Spec Sheet

Cisco UCS C220/C240/B200 M5 Memory Guide Addendum

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Introduction

Cisco announced the end-of-sale and end-of life dates for the Cisco DDR4-2933 Memory DIMM products, currently supported on Cisco UCS M5 servers. *Table 1* lists the product part numbers affected by this announcement.

Table 1 M5 Memory DIMM Product Part Numbers Affected by the EOL14611 Announcement

EOS Product Part Number (PID)	PID Description
UCS-MR-X16G1RT-H	16GB DDR4-2933MHz RDIMM 1Rx4 (8Gb)/1.2v
UCS-MR-X32G2RT-H	32GB DDR4-2933MHz RDIMM 2Rx4 (8Gb)/1.2v
UCS-MR-X64G2RT-H	64GB DDR4-2933MHz RDIMM 2Rx4 (16Gb)/1.2v
UCS-ML-X64G4RT-H	64GB DDR4-2933MHz LRDIMM 4Rx4 (8Gb)/1.2v
UCS-ML-128G4RT-H	128GB DDR4-2933MHz LRDIMM 4Rx4 (16Gb)/1.2v

The last day to order the affected product(s) is May 11, 2022. *Table 2* describes the end-of-life milestones, definitions, and dates for the affected product(s).

Table 2 End-of-life Key Milestones and dates for Cisco M5 DDR4-2933 Memory DIMM Products

Milestones	Definition	Date
End-Of-Life Announcement Date	The date the document that announces the end of sale and end of life of a product is distributed to the general public.	February 10,2022
End-Of-Sale Date	The last date to order the product through Cisco point-of-sale mechanisms. The product is no longer for sale after this date.	May 11, 2022
Last Ship Date	The last-possible ship date that can be requested of Cisco and/or its contract manufacturers. Actual ship date is dependent on lead time.	May 11, 2022

Alternative DIMMs to the DDR4-2933MHz DIMMs being EOLed

In an effort to offer alternative DIMMs to the ones being EOL by our suppliers, the Cisco Engineering team conducted a comprehensive qualification process of existing DDR4-3200 Memory DIMM products on M5 servers, based on 2nd Generation Intel® Xeon® Scalable Processors. These DDR4-3200 Memory DIMMs are already available on Cisco M6 Rack and Blade servers and are the latest generation of DDR4 Memory DIMMs. Fully compatible electrically (1.2Volts), they will run at the maximum clock speed of each M5 processor, ranging from 2133MHz for the slowest CPU SKUs, up to 2933MHz for the fastest CPU SKUs.

Table 3 below summarizes the new set of Memory DIMM products available on Cisco M5 servers, running 2nd Generation Intel® Xeon® Scalable Processors. As of February 28, Cisco made all the densities orderable through Cisco point-of-sale mechanisms, including CCW.

Table 3 Replacement Memory DIMM product Part Numbers and Description

Replacement Product PID	Replacement Product Description
UCS-MR-X16G1RW	16GB DDR4-3200MHz RDIMM 1Rx4 (8Gb)/1.2v
UCS-MR-X32G2RW	32GB DDR4-3200MHz RDIMM 2Rx4 (8Gb)/1.2v
UCS-MR-X64G2RW	64GB DDR4-3200MHz RDIMM 2Rx4 (16Gb)/1.2v
UCS-ML-128G4RW	128GB DDR4-3200MHz LRDIMM 4Rx4 (16Gb)/1.2v

NOTE: For all replacement DIMM PIDs, the clock speed will be limited to the maximum clock speed of each M5 servers, based on 2nd Generation Intel® Xeon® Scalable Processors, ranging from 2133 MHz to 2933 MHz.

Table 4 lists the EOL Memory DIMM product part numbers and their replacement PIDs.

Table 4 EOL14611 Memory DIMM Product Part Numbers and their replacement PIDs

EOS Product Part Number (PID)	PID Description	Replacement Product PID	Replacement Product Description
UCS-MR-X16G1RT-H	16GB DDR4-2933MHz RDIMM 1Rx4 (8Gb)/1.2v	UCS-MR-X16G1RW	16GB DDR4-3200MHz RDIMM 1Rx4 (8Gb)/1.2v
UCS-MR-X32G2RT-H	32GB DDR4-2933MHz RDIMM 2Rx4 (8Gb)/1.2v	UCS-MR-X32G2RW	32GB DDR4-3200MHz RDIMM 2Rx4 (8Gb)/1.2v
UCS-MR-X64G2RT-H	64GB DDR4-2933MHz RDIMM 2Rx4 (16Gb)/1.2v	UCS-MR-X64G2RW	64GB DDR4-3200MHz RDIMM 2Rx4 (16Gb)/1.2v
UCS-ML-X64G4RT-H	64GB DDR4-2933MHz LRDIMM 4Rx4 (8Gb)/1.2v	UCS-MR-X64G2RW[1]	64GB DDR4-3200MHz RDIMM 2Rx4 (16Gb)/1.2v
UCS-ML-128G4RT-H	128GB DDR4-2933MHz LRDIMM 4Rx4 (16Gb)/1.2v	UCS-ML-128G4RW	128GB DDR4-3200MHz LRDIMM 4Rx4 (16Gb)/1.2v

NOTE: (1) Cisco doesn't support a Load Reduce DIMM (LRDIMM) 64GB Memory PID as a replacement PID of existing UCS-ML-x64G4RT-H and recommends migrating to the Registered DIMM (RDIMM) instead, delivering the best balance in performance and price.

DIMM Guidelines

- System speed is dependent on the CPU DIMM speed support. Refer to *Table 1 on page 3* for DIMM speeds.
- The servers support the following memory reliability, availability, and serviceability (RAS) BIOS options (only one option can be chosen):
  - Adaptive Double Device Data Correction (ADDDC) (default)
  - Maximum performance
  - Full mirroring
  - Partial mirroring
- DIMM Count Rules:
  - Allowed DIMM count for 1 CPU:
    - Minimum DIMM count = 1; Maximum DIMM count = 12
    - 1, 2, 4, 6, 8, or 12 DIMMs allowed
    - 3, 5, 7, 9, 10, 11 DIMMs not allowed.
  - Allowed DIMM count for 2 CPUs
    - Minimum DIMM count = 2; Maximum DIMM count = 24
    - 2, 4, 8, 12, 16, or 24 DIMMs allowed
    - 6, 10, 14, 18, 20, 22 DIMMs not allowed.
- Mixing Rules:
  - The mixing rules of these replacement products are as followed:
    1. General statement: All existing mixing rules of Cisco DDR4-3200 M6 Memory DIMM PIDs will apply on M5 servers
    2. Mixing different types of DIMMs (RDIMM with any type of LRDIMM) are not supported within a server
    3. Mixing RDIMM with RDIMM types is allowed if they are mixed in same quantities, in a balanced configuration
    4. Mixing 16GB, 32GB, and 64GB RDIMMs is supported
    5. 128GB LRDIMMs cannot be mixed with other RDIMMs
  - In addition:
    - For new M5 Servers being ordered now, Cisco recommends ordering DDR4-3200 Memory DIMMs. These DDR4-3200 Memory DIMMs, already orderable on Cisco M6 Rack and Blade servers, are the latest generation of DDR4 Memory DIMMs.
    - Existing M5 Servers, running DDR4-2933 PIDs, can be upgraded with DDR4-3200 PIDs. The Cisco Engineering team conducted a comprehensive qualification process of DDR4-3200 Memory DIMM products on M5 servers, based on 2nd Generation Intel® Xeon® Scalable Processors. Mixing DDR4-2933 PIDs together with DDR4-3200 PIDs is allowed in accordance with rules 2-5 above.

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