Cisco 2600 Memory Guide

There are **four** kinds of memory in the 2600 series router: such as Flash, Dynamic RAM (DRAM), nonvolatile RAM (NVRAM), and BootROM.

BootROM:

BootROM is used for permanently storing startup diagnostic code (ROM Monitor).

The main task for the BootROM is to perform some hardware diagnostics during bootup on the router (Power On Self Test - POST), and to load the Cisco IOS software from the Flash to the Memory.

The BootROM is not erasable; it is **socketed** so it can be replaced.

Flash:

Flash is used for permanent storage of a full Cisco IOS software image in ***compressed form***. On the 2691, the Flash is also used to store the boot image and the NVRAM data.

- The 2610 and 2651 have one Flash SIMM socket supporting the Cisco 80-pin Flash SIMMs (4MB, 8MB, and 16MB). 8MB and 16MB Flash SIMMs is dual bank (they can be partitioned into two banks).

The 2600 series uses a Class B file system. Note that when you replace the Flash SIMM, you must use the ROMMON to copy a Cisco IOS software image onto that SIMM.

DRAM:

DRAM is **used at run time** for executable Cisco IOS software (and its subsystems), routing tables, Fast Switching cache, running configuration, packets, and so on.

The 2600 has two DRAM sockets and uses **non-parity** DRAM.

The 2610-2621 uses 100-pin EDO DRAM DIMMs. The 265x and the 2600XM use 100-pin SDRAM DIMMs which are NOT COMPATIBLE with the existing 2610-2621 DIMMs. The 2691 uses 168-pin SDRAM DIMMs (two sockets).

DRAM is logically divided in Main Processor Memory and Shared Input/Output (I/O) Memory. Shared I/O Memory is shared among interfaces for temporary storage of packets. The 2600 can reallocate the split between processor and I/O memory (as can the 3600 series) with the **memory-size iomem <percent>** command.

NVRAM:

NVRAM is used for writable permanent storage of the **startup configuration -** It is an EPROM.

DRAM

Dynamic random-access memory (DRAM) for **main memory** and **shared memory** (Cisco 261x and Cisco 262x routers)

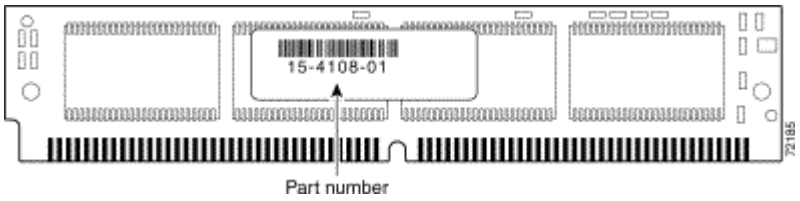
Cisco IOS software and routing tables are located in main memory.

3.3V EDO DRAM Part Numbers

Memory Size	3.3V EDO DRAM
8 MB	15-2854-xx
16 MB	15-2853-xx
32 MB	15-2851-xx

Cisco 2600 series routers contain two 100-pin dual in-line memory module (DIMM) sockets (or banks) for DRAM, numbered 0 and 1.Each socket can be filled with a 100-pin DRAM DIMM (EDO or SDRAM DIMMs depending on router model).

3.3V, 100-Pin EDO DRAM Module for Cisco 2600 Series



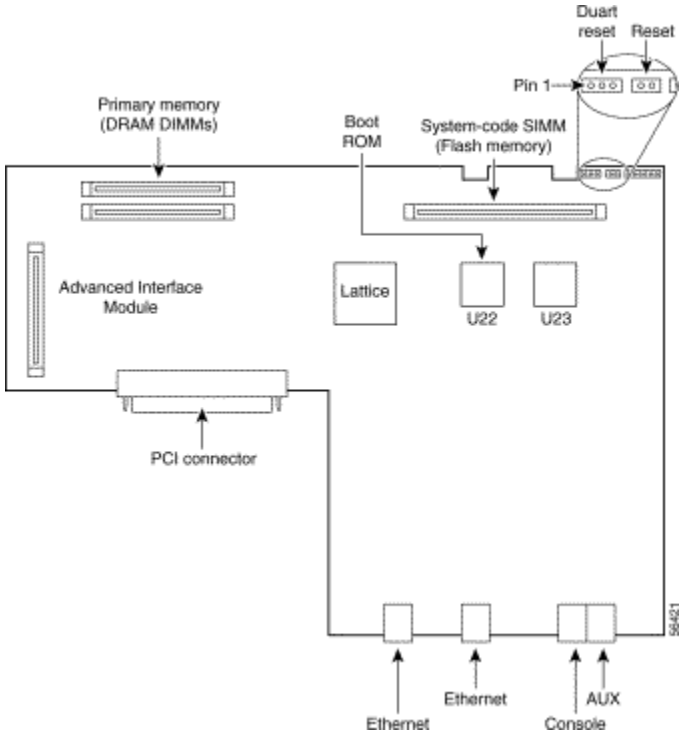
To see how much memory is currently installed in the router, enter the **show version** command. Near the middle of the resulting output, a message similar to the following appears:

Cisco 2610(MPC860) processor (revision 0x200) with 28672K/4096K bytes of memory.

This line shows how much memory is installed (in this example, 28672K/4096K). The first number represents primary memory and the second number represents shared memory.

You can use the **memory-size iomem** software command to configure DRAM as a mixture of shared memory, which is used for data transmitted or received by network modules and WAN interface cards, and primary or main memory, which is reserved for the CPU.

DIMM Socket Location



Flash Memory

The **system code** (router operating system software) is stored in a Flash memory 80-pin single in-line memory module (SIMM).

There is one system-code (Flash memory) SIMM socket on the system board. You can verify how much Flash memory is already installed in your router by entering the **show flash** EXEC command.

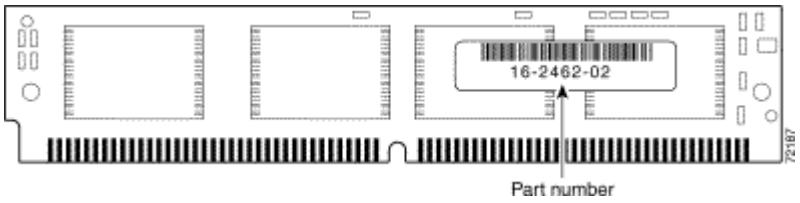
Caution The **system code** is stored on the Flash memory SIMM, but new system-code SIMMs are shipped without preinstalled software. Before continuing with this procedure, use the **copy flash tftp** EXEC command to back up the system code to a Trivial File Transfer Protocol (TFTP) server.

Note The Cisco 2620 and Cisco 2621 can be upgraded to support a maximum of 32 MB of Flash memory when using both the Cisco 2600 boot ROM version 12.2(6r) (supplied with Cisco part number MEM2620-32FSBoot=) and either Cisco IOS Release 12.1(3)T or Cisco IOS Release 12.2T or later Cisco IOS releases. The 32 MB Flash SIMM module is not supported on the Cisco 2610, Cisco 2611, Cisco 2612, or Cisco 2612.

Cisco 2600 Series Flash Memory Table

Router	Flash Memory Capacity	Flash Device
Cisco 2610	8- to 16-MB	5V SIMM module
Cisco 2611		
Cisco 2612		
Cisco 2613		
Cisco 2620	8- to 32-MB	
Cisco 2621		
Cisco 2650		
Cisco 2651		

Cisco 2600 Series 3.3 and 5V 80-Pin SIMM Module



SIMM Module Part Numbers

Memory Size	5V SIMMs
8 MB	16-0965-xx
16 MB	16-1378-xx
32 MB	16-1745-xx