.8 GHz	2 Intel® Xeon® 15-core E7-8895 v2	5A992.c / NLR	0.2016 WT
Sun Server X4-4	2.8 GHz	4 Intel® Xeon® 15-core E7-8895 v2	5A992.c / NLR	0.4032 WT

#### Sun Server X4-2

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Sun Server X4-2	2.5 GHz	2 Intel® Xeon® 4-core E5-2609 v2	5A992.c / NLR	0.048 WT
Sun Server X4-2	2.6 GHz	2 Intel® Xeon® 8-core E5-2650 v2	5A992.c / NLR	0.0998 WT
Sun Server X4-2	3.0 GHz	2 Intel® Xeon® 10-core E5-2690 v2	5A992.c / NLR	0.144 WT

#### Sun Server X4-2L

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Sun Server X4-2L	2.5 GHz	2 Intel® Xeon® 4-core E5-2609 v2	5A992.c / NLR	0.048 WT

Sun Server X4-2L	2.6 GHz	2 Intel® Xeon® 8-core E5-2650 v2	5A992.c / NLR	0.00998 WT
Sun Server X4-2L	3.0 GHz	2 Intel® Xeon® 10-core E5-2690 v2	5A992.c / NLR	0.144 WT

#### Sun Server X3-2 (formerly Sun Fire X4170 M3 Server)

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Sun Server X3-2	2.4 GHz	2 Intel® Xeon® 4-core E5-2609	5A992.c / NLR	0.04608 WT
Sun Server X3-2	2.2 GHz	2 Intel® Xeon® 8-core E5-2660	5A992.c / NLR	0.08448 WT
Sun Server X3-2	2.9 GHz	2 Intel® Xeon® 8-core E5-2690	5A992.c / NLR	0.11136 WT

#### Sun Server X3-2L (formerly Sun Fire X4270 M3 Server)

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Sun Server X3-2L	2.4 GHz	2 Intel® Xeon® 4-core E5-2609	5A992.c / NLR	0.04608 WT
Sun Server X3-2L	2.2 GHz	2 Intel® Xeon® 8-core E5-2660	5A992.c / NLR	0.08448 WT
Sun Server X3-2L	2.9 GHz	2 Intel® Xeon® 8-core E5-2690	5A992.c / NLR	0.11136 WT

#### Sun Server X2-4 (formerly Sun Fire X4470 M2 Server)

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Sun Server X2-4	2.00 GHz	2 Intel® Xeon® E7-4820 8-core	5A992.c / NLR	0.0384 WT
Sun Server X2-4	2.26 GHz	4 Intel® Xeon® E7-4860 10-core	5A992.c / NLR	0.10877 WT
Sun Server X2-4	2.4 GHz	4 Intel® Xeon® E7-4870 10-core	5A992.c / NLR	0.1152 WT

#### Sun Server X2-8 (formerly Sun Fire X4800 M2 Server)

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Sun Server X2-8	2.13 GHz	4 Intel® Xeon® 8-core E7-8830	5A992.c / NLR	0.081907 WT
Sun Server X2-8	2.13 GHz	8 Intel® Xeon® 8-core E7-8830	5A992.c / NLR	0.163814 WT
Sun Server X2-8	2.4 GHz	8 Intel® Xeon® 10-core E7-8870	5A992.c / NLR	0.2304 WT

#### Sun Fire X2270 M2 Servers

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
X2270 M2	2.4 GHz	2 Intel® Xeon® 4-core E5620	5A992.c / NLR	0.0243 WT
X2270 M2	2.0 GHz	2 Intel® Xeon® 6-core L5638	5A992.c / NLR	0.0288 WT
X2270 M2	2.26 GHz	2 Intel® Xeon® 6-core L5640	5A992.c / NLR	0.0364 WT
X2270 M2	2.8 GHz	2 Intel® Xeon® 6-core X5660	5A992.c / NLR	0.044 WT



**Sun Fire X4170 M2 Server**

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
X4170 M2	2.4 GHz	2 Intel® Xeon® 4-core E5620	5A992.c / NLR	0.0243 WT
X4170 M2	2.26 GHz	2 Intel® Xeon® 6-core L5640	5A992.c / NLR	0.0364 WT
X4170 M2	2.8 GHz	2 Intel® Xeon® 6-core X5660	5A992.c / NLR	0.044 WT
X4170 M2	2.93 GHz	2 Intel® Xeon® 6-core X5670	5A992.c / NLR	0.046 WT

**Sun Fire X4270 M2 Server**

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
X4270 M2	2.4 GHz	2 Intel® Xeon® 4-core E5620	5A992.c / NLR	0.0243 WT
X4270 M2	2.26 GHz	2 Intel® Xeon® 6-core L5640	5A992.c / NLR	0.0364 WT
X4270 M2	2.8 GHz	2 Intel® Xeon® 6-core X5660	5A992.c / NLR	0.044 WT
X4270 M2	2.93 GHz	2 Intel® Xeon® 6-core X5670	5A992.c / NLR	0.046 WT

**Sun Fire X4470 Server**

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
X4470	2.0 GHz	2 Intel® Xeon® 6-core E7540	5A992.c / NLR	0.0288 WT
X4470	2.0 GHz	4 Intel® Xeon® 6-core E7540	5A992.c / NLR	0.0576 WT
X4470	2.66 GHz	2 Intel® Xeon® 6-core X7542	5A992.c / NLR	0.0384 WT
X4470	2.66 GHz	4 Intel® Xeon® 6-core X7542	5A992.c / NLR	0.0768 WT

**Sun Fire X4800 Server**

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
X4800	2.0 GHz	4 Intel® Xeon® 6-core E7540	5A992.c / NLR	0.0576 WT
X4800	2.0 GHz	8 Intel® Xeon® 6-core E7540	5A992.c / NLR	0.1152 WT
X4800	2.66 GHz	4 Intel® Xeon® 6-core X7542	5A992.c / NLR	0.0768 WT
X4800	2.66 GHz	8 Intel® Xeon® 6-core X7542	5A992.c / NLR	0.1536 WT

**Sun Fire X2250 Servers**

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
X2250	2 Intel® Xeon® Dual Core X5272	3.4 GHz	5A992.c / NLR	0.01632 WT
X2250	2 Intel® Xeon® Quad core E5405	2.0 Ghz	5A992.c / NLR	0.0192 WT
X2250	2 Intel® Xeon® Quad Core L5420	2.5 GHz	5A992.c / NLR	0.024 WT
X2250	2 Intel® Xeon® Quad Core X5472	3.0 GHz	5A992.c / NLR	0.0288 WT
X2250	2 Intel® Xeon® Quad Core E5472	3.0 GHz	5A992.c / NLR	0.0288 WT
X2550	2 Intel® Xeon® Quad Core X5482	3.2 GHz	5A992.c / NLR	0.03072 WT
X2250	2 Intel® Xeon® Quad Core X5460	3.16 Ghz	5A992.c / NLR	0.03034 WT

X2250	2 Intel® Xeon® Quad Core E5462	2.8 GHz	5A992.c / NLR	0.02688 WT
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### Sun Fire X4275 Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
X4275	2 Intel® Xeon® Quad Core E5520	2.26 GHz	5A992.c / NLR	0.0217 WT
X4275	2 Intel® Xeon® Quad Core L5520	2.26 GHz	5A992.c / NLR	0.0217 WT
X4275	2 Intel® Xeon® Quad Core E5540	2.53 GHz	5A992.c / NLR	0.02429 WT
X4275	2 Intel® Xeon® Quad Core X5560	2.80 GHz	5A992.c / NLR	0.02688 WT
X4275	2 Intel® Xeon® Quad Core X5570	2.93 GHz	5A992.c / NLR	0.02813 WT

### Sun Fire X4450 Servers

Family Part #	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
B15	1.86 GHz	4 Quad Core Intel® Xeon® L7345	5A992.c / NLR	0.03571 WT
B15	2.93 GHz	4 Quad Core Intel® Xeon® X7350	5A992.c / NLR	0.056256 WT
B15	2.4 GHz	4 Quad Core Intel® Xeon® E7340	5A992.c / NLR	0.04608 WT
B15	2.13 GHz	4 Quad-Core Intel® Xeon® E7320	5A992.c / NLR	0.04090 WT
B15	2.93 GHz	4 Dual-core Intel® Xeon® E7220	5A992.c / NLR	0.028128 WT

### Sun Fire X4150 Servers

Family Part #	Clock Speed	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
B13	3.0 GHz	2 Dual-Core Xeon 5160	5A992.c / NLR	0.0144 WT
B13	2.33 GHz	2 Quad-Core Xeon E5345	5A992.c / NLR	0.02237 WT
B13	2.66 GHz	2 Quad-Core Xeon E5355	5A992.c / NLR	0.02554

### Sun Blade Servers

#### [SPARC Blade Server Modules](#)

##### SPARC T5-1B Server Module

Product	Processor Type & Number	Frequency	APP in WT	ECCN / Eligible License Exception
SPARC T5-1B Server	1 SPARC T5 16-core processor	3.6-GHz	0.0346 WT	5A992.c / NLR

##### SPARC T4-1B Server Module

Product	Processor Type & Number	Frequency	APP in WT	ECCN / Eligible License Exception
SPARC T4-1B Server	1 SPARC T4 8-core processor	2.85-GHz	0.0137 WT	5A992.c / NLR

### SPARC T3-1B Server Module

Product	Processor Type & Number	Frequency	APP in WT	ECCN / Eligible License Exception
SPARC T3-1B Server	1 SPARC T3 8-core processor	1.65-GHz	0.0079 WT	5A992.c / NLR
SPARC T3-1B Server	1 SPARC T3 16-core processor	1.65-GHz	0.0158 WT	5A992.c / NLR

### Sun Blade T6340 Server Modules

Product	Processor Type & Number	Frequency	APP in WT	ECCN / Eligible License Exception
T6340	2 6-core UltraSPARC T2 Plus	1.2 GHz	0.00432 WT	5A992.c / NLR
T6340	2 8-core UltraSPARC T2 Plus	1.2 GHz	0.00576 WT	5A992.c / NLR
T6340	2 8-core UltraSPARC T2 Plus	1.4 GHz	0.00672 WT	5A992.c / NLR

### Sun Blade T6320 Server Modules

Product	Processor Type & Number	Frequency	APP in WT	ECCN / Eligible License Exception
T6320	1 UltraSPARC T2 4-core	1.2 GHz	0.00144 WT	5A992.c / NLR
T6320	1 UltraSPARC T2 8-core	1.4 GHz	0.00336 WT	5A992.c / NLR
T6320	1 UltraSPARC T2 8-core	1.6 GHz	0.00384 WT	5A992.c / NLR

### Sun Blade T6300 Server Modules

Product	Processor Type & Number	Frequency	APP in WT	ECCN / Eligible License Exception
T6300	1 UltraSPARC T1 6-core	1.0 GHz	0.00007 WT	5A992.c / NLR
T6300	1 UltraSPARC T1 8-core	1.0 GHz	0.00009 WT	5A992.c / NLR
T6300	1 UltraSPARC T1 8-core	1.2 GHz	0.00011 WT	5A992.c / NLR
T6300	1 UltraSPARC T1 8-core	1.4 GHz	0.00013 WT	5A992.c / NLR

### [Sun Blade x86 Server Modules](#)

#### Sun Blade X4-2B Server Module

Product	Processor Type & Number	Frequency	APP in WT	ECCN / Eligible License Exception
Sun Blade X4-2B	2 Intel® Xeon® 4-core E5-2609 v2	2.5 GHz	0.048 WT	5A992.c / NLR
Sun Blade X4-2B	2 Intel® Xeon® 8-core E5-2650 v2	2.6 GHz	0.09984 WT	5A992.c / NLR
Sun Blade X4-2B	2 Intel® Xeon® 12-core E5-2697 v2	2.7 GHz	0.15552 WT	5A992.c / NLR

#### Sun Blade X3-2B (formerly Sun Blade X6270 M3 Server Module)

Product	Processor Type & Number	Frequency	APP in WT	ECCN / Eligible License Exception
Sun Blade X3-2B	2 Intel® Xeon® 4-core E5-2609	2.4 GHz	0.04608 WT	5A992.c / NLR

Sun Blade X3-2B	2 Intel® Xeon® 8-core E5-2660	2.2 GHz	0.08448 WT	5A992.c / NLR
Sun Blade X3-2B	2 Intel® Xeon® 8-core E5-2690	2.9 GHz	0.11136 WT	5A992.c / NLR

#### Sun Blade X6270 M2 Server Module

Product	Processor Type & Number	Frequency	APP in WT	ECCN / Eligible License Exception
X6270 M2	2 Intel® Xeon® 6-core L5638	2.0 GHz	0.0288 WT	5A992.c / NLR
X6270 M2	2 Intel® Xeon® 6-core L5640	2.26 GHz	0.03643 WT	5A992.c / NLR
X6270 M2	2 Intel® Xeon® 6-core X5650	2.66 GHz	0.04219 WT	5A992.c / NLR
X6270 M2	2 Intel® Xeon® 6-core X5660	2.8 GHz	0.04406 WT	5A992.c / NLR
X6270 M2	2 Intel® Xeon® 6-core X5670	2.93 GHz	0.04608 WT	5A992.c / NLR
X6270 M2	2 Intel® Xeon® 6-core X5680	3.33 GHz	0.04982 WT	5A992.c / NLR
X6270 M2	2 Intel® Xeon® 6-core X5690	3.46 GHz	0.04991 WT	5A992.c / NLR

#### Sun Blade X6275 M2 Server Module

Product	Processor Type & Number	Frequency	APP in WT	ECCN / Eligible License Exception
X6275 M2	4 Intel® Xeon® 4-core E5620	2.4 GHz	0.04858 WT	5A992.c / NLR
X6275 M2	4 Intel® Xeon® 4-core E5640	2.66 GHz	0.05376 WT	5A992.c / NLR
X6275 M2	4 Intel® Xeon® 6-core L5638	2.0 GHz	0.05760 WT	5A992.c / NLR
X6275 M2	4 Intel® Xeon® 6-core L5640	2.26 GHz	0.07286 WT	5A992.c / NLR
X6275 M2	4 Intel® Xeon® 6-core X5650	2.66 GHz	0.08438 WT	5A992.c / NLR
X6275 M2	4 Intel® Xeon® 6-core X5660	2.8 GHz	0.08813 WT	5A992.c / NLR
X6275 M2	4 Intel® Xeon® 6-core X5670	2.93 GHz	0.09216 WT	5A992.c / NLR
X6275 M2	4 Intel® Xeon® 6-core X5680	3.33 GHz	0.09965 WT	5A992.c / NLR

#### Sun Blade X6275 Server Module

Product	Processor Type & Number	Frequency	APP in WT	ECCN / Eligible License Exception
X6275	4 Intel® Xeon® 4-core L5530	2.4 GHz	0.04608 WT	5A992.c / NLR
X6275	4 Intel® Xeon® 4-core E5540	2.53 GHz	0.04858 WT	5A992.c / NLR
X6275	4 Intel® Xeon® 4-core X5550	2.66 GHz	0.05107 WT	5A992.c / NLR
X6275	4 Intel® Xeon® 4-core X5560	2.8 GHz	0.05376 WT	5A992.c / NLR
X6275	4 Intel® Xeon® 4-core X5570	2.93 GHz	0.05626 WT	5A992.c / NLR
X6275	4 Intel® Xeon® 4-core W5580	3.2 GHz	0.06144 WT	5A992.c / NLR

#### Sun Blade X6450 Server Modules

Product	Frequency	Processor Type & Number	APP in WT	ECCN / Eligible License Exception
X6450	1.86 GHz	4 Intel® Xeon® E5320 quad-core	0.03572 WT	5A992.c / NLR
X6450	1.6 GHz	4 Intel® Xeon® L5310 quad-core	0.03072 WT	5A992.c / NLR

X6450	2.33 GHz	4 Intel® Xeon® E5345 quad-core	0.04474 WT	5A992.c / NLR
X6450	2.66 GHz	4 Intel® Xeon® X5355 quad-core	0.05107 WT	5A992.c / NLR
X6450	2.83 GHz	4 Intel® Xeon® E5440 quad-core	0.054336 WT	5A992.c / NLR
X6450	3.16 GHz	4 Intel® Xeon® E5460 quad-core	0.06067 WT	5A992.c / NLR

### Sun Blade X6250 Server Modules

Product	Frequency	Processor Type & Number	APP in WT	ECCN / Eligible License Exception
X6250	1.86 GHz	1 Xeon E5320 quad-core	0.00893 WT	5A992.c / NLR
X6250	1.6 GHz	2 Xeon L5310 quad-core	0.01536 WT	5A992.c / NLR
X6250	2.33 GHz	2 Xeon E5345 quad-core	0.02236 WT	5A992.c / NLR
X6250	2.66 GHz	2 Xeon X5355 quad-core	0.02554 WT	5A992.c / NLR
X6250	3.0 GHz	2 Xeon 5160 dual-core	0.0144 WT	5A992.c / NLR
X6250	2.33 GHz	2 Xeon E5410 quad-core	0.02237 WT	5A992.c / NLR
X6250	2.83 GHz	2 Xeon E5440 quad-core	0.02717 WT	5A992.c / NLR

### Sun Blade X6220 Server Modules

Product	Frequency	Processor Type & Number	APP in WT	ECCN / Eligible License Exception
X4271A	2.0 GHz	2 Opteron 2212 Dual core	0.0096 WT	5A992.c / NLR
X4272A	2.6 GHz	2 Opteron 2218 Dual core	0.0125 WT	5A992.c / NLR
X4273A	2.8 GHz	2 Opteron 2220 Dual core	0.0134 WT	5A992.c / NLR
X4274A	3.2 GHz	2 Opteron 2224SE Dual core	0.0154 WT	5A992.c / NLR

## [Oracle Netra Servers](#)

### Netra Modular System

Product	Features	ECCN / Eligible License Exception
Netra Modular System	2 to 30 compute nodes each with 2 Intel® Xeon® E5-2699 v3 18-core 2.3-GHz CPU processors. Adjusted Peak Performance not aggregated.	5A002.a.1 / ENC 740.17(b)(1)

### Netra SPARC S7-2 Server

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
Netra SPARC S7-2 Server	1x SPARC S7 8-core processor	4.27-GHz	5A992.c / NLR	0.0205 WT
Netra SPARC S7-2 Server	2x SPARC S7 8-core processors	4.27-GHz	5A992.c / NLR	0.041 WT
Netra SPARC S7-2 Server	1x SPARC S7 8-core processor	4.5-GHz	5A992.c / NLRN	0.0216 WT
Netra SPARC S7-2 Server	2x SPARC S7 8-core processors	4.5-GHz	5A992.c / NLR	0.0432 WT

**Netra SPARC T5-1B Server Module**

Product	Processor Type & Number	Frequency	APP in WT	ECCN / Eligible License Exception
Netra SPARC T5-1B Server	1 SPARC T5 16-core processor	3.6-GHz	0.0346 WT	5A992.c / NLR

**Netra SPARC T4-1 Server**

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
Netra SPARC T4-1 Server	1 SPARC T4 4-core processor	2.85-GHz	5A992.c / NLR	0.0068 WT
Netra SPARC T4-1 Server	1 SPARC T4 8-core processor	2.85-GHz	5A992.c / NLR	0.0137 WT

**Netra SPARC T4-1B Server Module**

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
Netra SPARC T4-1B Server	1 SPARC T4 8-core processor	2.85-GHz	5A992.c / NLR	0.0137 WT

**Netra SPARC T4-2 Server**

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
Netra SPARC T4-2 Server	2 SPARC T4 8-core processors	2.85-GHz	5A992.c / NLR	0.0274 WT

**Netra SPARC T3-1 Server**

Product	Processor Type & Number	Frequency	ECCN / Eligible License Exception	APP in WT
Netra SPARC T3-1 Server	1 SPARC T3 16-core processor	1.65-GHz	5A992.c / NLR	0.0158 WT

**Sun Netra T5440 Server**

Product	Clock Speed	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Netra T5440	1.2-GHz	2 UltraSPARC T2 Plus 8-core processors	5A992.c / NLR	0.00576 WT
Netra T5440	1.4-GHz	2 UltraSPARC T2 Plus 8-core processor	5A992.c / NLR	0.00672 WT

**Sun Netra T5220 Server**

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Netra T5220	1.2-GHz	1 UltraSPARC T2 4-core processor	5A992.c / NLR	0.00144 WT
Netra T5220	1.2-GHz	1 UltraSPARC T2 8-core processor	5A992.c / NLR	0.00288 WT

**Oracle Netra Server X5-2**

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Oracle Netra Server X5-2	2.3 GHz	2 Intel® Xeon® 18-core 2.3-GHz E5-2699 v3	5A992.c / NLR	0.39744 WT

**Netra Server X3-2 (formerly Sun Netra X4270 M3 Server)**

Product	Clock Speed	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Netra Server X3-2	2.1 GHz	2 Intel® Xeon® 8-core E5-2658	5A992.c / NLR	0.08064 WT

**Sun Netra X4270 M2 Server**

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Netra X4270 M2	2.4 GHz	2 Intel® Xeon® 4-core E5620	5A992.c / NLR	0.024288 WT
Netra X4270 M2	2.93 GHz	2 Intel® Xeon® 6-core X5670	5A992.c / NLR	0.04608 WT
Netra X4270 M2	3.33 GHz	2 Intel® Xeon® 6-core X5680	5A992.c / NLR	0.049824 WT

**Sun Netra X4270 Server**

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Netra X4270	2.13 GHz	2 Intel® Xeon® 4-core L5518	5A992.c / NLR	0.02045 WT

**Sun Netra X4250 Server**

Product	Frequency	Processor Type & Number	ECCN / Eligible License Exception	APP in WT
Netra X4250	2.13 GHz	2 Intel® Xeon® 4-core L5408	5A992.c / NLR	0.02045 WT

Product	Clock Speed	Processor Type & Number	APP in WT	ECCN / Eligible License Exception
<b>Sun Netra 6000 Chassis</b>				
Netra 6000 Chassis	n/a	No CPU processor on Chassis	n/a	5A992.c / NLR
<b>Netra SPARC T4-1B Server Module</b>				
Netra SPARC T4-1B	2.85 GHz	1x 8-core SPARC T4 processor	0.0137 WT	5A992.c / NLR
<b>Netra SPARC T3-1B Server Module</b>				
Netra SPARC T3-1B	1.6 GHz	1x 16-core SPARC T3 processor	0.0158 WT	5A992.c / NLR
<b>Sun Netra T6340 Server Module</b>				
Netra T6340	1.4 GHz	2x 8-core UltraSPARC T2 Plus	0.00672 WT	5A992.c / NLR
<b>Sun Netra X6270 M2 Server Module</b>				
Netra X6270 M2	2.0GHz	2 6-core Intel® Xeon® L5638	0.0288 WT	5A992.c / NLR
<b>Netra Blade X3-2B (formerly Sun Netra X6270 M3 Server Module)</b>				
Netra Blade	2.1 GHz	2x 8-core Intel® Xeon® E5-2658	0.08064	5A992.c / NLR

X3-2B			
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### Sun Netra CT900 ATCA Blade Server

Product	Clock Speed	Processor Type & Number	APP in WT	ECCN / Eligible License Exception
<b>Server Blades</b>				
<b>Sun Netra CP3260 ATCA Server</b>				
Netra CP3260	1.2 GHz	1 8-core UltraSPARC T2	0.00288 WT	5A992.c / NLR
<b>Sun Netra CP3060 ATCA Server</b>				
Netra CP3060	1.2 GHz	1 8-core UltraSPARC T1	0.00011 WT	5A992.c / NLR
<b>Sun Netra CP3270 ATCA Blade Server</b>				
Netra CP3270	1.73 GHz	2 Intel® Xeon® LC5518 8-core	0.01664 WT	5A992.c / NLR
<b>Sun Netra CP3250 ATCA Blade Server</b>				
Netra CP3250	2.13 GHz	2 Intel® Xeon® LC5408 four-core	0.02045 WT	5A992.c / NLR
<b>Sun Netra CP3220 ATCA Blade Server</b>				
Netra CP3220	2.2 GHz	1 quad-core AMD Opteron processor	0.0106 WT	5A992.c / NLR
Netra CP3220	1.8 GHz	1 quad-core AMD Opteron processor	0.0086 WT	5A992.c / NLR
<b>Sun Netra CP3020 ATCA Blade Server</b>				
Netra CP3020	2.2 GHz	1 single-core AMD Opteron Processor	0.0026 WT	5A992.c / NLR
Netra CP3020	1.8 GHz	1 single-core AMD Opteron Processor	0.0022 WT	5A992.c / NLR
Netra CP3020	2.2 GHz	1 dual-core AMD Opteron Processor	0.0053 WT	5A992.c / NLR
Netra CP3020	1.8 GHz	1 dual-core AMD Opteron Processor	0.0043 WT	5A992.c / NLR
<b>Sun Netra CP3200 Advanced Rear Transition Module</b>				
Netra CP3200	n/a	n/a	n/a	5A992.c / NLR

### [Oracle Storage Systems](#)

#### [All Flash Storage](#)

Product Name	ECCN / Eligible License Exception
Oracle All Flash FS Storage System	5A002.a.1 / ENC 740.17(b)(1)

#### [NAS Systems](#)

Product Name	Processor	APP in WT	ECCN / Eligible License Exception
Oracle ZFS Backup Appliance ZS5-4	8x Intel® Xeon® 18-core 2.6-GHz E7-8895 v3 Processors	1.7971 WT	5A002.a.1 / ENC 740.17(b)(1)
Oracle ZFS Backup Appliance ZS5-2	4x Intel® Xeon® 18-core 2.3-GHz E5-2699 v3 Processors	1.5898 WT	5A002.a.1 / ENC 740.17(b)(1)
Oracle ZFS Storage Appliance Racked System ZS5-4	8x Intel® Xeon® 18-core 2.6-GHz E7-8895 v3 Processors	1.7971 WT	5A002.a.1 / ENC 740.17(b)(1)



Oracle ZFS Storage Appliance Racked System ZS5-2	4x Intel® Xeon® 18-core 2.3-GHz E5-2699 v3 Processors	1.5898 WT	5A002.a.1 / ENC 740.17(b)(1)
Oracle ZFS Storage ZS5-4	8x Intel® Xeon® 18-core 2.6-GHz E7-8895 v3 Processors	1.7971 WT	5A002.a.1 / ENC 740.17(b)(1)
Oracle ZFS Storage ZS5-2	4x Intel® Xeon® 18-core 2.3-GHz E5-2699 v3 Processors	1.5898 WT	5A002.a.1 / ENC 740.17(b)(1)
Oracle ZFS Storage ZS4-4	8x Intel® Xeon® 15-core 2.8-GHz E7-8895 v2 Processors	0.8064 WT	5A002.a.1 / ENC 740.17(b)(1)
Oracle ZFS Storage ZS3-2	4x Intel® Xeon® 8-core 2.1-GHz E5-2658 Processors	0.16128 WT	5A002.a.1 / ENC 740.17(b)(1)
Oracle ZFS Storage ZS3-4	8x Intel® Xeon® 10-core 2.4-GHz E7-4870 Processors	0.2304 WT	5A002.a.1 / ENC 740.17(b)(1)
Oracle ZFS Storage ZS3-BA	8x Intel® Xeon® 8-core 2.0-GHz E7-4820 Processors	0.1536 WT	5A002.a.1 / ENC 740.17(b)(1)
Sun ZFS Storage 7120	1x 4-core 2.4-GHz Intel® Xeon® Processor	0.01152 WT	5A002.a.1 / ENC 740.17(b)(1) CCATS G068998
Sun ZFS Storage 7320	2x 4-core 2.4-GHz Intel® Xeon® Processors	0.02304 WT	5A002.a.1 / ENC 740.17(b)(1) CCATS G068998
Sun ZFS Storage 7420	4x 8-core 2.0-GHz Intel® Xeon® 4x 10-core 2.4-GHz Intel® Xeon®	0.0768 WT 0.1152 WT	5A002.a.1 / ENC 740.17(b)(1) CCATS G068998

## [SAN Systems](#)

Product Name	ECCN / Eligible License Exception
Oracle FS1-2 Flash Storage System	5A002.a.1 / ENC 740.17(b)(1)
Pillar Axiom 600 Storage System	ENC 740.17(b)(1) CCATS G030127
Oracle MaxRep Replication Engine	5A002.a.1 / ENC 740.17(b)(1)

## [Tape Storage](#)

### Tape Libraries

Product Name	ECCN / Eligible License Exception
StorageTek SL4000 Modular Library System	5A002.a.1 / ENC 740.17(b)(1), CCATS G060485
StorageTek SL150 Modular Library System	5A002.a.1 / ENC 740.17(b)(1), CCATS G060485
StorageTek SL3000 Modular Library System	5A002.a.1 / ENC 740.17(b)(1), CCATS G060485
StorageTek SL8500 Modular Library System	5A002.a.1 / ENC 740.17(b)(1), CCATS G060485
StorageTek SL500 Modular Library System	5A002.a.1 / ENC 740.17(b)(1), CCATS G060485
StorageTek Virtual Storage Manager System (VSM)	5A002.a.1 / ENC 740.17(b)(1)
StorageTek Virtual Library Extension (VLE)	5A002.a.1 / ENC 740.17(b)(1)
StorageTek SL48 Tape Library	EAR99
StorageTek SL24 Tape Autoloader	EAR99
StorageTek L1400M Tape Library	EAR99

StorageTek L700e Tape Library	EAR99
StorageTek C4 Tape Library	EAR99
StorageTek C2 Tape Library	EAR99
StorageTek Virtual Tape Library (VTL)	5A002.a.1 / ENC 740.17(b)(1), CCATS G054436
StorageTek Virtual Tape Library (VTL) Plus	5A002.a.1 / ENC 740.17(b)(1), CCATS G054436

### Tape Encryption

Product Name	ECCN / Eligible License Exception
Oracle Key Manager 3	5A002.a.1 / ENC 740.17(b)(1)
Oracle Sun StorageTek Key Management System 2.x	5A002.a.1 / ENC 740.17(b)(1), CCATS G060792
StorageTek Crypto Key Management System 1.x (KMS)	5A002.a.1 / ENC 740.17(b)(1), CCATS G048397

### Tape Drives

Product Name	ECCN / Eligible License Exception
StorageTek T10000D Tape Drive	5A992.c / NLR, CCATS G060792
StorageTek T10000C Tape Drive	5A992.c / NLR, CCATS G060792
StorageTek T10000B Tape Drive	5A992.c / NLR, CCATS G060792
StorageTek T9840D Tape Drive	5A992.c / NLR, CCATS G060792
StorageTek Linear Tape Open (LTO) 7 Tape Drive	5A992.c / NLR
StorageTek Linear Tape Open (LTO) 5 Tape Drive	5A992.c / NLR
StorageTek Linear Tape Open (LTO) 4 Tape Drive	5A992.c / NLR
Sun StorageTek Linear Tape Open (LTO) Tape Drive	EAR99

### Tape Media

Product Name	ECCN
StorageTek T10000 Data Cartridge	EAR99
StorageTek 9940 Data Cartridge	EAR99
StorageTek 9840 Data Cartridge	EAR99
StorageTek VolSafe Secure Media Technology	EAR99
StorageTek LTO Data Cartridge	EAR99
StorageTek Super DLT Tape Media	EAR99
StorageTek DLT Tape Media	EAR99

### [Storage Accessories and Networking](#)

Product Name	Part number	ECCN
<b>Storage Accessories</b>		
Oracle Flash Accelerator F320 PCIe Card		EAR99
Oracle Flash Accelerator F160 PCIe Card		5A992.c / NLR

Sun Flash Accelerator F40 PCIe Card		5A992.c / NLR, CCATS G143403
Sun Flash Accelerator F20 PCIe Card		EAR99
<b>Host Bus Adapters</b>		
Sun Storage 10 GbE FCoE ExpressModule Converged Network Adapter	SG-XEMFCOE2-Q-SR (SR Optical), xoption SG-XEMFCOE2-Q-TA (copper), xoption SG-EMFCOE2-Q-SR (SR Optical) factory installation SG-EMFCOE2-Q-TA (copper) factory installation	5A992.c, CCATS G400047
Sun Storage 10 GbE FCoE PCIe Converged Network Adapter	SG-XPCIEFCOE-Q-SR (short range) SG-XPCIEFCOE2-Q-TA (copper)	5A992.c, CCATS G400047
Sun StorageTek 4 Gb Fibre Channel ATCA Host Bus Adapter	SG-XPCIE2FC-ATCA-Z	4A994
Sun StorageTek Enterprise 4 Gb Fibre Channel PCI-X 2.0 Host Bus Adapter	SG-XPCI1FC-xx4-Z (single port) SG-XPCI2FC-xx4-Z (dual port)	4A994
Oracle Storage Quad Port 16 Gb Fibre Channel PCIe Host Bus Adapter	7114202	5A991
Oracle Storage Dual Port 16 or 32 Gb Fibre Channel PCIe Host Bus Adapter	7115462	5A991
Sun StorageTek Enterprise 4 Gb Fibre Channel PCI Express Host Bus Adapter	SG-XPCIE1FC-EM4-Z (single port, Emulex) SG-XPCIE2FC-EM4-Z (dual port, Emulex) SG-XPCIE1FC-QF4-Z (single port, QLogic) SG-XPCIE2FC-QF4-Z (dual port, QLogic)	4A994
StorageTek 8 Gb Fibre Channel PCI Express Host Bus Adapter	SG-XPCIE1FC-EM8-Z (single port, Emulex) SG-XPCIE2FC-EM8-Z (dual port, Emulex) SG-XPCIE1FC-QF8-Z (single port, QLogic) SG-XPCIE2FC-QF8-Z (dual port, QLogic)	4A994
StorageTek Dual 4 Gb Fibre Channel Dual GbE ExpressModule Host Bus Adapter	SG-XPCIE2FCGBE-E-Z (Xoption) SG-XPCIE2FCGBE-Q-Z (Xoption) SG-PCIE2FCGBE-E-Z (factory configured) SG-PCIE2FCGBE-Q-Z (factory configured)	4A994
StorageTek Dual 8 Gb Fibre Channel Dual GbE ExpressModule Host Bus Adapter	SG-XPCIEFCGBE-E8-Z (Emulex Xoption) SG-XPCIEFCGBE-Q8-Z (QLogic Xoption)	4A994
Sun StorageTek PCI Express SAS Host Bus Adapter	SG-XPCIE8SAS-E-Z SG-PCIE8SAS-E-Z	4A994
Sun StorageTek SAS ExpressModule Host Bus Adapter	SG-XPCIESAS-EB-Z SG-PCIE8SAS-EB-Z	4A994
Sun StorageTek SAS RAID Host Bus Adapter	SGXPCIESAS-R-EXT-Z (Xoption, external) SG-PCIESAS-R-EXT-Z (ATO, external) SGXPCIESAS-R-INT-Z (Xoption, internal) SG-PCIESAS-R-INT-Z (ATO, internal)	4A994

### **Fibre Channel Storage**

<b>Product Name</b>	<b>ECCN</b>
StorageTek 2510 Array	4A994
StorageTek 2530 Array	4A994
StorageTek 2540 Array	4A994
StorageTek 6140 Array	4A994
StorageTek 6540 Array	4A994

Sun Storage 6180 Array	4A994
Sun Storage 6580 Array	4A994
Sun Storage 6780 Array	4A994
Sun StorageTek 3510 Storage Array	4A994
Sun Storage F5100 Flash Array	4A994
StorEdge 3310 with StorEdge Configuration Service Software	4A994
Sun StorageTek D240 Media Tray	EAR99

## Networking and Data Center Fabric Products

### **Oracle EDR Infiniband Fabric Products**

<b>Product</b>	<b>ECCN / Eligible License Exception</b>
Oracle InfiniBand Switch IS2-46	5A002.a.1 / ENC 740.17(b)(1)
Oracle InfiniBand Switch IS2-254	5A002.a.1 / ENC 740.17(b)(1)
Oracle Fabric Interconnect FS2-12	5A002.a.1 / ENC 740.17(b)(1)
Oracle Dual Port EDR InfiniBand Adapter	5A991
Oracle Dual Port QDR InfiniBand Adapter M4	5A991
Oracle Dual Port QDR InfiniBand Adapter M3	5A991
Sun DataCenter InfiniBand Switch 648	5A002.a.1 / ENC 740.17(b)(1), CCATS G073189
Sun DataCenter InfiniBand Switch 72	5A002.a.1 / ENC 740.17(b)(1), CCATS G073189
Sun DataCenter InfiniBand Switch 36	5A002.a.1 / ENC 740.17(b)(1), CCATS G073189
Sun Network QDR InfiniBand Gateway Switch	5A002.a.1 / ENC 740.17(b)(1), CCATS G073189
Sun InfiniBand Dual Port 4x QDR PCIe ExpressModule Host Channel Adapter	5A991

### **Oracle Virtual Networking**

<b>Product</b>	<b>ECCN / Eligible License Exception</b>
Oracle Fabric Interconnect F1-4	5A002.a.1 / ENC 740.17(b)(1)
Oracle Fabric Interconnect F1-15	5A002.a.1 / ENC 740.17(b)(1)
Oracle Fabric Manager	5D002 / ENC 740.17(b)(1)
Oracle Fabric Monitor	5D002 / ENC 740.17(b)(1)
Oracle SDN	5D002 / ENC 740.17(b)(1)

### **Ethernet Networking Products**

<b>Product</b>	<b>ECCN / Eligible License Exception</b>
Oracle Ethernet Switch ES2-64	5A002.a.1 / ENC 740.17(b)(1)
Oracle Ethernet Switch ES2-72	5A002.a.1 / ENC 740.17(b)(1)
Oracle Switch ES1-24	5A002.a.1 / ENC 740.17(b)(1)
Oracle Quad 10 Gb Ethernet Adapter or Oracle Dual 40 Gb Ethernet	5A991

Adapter (7114148, 7114134)	
Sun Network 10GbE Switch 72p	5A002.a.1 / ENC 740.17(b)(1) CCATS G073189
Sun Dual Port 10 GbE PCIe 2.0 Low Profile Adapter, Base-T	5A992.c / NLR
Sun Dual Port 10 GbE PCIe 2.0 ExpressModule, Base-T	5A992.c / NLR
Sun Dual Port 10 GbE SFP+ PCIe 2.0 Networking Cards with Intel 82599 10GbE Controller (X1111A-Z, X1112A-Z)	5A992.c / NLR
Sun 10GbE PCIe ExpressModule with Intel 82598EB 10 Gigabit Ethernet Controller	5A992.c / NLR
Sun 10GbE with Intel 82598EB 10 Gigabit Ethernet Controller Low Profile Adapter	5A992.c / NLR
<b>Sun Multithreaded 10 Gigabit Ethernet (10GbE) Networking Cards</b>	
Sun Dual 10 GbE XFP PCIe Low Profile Adapter for rack servers without transceiver (X1027A-Z-N)	5A991
Sun Dual 10 GbE XFP PCIe ExpressModule for blade servers without transceiver (X1028A-Z-N)	5A991
10 GbE SR (Short Reach) XFP Transceiver for use with Multimode Fiber (MMF) (X5558A-Z-N)	5A991
10 GbE LR (Long Reach) XFP Transceiver for use with single-mode fiber (SMF) (X5560A-Z-N)	5A991
<b>Network Express Modules</b>	
Sun Blade 6000 Virtualized Multi-Fabric 10 GbE Network Express Module	5A992.c / NLR
Sun Blade 6000 and Sun Netra 6000 Virtualized 40 GbE Network Express Module (7100090)	5A991
<b>Sun Quad Port PCIe 2.0 Gigabit Ethernet Networking Cards</b>	
Sun Quad Port GbE PCIe 2.0 Low Profile Adapter, UTP	5A991
Sun Dual Port GbE PCIe 2.0 Low Profile Adapter, MMF	5A991
Sun Quad Port GbE PCIe 2.0 ExpressModule, UTP	5A991
Sun Quad Port GbE PCIe 2.0 ExpressModule, MMF	5A991
<b>Sun Multithreaded Quad Gigabit Ethernet Networking Cards</b>	
Sun Quad GbE x8 PCIe Low Profile Adapter	5A991
Sun Quad GbE x8 PCIe ExpressModule	5A991
<b>Sun x4 PCI-Express Quad Gigabit Ethernet Networking Cards</b>	
Sun x4 PCIe Quad Gigabit Ethernet Low Profile Adapter for rack servers	5A991
Sun x4 PCIe Quad Gigabit Ethernet ExpressModule for blade servers	5A991
<b>Sun PCI-Express Dual Gigabit Ethernet Adapter</b>	
Sun PCIe Dual Gigabit Ethernet UTP Adapter	5A991
Sun PCIe Dual Gigabit Ethernet MMF Adapter	5A991

## **Cryptographic Accelerator**

<b>Product</b>	<b>ECCN / Eligible License Exception</b>
Sun Cryptographic Accelerator 6000 PCIe Card	5A002.a.1 / ENC 740.17(b)(1), CCATS G068874

## **Fabric Expansion Modules**

<b>Product</b>	<b>ECCN / Eligible License Exception</b>
PCIe Fabric Expansion Module (spare)	5A991
Sun Blade PCIe-2 Pass-through Fabric Expansion Module	5A991
Sun 10 GbE XAUI Pass-through Fabric Expansion Module	5A991
Dual port 10 Gbe Fabric Expansion Module (spare)	5A992.c / NLR, CCATS G135872
Sun Blade Server Module: Sun Dual 10 GbE Fabric Expansion Module	5A992.c / NLR, CCATS G135872

## **Communications**

<b>Product</b>	<b>ECCN</b>	<b>Eligible License Exception</b>
Oracle Acme Packet 1100	5A002.a.1	ENC 740.17(b)(2) Restricted, CCATS G147602
Oracle Acme Packet 2600	5A002.a.1	ENC 740.17(b)(2) Restricted, CCATS G148079
Oracle Acme Packet 3800 and 3820	5A002.a.1	ENC 740.17(b)(2) Restricted, CCATS G147602
Oracle Acme Packet 4250	5A002.a.1	ENC 740.17(b)(2) Restricted, CCATS G147871
Oracle Acme Packet 4500	5A002.a.1	ENC 740.17(b)(2) Restricted, CCATS G147602
Oracle Acme Packet 4600	5A002.a.1	ENC 740.17(b)(2) Restricted, CCATS G147602
Oracle Acme Packet 6100	5A002.a.1	ENC 740.17(b)(2) Restricted, CCATS G147738
Oracle Acme Packet 6300	5A002.a.1	ENC 740.17(b)(2) Restricted, CCATS G147738
Oracle Acme Packet 6350	5A002.a.1	ENC 740.17(b)(2) Restricted, CCATS G147738
Oracle Acme Packet Net-Net 7000	5A002.a.1	ENC 740.17(b)(2) Restricted, CCATS G147770
Oracle Acme Packet Net-Net 9200	5A002.a.1	ENC 740.17(b)(2) Restricted, CCATS G147864
Oracle Acme Packet Net-Net 14000	5A002.a.1	ENC 740.17(b)(2) Restricted, CCATS G147602
Oracle Communications EAGLE	5A002.a.1	ENC 740.17(b)(1), CCATS G150935
Oracle Communications Diameter Signaling Router	5A002.a.1	ENC 740.17(b)(2) Restricted, CCATS G150695
Oracle Network Applications Platform	5A002.a.1	ENC 740.17(b)(1)

## **MICROS Hardware**

<b>Product</b>	<b>ECCN / Eligible License Exception</b>
Oracle MICROS Workstation 6 Series (WS6)	5A992.c / NLR
Oracle MICROS Workstation 610	5A992.c / NLR
Oracle MICROS Workstation 620	5A992.c / NLR

Oracle MICROS Workstation 650	5A992.c / NLR
Oracle MICROS Workstation 5A (WS5A)	5A992.c / NLR
Oracle MICROS PC Workstation 2015 (PCWS 2015)	5A992.c / NLR
MICROS Workstation 4 LX	5A992.c / NLR
Oracle MICROS Keyboard Workstation 270 (KW270)	5A992.c / NLR
MICROS m-Tablet R-Series	5A992.c / NLR
MICROS m-Tablet E-Series	5A992.c / NLR
MICROS m-Station	EAR99 / NLR
MICROS DT430 SC Handheld	5A992.c / NLR
MICROS DT362 Mobile Tablet	5A992.c / NLR
MICROS Protege	5A992.c / NLR

### [Previous Products](#)

<b>Product Name</b>	<b>ECCN / Eligible License Exception</b>
Sun Blade 150	5A992.c / NLR
Sun Blade 1500	5A992.c / NLR
Sun Fire V100 Server	5A992.c / NLR, CCATS G141797
Sun Fire V120 Server	5A992.c / NLR, CCATS G141797
Sun Fire V210 Server	5A992.c / NLR, CCATS G141797
Sun Fire V215 Server	5A992.c / NLR, CCATS G141797
Sun Fire V240 Server	5A992.c / NLR, CCATS G141797
Sun Fire V245 Server	5A992.c / NLR, CCATS G141797
Sun Fire V250 Server	5A992.c / NLR, CCATS G141797
Sun Fire V440 Server	5A992.c / NLR, CCATS G141797
Sun Fire V445 Server	5A992.c / NLR, CCATS G141797
Sun Fire V245 Server	5A992.c / NLR, CCATS G141797
Sun Fire V480 Server	5A992.c / NLR, CCATS G141797
Sun Fire V490 Server	5A992.c / NLR, CCATS G141797
Sun Fire V880 Server	5A992.c / NLR, CCATS G141797
Sun Fire V890 Server	5A992.c / NLR, CCATS G141797
Sun Fire V1280 Server	5A992.c / NLR, CCATS G141797
Sun Fire V20z Server	5A992.c / NLR, CCATS G141797
Sun Fire V40z Server	5A992.c / NLR, CCATS G141797
Sun Fire V60x Server	5A992.c / NLR, CCATS G141797
Sun Fire V65x Server	5A992.c / NLR, CCATS G141797
Sun Fire E2900 Server	5A992.c / NLR, CCATS G141797
Sun Fire E4900 Server	5A992.c / NLR, CCATS G141797
Sun Fire E6900 Server	5A992.c / NLR, CCATS G141797

Sun Fire T1000 Server	5A992.c / NLR, CCATS G141797
Sun Fire T2000 Server	5A992.c / NLR, CCATS G141797
Sun Fire X4100 / X4100 M2 Server	5A992.c / NLR, CCATS G141797
Sun Fire X4140 Server	5A992.c / NLR, CCATS G141797
Sun Fire X4240 Server	5A992.c / NLR, CCATS G141797
Sun Netra 240	5A992.c / NLR, CCATS G141797
Sun Ray 1 / Sun Ray 1g	EAR99
Sun Storage 7110 Unified Storage System	5A002.a.1 / ENC 740.17(b)(1), CCATS G068998
Sun Storage 7210 Unified Storage System	5A002.a.1 / ENC 740.17(b)(1), CCATS G068998
Sun Storage 7310 Unified Storage System	5A002.a.1 / ENC 740.17(b)(1), CCATS G068998
Sun Storage 7410 Unified Storage System	5A002.a.1 / ENC 740.17(b)(1), CCATS G068998

### Acronyms

- APP = Adjusted Peak Performance
- ECCN = Export Control Classification Number
- ENC = US Commerce Department License Exception per section 740.17 of the U.S. Export Administration Regulations
- ERN = Encryption Registration Number
- NLR = No License Required
- WT = Weighted TeraFLOPs