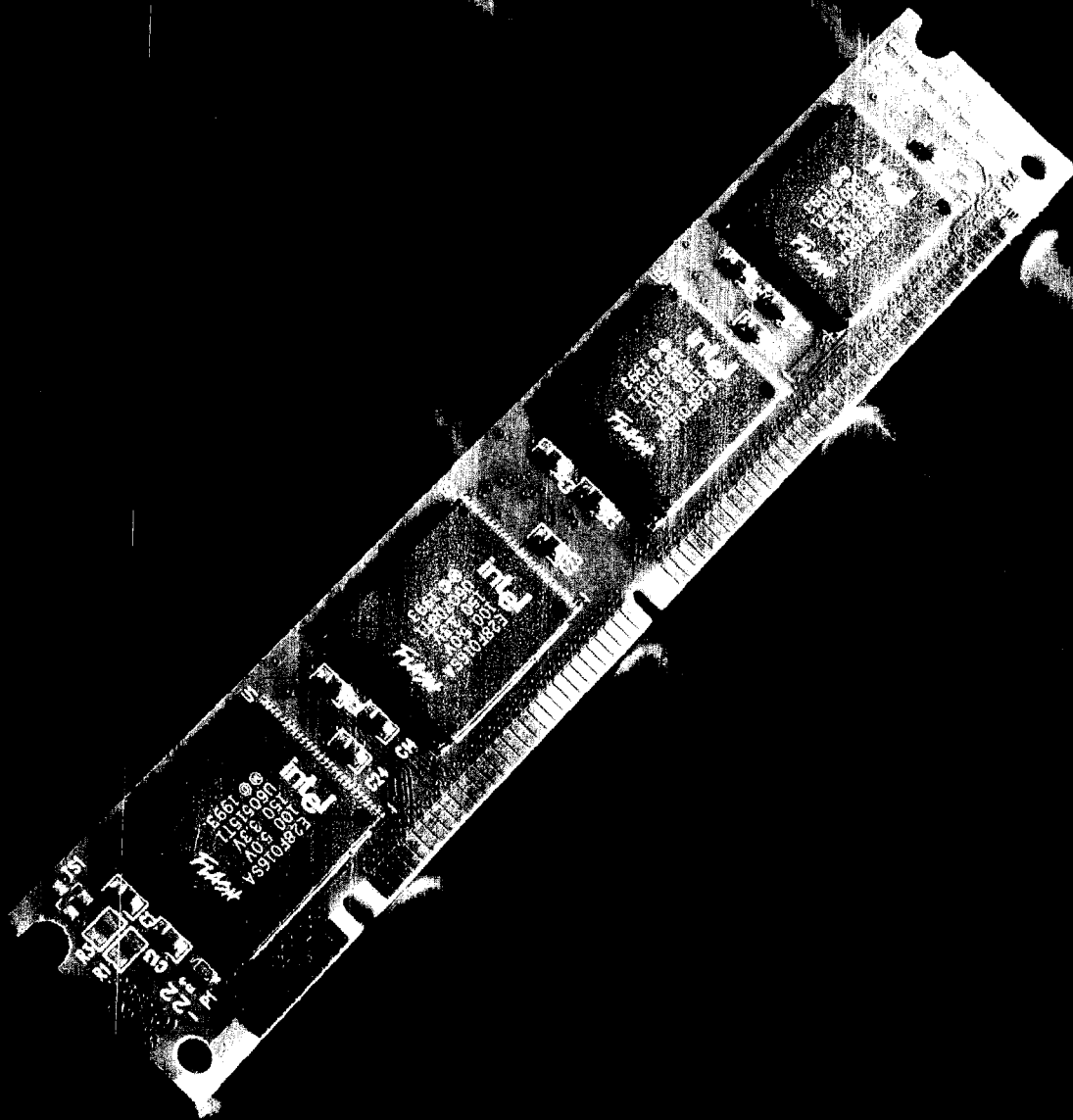


168-PIN 8-BYTE WIDE FLASH

DIMM MEMORY MODULES



- SERIES II Flash DIMMs with options
- **FlashRAM DIMMs**

- Synchronous Flash DIMMs

- Custom designs available



SMRTD006



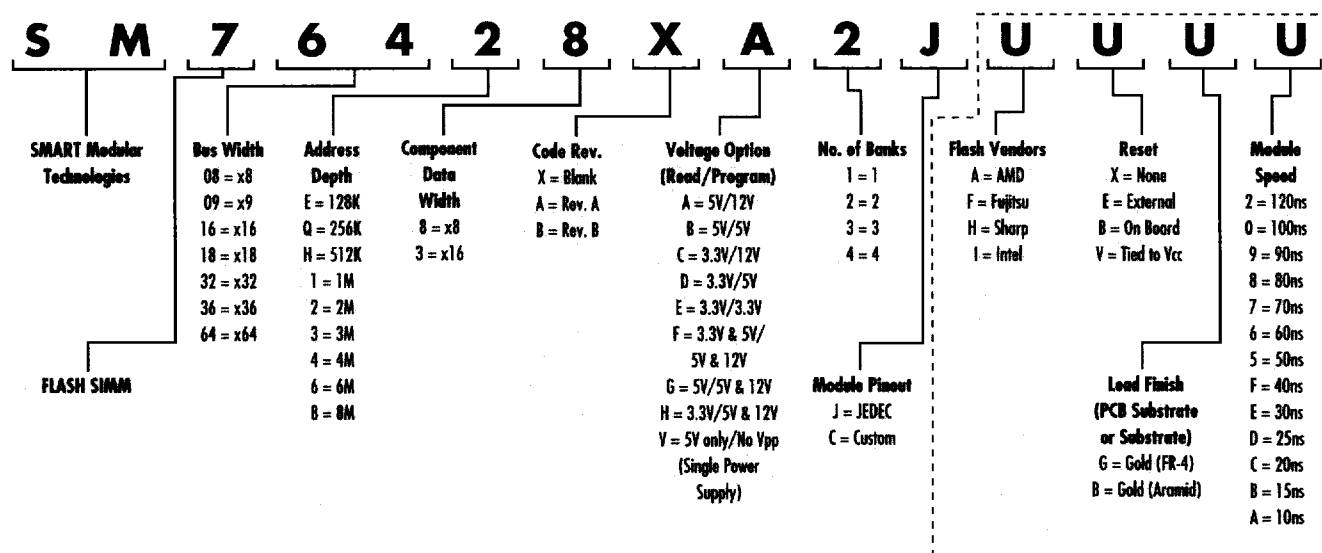
SMART
Modular Technologies

QUICK REFERENCE GUIDE: 168-PIN 8-BYTE WIDE FLASH DIMM MODULES

DENSITY	ORG.	ACCESS TIME (ns)	PROG. VOLTAGE (V)	SMART PART NO.*
DRAM-LIKE FLASH DIMMS (FLASHRAM)				
16MB	2M x 64	85	None	SM564F2000
8MB	1M x 64	85	None	SM564F1000
SYNCHRONOUS FLASH DIMMS				
32MB	8M x 64	30	5V & 12V	SM764A8000S
16MB	4M x 64	30	5V & 12V	SM764A4000S
8MB	2M x 64	30	5V & 12V	SM764A2000S
SECTOR ERASE FLASH DIMMS (BASED ON 1M x 16 COMPONENTS)				
8MB	2M x 64	70/80	5V & 12V	SM76423XG2CUUGU
4MB	1M x 64	70/80	5V & 12V	SM76413XG1CUUGU
SECTOR ERASE FLASH DIMMS (BASED ON 2M x 8 COMPONENTS)				
32MB	8M x 64	70/80	5V & 12V	SM76488XG4CUUGU
32MB	8M x 64	90/120	None	SM76488XV4CUUGU
24MB	6M x 64	70/80	5V & 12V	SM76468XG3CUUGU
24MB	6M x 64	90/120	None	SM76468XV3CUUGU
16MB	4M x 64	70/80	5V & 12V	SM76448XG2CUUGU
16MB	4M x 64	90/120	None	SM76448XV2CUUGU
8MB	2M x 64	70/80	5V & 12V	SM76428XG1CUUGU
8MB	2M x 64	90/120	None	SM76428XV1CUUGU

* See part numbering guide on the back to complete part numbers.

FLASH DIMM PART NUMBERING GUIDE



To order, complete the part numbers in the quick reference guide by selecting the desired U code. U = user specified.

EXAMPLE: SM76428XV1CAVG9

2M x 64, AMD's 2M x 8 Based, 5V Vcc, No Vpp, Gold Lead Finish, 90 ns access time, Unprogrammed

A COMPLETE LINE OF FLASH MODULES AND CARDS

In addition to 168-pin DIMMs SMART Modular Technologies offers a full line of Flash 72-pin SIMMs available now with a number of special features.

FlashRAM SIMMs and Synchronous Flash SIMMs provide direct DRAM + ROM replacement for code execution and high performance Flash technology for embedded systems as shown in the diagram below.

Asynchronous Flash SIMMs are used (in high volume) in embedded controller applications.

Some advantages are:

- Non volatility
- In-circuit reprogrammability (immediate response to last minute customer requests)
- Test-code programming (programmed with production code at time of shipment)
- Field upgrades of code via Commlink or diskette
- Memory size options and after market upgrades

Additional options include:

- On-board active reset control
- System reset control
- DC to DC converter allows use of 12V parts in a 5V system

SMART also offers a Flash SIMM Code Developer's Kit: a programming tool that provides full read/write capability for Flash SIMMs so code can be developed and tested without expensive lab equipment.

72-PIN MODULES

72-pin DRAM-like Flash SIMM modules

80-PIN MODULES

80-pin Synchronous Flash SIMM modules
80-pin Sector Erase Flash SIMM modules

144-PIN MODULES

144-pin SO DIMM FLASH modules

FLASH CARDS

ATA Flash, 4MB-20MB, Type I PC cards
ATA Flash, 4MB-20MB, Type II PC cards
ATA Flash, 24MB-112MB, Type II PC cards
CompactFlash ATA PC cards
Linear Flash PC cards
Miniature Flash PC cards
IDE Flash PC Cards
Flash PC Card Adapter

OTHER PRODUCTS MANUFACTURED BY SMART MODULAR TECHNOLOGIES:

Memory Modules & PC Cards

- High density modules up to 256 Megabyte per module
- Full line of 72 pin JEDEC standard DRAM SIMM modules to 128MB with 3.3V and 5V, FPM and EDO options
- 168 pin AMS Families, DRAM DIMM modules to 128MB with 3.3V and 5V, FPM, EDO and SDRAM options
- Full line of 72 pin SO DIMM DRAM modules to 64MB with 3.3V and 5V, FPM and EDO options
- 144 pin AMS Families, DRAM SO DIMM modules with FPM, EDO and SDRAM options
- Sun SPARCstation 10/20 memory modules
- COAST L2 Cache modules

Apex Data I/O & Connectivity Products

- Mobile Plus™ Cellular-Ready V.34 Data/Fax Modem
- Mobile Plus™ Macintosh Cellular-Ready V.34 Data/Fax Modem
- ClipperCom™ International V.34 Data/Fax Modem
- ClipperCom™ World V.34 Data/Fax Modem
- Ethernet Adapter
- Token Ring
- Data/Fax Modem with 6MB Memory for HP 100/200LX
- Serial Port
- Media Express™ MPEG-1 PC Card
- ATA Flash Cards
- Notebook Memory Upgrades: IBM ThinkPad, Toshiba, Compaq

SMARTengine Family of RISC Embedded Computing Solutions

Standard Products (hardware)

- 30A: R3081 based embedded single board computer
- 30ISA: R3081 based ISA single board computer
- 30EISA: R3081 based EISA single board computer
- 43net: R4300 based internetworking board with 2 ethernet
- 43PCI: R4300 based PCI motherboard computer
- 47PCI: R4700 based compact PCI single board computer
- 50PCI: R5000 based compact PCI single board computer
- 603PCI: PowerPC 603e based PCI single board computer

Standard Products (Software)

- Real-time operating system ports (VxWorks, pSOS, mNucleus, C-EXECUTIVE, others)
- PROM monitor

Custom Products for OEMs

SMART specializes in providing turnkey embedded computer products for internetworking, telecom, imaging, industrial control, and a host of other high performance applications. Please call SMART at: 510-624-8221 to discuss your application.



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