

Portable Product Sheet - Router Memory



Last Updated: July 22, 2005

All numbers for table 1a/b/c are for internal DRAM/Flash only. For external flash cards/disks, see table 5.

Column "E?" is a field that indicates if the unit supports external flash memory (See Table 5).

Memory given as 'standard' (Std) will always be sold as an optimal configuration - for example, a 3660 that comes with 32Mb DRAM default would be given as a single 32Mb module, instead of 2 x 16Mb. This is always the case unless there is a severe memory component shortage.

Memory Tables - Table 1 - SOHO/SMB Routers

Router	Memory				Flash				E?
	Fixed	Slots	Std	Max	Fixed	Slots	Std	Max	
SOHO7x	16	0	16	16	8	0	8	8	N
SOHO9x	32	0	32	32	8	0	8	8	N
700	1.5	0	1.5	1.5	1	0	1	1	N
801-804	4	1	8	12	4	1	8	12	N
805	8	1	8	16	4	1	8	12	N
806	16	1	32	32	0	1	8	16	N
811-813	8	1	8	16	4	1	8	12	N
827/828	16	1	32	32	8	1	8	16	N
826/827H	16	1	32	32	8	1	8	16	N
827-4V	16	1	48	48	8	1	12	16	N
83x	64	1	64	80	8	1	12	24	N
85x	64	1	64	192	20	1	20	52	N
87x	128	1	128	256	20	1	20	52	N
1003/4/5	0	0	8	16	0 (External PCMCIA only)				Y
1400	8	1	16	24	0 (External PCMCIA only)				Y
16xx	2	1	2	18	0 (External PCMCIA only)				Y
16xxR	8	1	8	24	0 (External PCMCIA only)				Y
1701	64	1	64	128	32	0	32	32	N
1710	32	1	64	96	16	0	16	16	N
1711/1712	64	1	64	128	32	0	32	32	N
1720	16	1	32	48	0	1	8	16	N
1721	64	1	64	128	32	0	32	32	N
1750	16	1	16	48	0	1	4	16	N
1750-xV	16	1	32	48	0	1	8	16	N
1751	64	1	64	128	32	0	32	32	N
1751-V	64	1	96	128	32	0	32	32	N
1760	64	1	64	128	32	1	32	64	N
1760-V	64	1	96	128	32	1	32	64	N
1841	128	1	128	384	0 (External CF only)				Y
IAD2400	64	0	64	64	8	0	8	8	N
2500	0 or 2	1	4 or 8	16	0	2	8	16	N

Notes - SOHO/SMB Router Memory

806/826's shipped prior to April 2002 had less DRAM (16Mb) standard (not 32Mb as default/maximum).

1721/51/60 shipped prior to August 18 2003 had 16MB flash and 32-64 MB DRAM.

Pre-May 2003 83x's shipped with 8MB flash standard. March 2005 saw an increase in default DRAM to 64.

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Memory Tables - Table 2 - Midrange/Access Routers

Router	System Memory			Packet Memory			Main Flash				Boot Flash		E?
	Slots	Std	Max	Slots	Std	Max	Fixed	Slots	Std	Max	Min	Max	
2610-13	2	32	64	0			0	1	8	16	0		N
262x	2	32	64	0			0	1	8	32	0		N
265x	2	32	128	0			0	1	8	32	0		N
261xXM/262xXM	2	128	256	0			16	1	32	48	0		N
265xXM	2	256	256	0			16	1	32	48	0		N
2691	2	256	256	0			0	1	32	128	0		Y
2801	1	128	384	0			0 (External CF Only)				4	4	Y
2811	2	256	768	0			0 (External CF Only)				2	2	Y
2821/2851	2	256	1024	0			0 (External CF Only)				2	2	Y
3620	4	32	64	0			0	2	16	32	0		Y
3640/3640A	4	32	128	0			0	2	16	32	0		Y
3660 (Ent)	2	32	256	0			0	2	16	64	0		Y
3660 (Telco)	2	32	256	0			0	2	16	64	0		Y
3631	2	64	256	0			0	1	32	128	0		N
3725	2	256	256	0			0	1	32	128	0		Y
3745	2	256	512	0			0	1	32	128	0		Y
3825/3845	2	256	1024	0			0 (External CF Only)						Y
mc3810	1	32	64	0			0	1	16	32	0		N
mc3810-V3	1	64	64	0			0	1	16	32	0		N
4000M	1	8	32	1	4	16	0	2	4	16	0		N
4500M	2	16	32	1	4	16	0	2	4	16	4	16	N
4700M	2	16	64	1	4	16	0	2	4	16	8		N
AS5200	1	8	16	1	4	16	0	2	16	16	0		N
AS5300	2	64	128	1	8	16	0	2	16	32	8	8	N
AS5350	2	128	512	1	64	128	0	2	32	64	8	16	N
AS5400(-HPX)	2	256	512	1	64	128	0	2	32	64	8	16	N

Notes - Midrange/Access Routers

2610-21's were first shipped with 16Mb DRAM, then 24Mb, then standardized on 32Mb before EOS.

262x's assembled prior to March, 2001 used a bootROM incompatible with the 32Mb Flash module from the 265x series and must be upgraded to the new bootrom to be able to use this module.

36xx routers shipped prior to mid-May of 2002 shipped with 8Mb default flash memory.

On any 4x00M, all 2-slot memory must have either a single chip installed or have same-size chips installed.

26xxXM's prior to August 18, 2003 came, in most cases, with 32MB DRAM and 16 MB Flash. On June 14 2004, 261x/2x XM's went from 96 to 128MB default, 265x and 2691/37xx went from 128 to 256MB default.

26xxXM's shipped prior to April 2004 had a maximum DRAM capacity of 128MB. This was upped to 256MB through a bootROM which can be ordered separately for older 2600XM's, and requires 12.3(11)T IOS.

3660 (Telco only) increased default memory from 32 to 128MB DRAM and 16 to 32MB Flash in Feb. 2004.

The 2801 has 128MB memory soldered onto the motherboard.

Portable Product Sheet - Router Memory



Memory Tables - Table 3 - 7xxx Series Routers

Router	Route Memory			Packet Memory			Boot Flash			E?
	Slots	Std	Max	Slots	Std	Max	Slots	Std	Max	
70x0(RP)	4	16	64	0			1	4	4	Y
70x0(RSP)	4	16	128	0			1	8	8	Y
71xx	2	64	256	1	64	64	1	8	8	Y
72xx (NPE-100)	4	32	128	0			0			N
72xx (NPE-150)	4	64	128	1 (fixed)			0			N
72xx (NPE-175)	1	64	128	0			0			N
72xx (NPE-200)	4	64	128	4 (fixed)			0			N
72xx (NPE-225)	1	128	256	0			0			N
72xx (NPE-300)	2	128	256	2	32	32	0			N
72xx (NPE-400)	1	128	512	0			0			N
72xx (NPE-G1)	2	256	1024	16(<=256) or 32(>256)			16 (fixed)			Y
72xx (NSE-1)	1	128	256	0			0			N
72xx (I/O;-FE)	0			0			0 or 1	4	4	Y
72xx (I/O-GE;2FE)	0			0			8 (fixed)			Y
7301	2	256	1024	16(<=256) or 32(>256)			32 (fixed)			Y
7304 (NSE-100)	1	512	512	0			1	32	32	Y
7304 (NPE-G100)	2	1024	1024	128			1	32	32	Y
7401	1	128	512	0			8 (fixed)			Y
75xx(RSP1)	4	16	128	0			1	8	8	Y
75xx(RSP2)	4	32	128	0			1	8	8	Y
75xx(RSP4/4+)	2	64	256	2 (fixed)			1	8	16	Y
75xx(RSP8)	2	64	256	8 (fixed)			1	16	16	Y
75xx(RSP16)	2	128	1024	8 (fixed)			1	16	16	Y
75xx(VIP2-10)	2	16	64	1	0.512	2	0			N
75xx(VIP2-15/20)	2	16	64	1	1	2	0			N
75xx(VIP2-40)	2	32	64	1	2	2	0			N
75xx(VIP2-50)	1	32	128	1	4	8	0			N
75xx(VIP4/VIP6)	1	64	256	1	64	64	0			N

Notes - 7xxx Series Routers

NPE-100/150/200/G1, 7301, and VIP2-10/15/20/40 must pair memory SIMM's.

Portable Product Sheet - Router Memory



Memory Tables - Table 4 - Core Routers

Router	Route Memory			Packet Memory			Boot Flash			E?
	Slots	Std	Max	Slots	Std	Max	Slots	Std	Max	
10000 (PRE/PRE-1)	2	512	512	0	128	128	0	32	32	Y
10000 (PRE-2)	2	1024	1024	0	256	256	0	64	64	Y
12000 (GRP-B)	2	128	512	0			1	8	8	Y
12000 (PRP)	2	512	2048	0			1	64	64	Y
12000 (PRP-2)	2	1024	4096	0			1	64	64	Y
12000 (Engine 4)	1	256	512	4	512	512	0			N
12000 (Engine 3)	2	256	512	4	512	512	0			N
12000 (Engine 2)	2	128	256	4	256	512	0			N
12000 (Engine 1)	2	128	256	4	256	256	0			N
12000 (Engine 0)	2	128	256	4	128	256	0			N
CRS-1 RP	2	2048	4096	0			1 40GB IDE disk			Y
CRS-1 LC	2	2048	2048	2	2048	2048	0			N

Notes - Core Routers

12000 line cards use paired packet mem in dedicated banks (i.e. 2x64MB RX, 2x64MB TX (256MB config)).

PRE and PRE-1 differ in PXF memory - 512MB (former) or 1GB (latter). PRE-1 is required for broadband.

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Memory Tables - Table 5 (External Flash)

Router	Slots	Flash Card (FLC)					Flash Disk (FLD)				Compact Flash			
		4	8	16	20	32	48	64	128	1G	32	64	128	256
1003/4/5	1	Y	N	N	N	N	N				N			
14xx	1	Y	Y	Y	N	N	N				N			
16xx	1	Y	Y	Y	N	N	N				N			
16xxR	1	Y	Y	Y	N	N	N				N			
1841	1	N					N				Y	Y	Y	N
2691	1	N					N				Y	Y	Y	N
2801	1	N					N				N	Y	Y	N
2811/21/51	1	N					N				N	Y	Y	Y
36xx	2	Y	Y	Y	Y	N	N				N			
3725/45	1	N					N				Y	Y	Y	N
3825/45	1	N					N				N	Y	Y	Y
70x0(RP)	1	N	Y	Y	N	N	N				N			
70x0(RSP)	2	N	Y	Y	Y	Y	N				N			
71xx	2	N	N	N	Y	N	Y	Y	Y	N	N			
72xx (I/O)	2	N	N	Y	Y	N	Y	Y	Y	N	N			
72xx (NPE-G1)	1	N					N				N	Y	Y	Y
7301	1	N					N				N	Y	Y	Y
7304 (NSE-100)	1	N					N				N	Y	Y	N
7304 (NPE-G100)	1	N					N				N	N	N	Y
7401	1	N					N				N	Y	Y	N
75xx(RSP1)	2	N	Y	Y	Y	N	N				N			
75xx(RSP2)	2	N	Y	Y	Y	Y	N				N			
75xx(RSP4)	2	N	N	Y	Y	Y	N				N			
75xx(RSP8)	2	N	N	Y	Y	Y	Y	Y	Y	N	N			
75xx(RSP16)	2	N					Y	Y	Y	N	N			
10000 (PRE/PRE-1)	2	N					Y	N	Y	N	N			
10000 (PRE-2)	2	N					N	Y	Y	N	N			
12000(GRP-B)	2	N	N	N	N	Y	Y	Y	Y	N				
12000(PRP)	2	N					Y	Y	Y	Y	N			
12000(PRP-2)	2	N					N	Y	Y	Y	N			
CRS-1 RP	2	N					N	N	N	Y	N			

Notes - External Flash

Fields in light orange denote what ships, by default, with the product (if any is default at all).

Technically speaking, most sizes of cards will work in most routers, so long as they are "less than" the maximum size it can officially support. What is listed here are what the CCO Docs list and/or what is orderable. Therefore, a smaller or larger card "may" work, but likely will not be supported by TAC.

To see if a card can be interchanged between different model routers, please refer to the following URL:
<http://www.cisco.com/warp/public/63/pcmciatrix.html>

The 12000 series PRP-2 also includes the options of adding one or both of the following directly to the mainboard, internally: 1) a 1GB CompactFlash disk, 2) a 40GB hard disk.

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Identifying Router Memory

In most routers, the memory chip configuration is easily discernable, due to the router either only having fixed memory, or the router having only one DRAM slot. In some cases, however, there are multiple slots. In those cases, there are sometimes ways to figure out the memory layout (i.e. is my 3640's 64MB DRAM in 2x32MB or 4x16MB) through software, without having to physically open the chassis. Such procedures are listed below. Note that these procedures do not cover all multi-memory-slot routers... for some router models, software methods are impossible. This is not to say that, in the future, IOS will not include other models - just that, currently, there is no way to do so.

Router Model	Procedure
1841	Issue a " show platform " command.
26xx (non-XM)	Issue a " show c2600 " command. This may not work on older models of 26xx, and only works in newer IOS images - 12.2(11)T is required (Cisco Enhancement ID CSCdv58188).
26xx(XM)	Issue a " show c2600 " command. Only works in newer IOS images - 12.2(11)T is required (Cisco Enhancement ID CSCdv58188).
2691	Issue a " show platform " command.
2800	Issue a " show platform " command.
3620/3640	Use the procedure described at http://www.cisco.com/warp/customer/63/simm_config_3620_3640.html
3631	Issue a " show platform " command.
3700	Issue a " show platform " command.
3800	Issue a " show platform " command.
AS5400	Issue a " show as5400 " command. Only works in newer IOS images - 12.2(11)T is required (Cisco Enhancement ID CSCdv64625).