

## 3.0 Volt-only MirrorBit™ Flash Memory

Density	Ordering Part Number <sup>1</sup>					Voltage Supply	V <sub>IO</sub>	Organization	Additional Features, Sector Size/Count <sup>4</sup>	
	Device Number	Sector	Access Times (ns) <sup>2</sup>	Package (Pin/Ball Count) <sup>3</sup>	Temp. Range					
MirrorBit without Page Mode	16 Mbit	Am29LV017M	U	70, 90, 120	E (40), F (40), WC (48)	I	2.7–3.6 V	NA	2 M x 8	CFI. Sector size (kB): (32)64
	16 Mbit	Am29LV116M	T, B	70, 90, 120	E (40), F (40)	I	2.7–3.6 V	NA	2 M x 8	CFI. Sector sizes (kB): 16,(2)8,32,(15)64
	16 Mbit	Am29LV160M	T, B	70, 90, 120	E (48), F (48), WC (48), PC (64)	I	2.7–3.6 V	NA	1 M x 16, 2 M x 8	CFI. Sector sizes (kB): 16,(2)8,32,(15)64
	32 Mbit	Am29LV033M	U	90R 101, 112, 120	E (40), F (40), WD (63)	I	3.0–3.6 V 2.7–3.6 V	NA	4 M x 8	CFI. Sector size (kB): (64)64
MirrorBit with Page Mode	32 Mbit	Am29LV320M	H, L	90R 101, 112, 120	E (56), F (56), PC (64)	I	3.0–3.6 V 2.7–3.6 V	V <sub>IO</sub>	2 M x 16, 4 M x 8	SecSi Sector, WP#/ACC, CFI. Sector size (kB): (64)64
			T, B	90R 101, 112, 120	E (48), WM (48), PC (64)	I	3.0–3.6 V 2.7–3.6 V	NA		SecSi Sector, WP#/ACC, CFI. Sector sizes (kB): (8)8,(63)64
	64 Mbit	Am29LV065M	U	90R	E (48), F (48), WH (63)	I	3.0–3.6 V	3.0–3.6 V	8 M x 8	SecSi sector, ACC, CFI. Sector size (kB): (128)64
				101			2.7–3.6 V	2.7–3.6 V		
				112, 120			2.7–3.6 V	1.65–3.6 V		
	64 Mbit	Am29LV640M	U	90R	WH (63)	I	3.0–3.6 V	3.0–3.6 V	4 M x 16	SecSi sector, ACC, CFI. Sector size (kW): (128)32
				101			2.7–3.6 V	2.7–3.6 V		
				112, 120			2.7–3.6 V	1.65–3.6 V		
			H, L	90R	E (56), F (56), PC (64)	I	3.0–3.6 V	3.0–3.6 V	4 M x 16, 8 M x 8	SecSi sector, WP#/ACC, CFI. Sector size (kB): (128)64
				101			2.7–3.6 V	2.7–3.6 V		
				112, 120			2.7–3.6 V	1.65–3.6 V		
	T, B	90R	E (48), WH (63), PC (64)	I	3.0–3.6 V	NA	SecSi sector, WP#/ACC, CFI. Sector sizes (kB): (8)8,(127)64			
		101, 112, 120			2.7–3.6 V	NA				
64 Mbit	Am29LV641M	H, L	90R	E (48), F (48)	I	3.0–3.6 V	3.0–3.6 V	4 M x 16	SecSi sector, WP#, ACC, CFI. Sector size (kW): (128)32	
			101			2.7–3.6 V	2.7–3.6 V			
			112, 120			2.7–3.6 V	1.65–3.6 V			
128 Mbit	Am29LV642M	U	90R	PA (64)	I	3.0–3.6 V	3.0–3.6 V	8 M x 16	Same-Die Stack (2 Am29LV640MU in the same package), ACC, CFI. Sector size (kW): (256)32	
			101			2.7–3.6 V	2.7–3.6 V			
			112, 120			2.7–3.6 V	1.65–3.6 V			
128 Mbit	Am29LV652M	U	90R	MA (63)	I	3.0–3.6 V	3.0–3.6 V	16 M x 8	Same-Die Stack (2 Am29LV065MU in the same package), ACC, CFI. Sector size (kB): (256)64	
			101			2.7–3.6 V	2.7–3.6 V			
			112, 120			2.7–3.6 V	1.65–3.6 V			
128 Mbit	Am29LV128M	H, L	90R	E (56), F (56), PC (64)	I	3.0–3.6 V	3.0–3.6 V	8 M x 16, 16 M x 8	WP#/ACC, CFI. Sector size (kB): (256)64	
			101			2.7–3.6 V	2.7–3.6 V			
			112, 120			2.7–3.6 V	1.65–3.6 V			
256 Mbit	Am29LV256M	H, L	90R	E (56), F (56), PC (64)	I	3.0–3.6 V	3.0–3.6 V	16 M x 16, 32 M x 8	WP#/ACC, CFI. Sector size (kb): (512)64	
			101			2.7–3.6 V	2.7–3.6 V			
			112, 120			2.7–3.6 V	1.65–3.6 V			

### Notes:

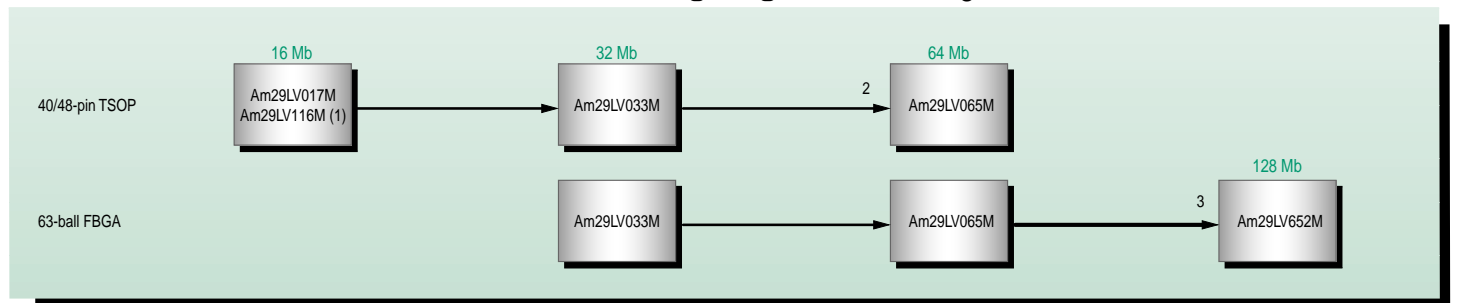
- Contact an AMD representative for availability. See individual data sheets for details. MirrorBit products listed are scheduled for future introduction. Some features may be pending, and specifications may be subject to change.
- Access times are as follows: 90R = 90 ns, 101 = 100 ns, 112 = 110 ns, 120 = 120 ns.
- Pin/ball count is provided in parenthesis for information only, and is not included in the actual ordering part number.
- Features:** WP# = Write protect input. ACC = Programming acceleration input. SecSi Sector = Secured Silicon (unique/random ID). CFI = Common Flash Interface. **Sector Size/Count:** Sector counts are given in parentheses. Kw = kilowords, KB = kilobytes, Mb = megabits.

## MirrorBit Drop-in Compatibility

Density	MirrorBit Device	TSOP	FBGA	Conventional Flash Device
16 Mbit	Am29LV160M	E (48), F (48)	WC (48)	Am29LV160D
			PC (64)	Am29DL163D <sup>1</sup>
	Am29LV017M	E (40), F (40)	WC (48)	Am29LV017D
	Am29LV116M	E (40), F(40)		Am29LV116D
32 Mbit	Am29LV320MT/B	E (48)	WM (48)	Am29LV320D
			PC (64)	Am29DL323D/G
	Am29LV320MH/L	E (56), F (56)		Am29LV320D <sup>1</sup>
			PC (64)	Am29DL323D/G <sup>1</sup>
	Am29LV033M	E (40), F (40)	WD (63)	Am29LV033C
64 Mbit	Am29LV640MU		WH (63), PC (64)	Am29LV640D
	Am29LV640T/B	E (48)	WH (63), PC (64)	Am29DL640G
	Am29LV640H/L	E (56), F (56)	PC (64)	Am29DL640G <sup>1,2,3</sup>
	Am29LV641MH/L	E (48), F (48)		Am29LV641D
	Am29LV065MU	E (48), F (48)	WH (63)	Am29LV065D
128 Mbit	Am29LV128M		PC (64)	Am29LV642D
	Am29LV642M		PA (64)	Am29LV642D
	Am29LV652M		MA (63)	Am29LV652D

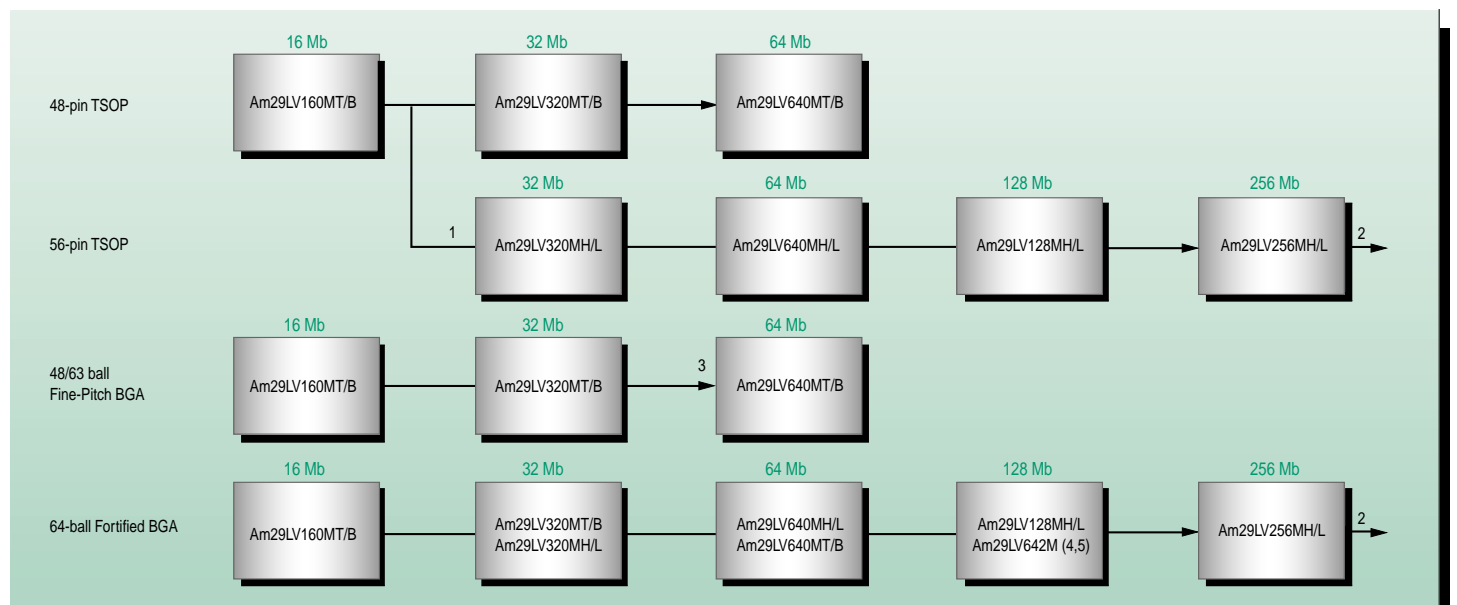
Notes: 1. Sector architecture differences. 2. 48-pin to 56-pin TSOP migration. 3. MirrorBit supports  $V_{IO}$ ; DL640 does not support  $V_{IO}$ .

### MirrorBit Package Migration (x8 only)



Notes: 1. Am29LV116M has boot sectors; all other devices shown have uniform sectors. 2. 40- to 48-pin migration. 3. Same-die stack solution.

### MirrorBit Package Migration (x8/x16, x16 only)



Notes: T/B = Top or bottom boot sector WP# protection. H/L = Top or bottom uniform sector WP# protection. U = Uniform sectors without WP# protection. (1) 48- to 56-pin migration. (2) MirrorBit products in these packages will include 512 Mbit and 1 Gbit devices. (3) 48- to 63-ball migration. (4) x16-only. (5) Same-die stack solution.