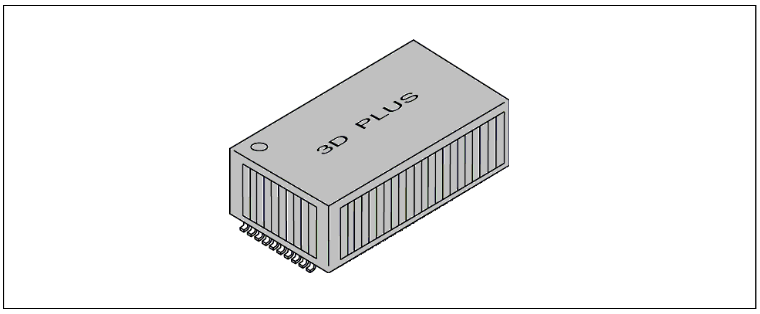
a HEICO company

MEMORY MODULE
FLASH NOR 16Mx16-SOP

Flash Memory MODULE

3D FO256M16VS4269

256Mbit organized as 16Mx16, based on 4Mx16



Features

Single 3.0V Power Supply.
Organization 16Mx16-Bit.
Stack of four 4Mx16 FLASH Memories

Simultaneous Reas/Write operation.
- Data can be continuously read one bank while executing erase/program functions in another bank.
- Zero latency between read and write operation.

Flexible Bank architecture.

Boot Sectors.
- Top and Bottom boot sectors in the same device.
- Any combination of sectors can be erased.

Zero Power Operation.
- Sophisticated power management circuits reduce power consumed during inactive periods to nearly zero.

High performance
- Access Time as fast as 90ns (120ns for -55°C +125°C).
- Program time : 4µs/word typical utilizing Accelerate function.

Ultra low power consumption

Minimum 1 million erase cycles guaranteed per sector

20 year data retention at 125°

General description

The 3D FO256M16VS4269 is a 256-Mbit high-density simultaneous Read/Write FLASH Memory module organized as 16Mx16-bit.

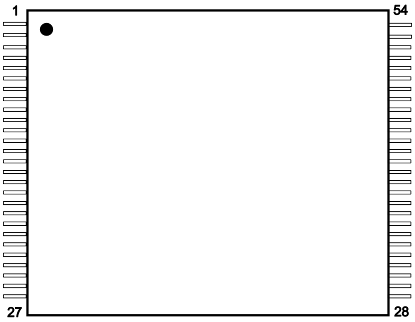
Using high-performance and high-reliability technology chips, stacking with the well-known 3D Plus MCM-V technology, this FLASH memory module provides a cost-effective solution for low power and high-capacity non-volatile memory data storage needs.

Each device of the module is a 64M-Bit FLASH Memory, organized 16Mx16bit that can be accessed by activating the associated control signals (#CEn and #WP/ACCn)

The 3D FO256M16VS4269 module is packaged in a 54 SOP Package and is available for commercial, industrial and military temperature range .

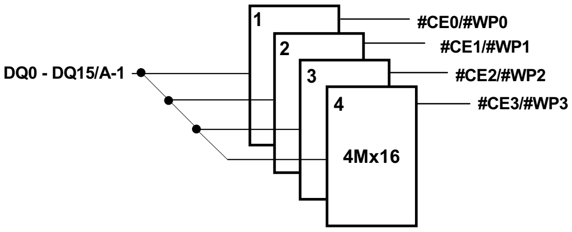
Pin Assignment (Top View)

SOP 54 - (Pitch : 0.50 mm)



1	#WP/ACC2	19	A17	37	DQ2
2	#WP/ACC1	20	A7	38	DQ10
3	A15	21	A6	39	DQ3
4	A14	22	A5	40	DQ11
5	A13	23	A4	41	VCC
6	A12	24	A3	42	DQ4
7	A11	25	A2	43	DQ12
8	A10	26	A1	44	DQ5
9	A9	27	#CE3	45	DQ13
10	A8	28	#CE2	46	DQ6
11	A19	29	A0	47	DQ14
12	A20	30	#CE0	48	DQ7
13	#WE	31	VSS	49	DQ15/A-1
14	#Reset	32	#OE	50	VSS
15	A21	33	DQ0	51	#BYTE
16	#WP/ACC0	34	DQ8	52	A16
17	RY/#BY	35	DQ1	53	#CE1
18	A18	36	DQ9	54	#WP/ACC3

FUNCTIONAL BLOCK DIAGRAM



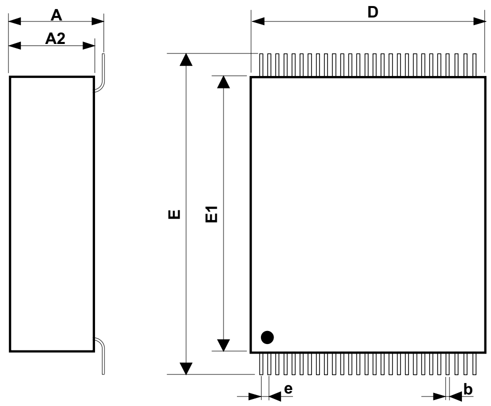
(All other signals are common to the four memories)

Flash Memory MODULE

3D FO256M16VS4269

256Mbit organized as 16Mx16, based on 4Mx16

Mechanical Drawing



	Min	Max
A	7.10	7.80
A2	6.00	6.40
D	14.50	14.90
E	20.00	20.40
E1	18.60	18.80
b	0.20	
e	0.50	
Dimensions (mm)		

Max. weight : 4.0gr.

Test Tools

3D FO256M16VS4269	ENPLAS OTS-56-0.5-01	Modified by 3D PLUS

DC Operating conditions and characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Supply voltage	Vcc	2.7	3.0	3.6	V
Input logic high voltage	VIH	2.1	-	Vcc+0.3	V
Input logic low voltage	VIL	-0.5	-	0.8	V
Output logic high Voltage	VOH	2.6	-	-	V
Output logic low voltage	VOL	-	-	0.45	V

Absolute maximum ratings

Parameter	Symbol	Value	Unit
Voltage on any pin relative to VSS	VIN, VOUT	-0.5 ~ 4.0	V
Storage temperature	TSTG	-55 ~ +150	°C
Power dissipation	PD	1	W
Short circuit current	LOS	200	mA
Thermal Resistance j-a	RTH	50	°C/W

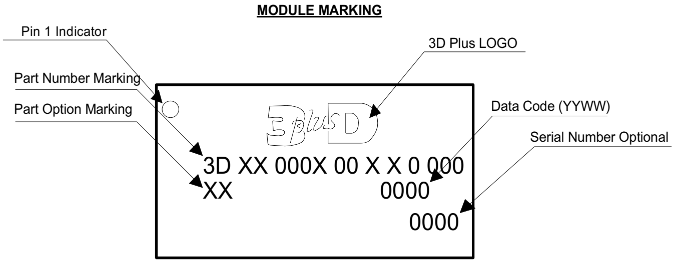
DC Characteristics

Parameter	Symbol	Value	Unit
Vcc Active Read Current (5MHz)	ICC1	16	mA
Vcc Active Write Current (5MHz)	ICC2	30	mA
Stand-by current	ICC3	40	µA

3D FO256M16VS4269 X X

Temperature Range
C = (0°C to + 70°C)
I = (-40°C to + 85°C)
M = (-55°C to +125°C)
S = Specific

Quality Level
N = Commercial Grade
B = Industrial Grade
S = Space Grade
C = Custom



MAIN SALES OFFICE

FRANCE	3D PLUS 408, rue Hélène Boucher Z.I. 78532 BUC Cedex	Tél : 33 (0)1 30 83 26 50	Fax : 33 (0)1 39 56 25 89	Web : www.3d-plus.com e-mail : sales@3d-plus.com	**DISTRIBUTOR**
USA	3D PLUS USA, Inc 6633 Eldorado Parkway Suite 420 Mckinney, TX 75070	Tél : (214) 733-8505	Fax : (214) 733-8506	e-mail : sales@3d-plus.com	