

NON-VOLATILE MEMORY IP

Standard CMOS Compatible - No Additional Processing Steps

Foundry	Node	In Design	InVerif.	Qualified	Customer Production	XPM Memory	XPM Register	Gusto/ Gusto-2	Secret-code
TSMC	180G			X	X	X	X		
	180BCD			X	X	X			
	160G			X (QC*)	X	X	X		
	130G			X	X	X	X	X	
	110G			X (QC*)	X	X	X	X	
	90LP			X	X	X			
	90G			X	X	X			
	80GC			X	X	X			
	65LP			X	X	X		X	
	65GP			X	X	X			
	55GP			X	X	X			
	55LP			X	X	X		X	
	55HV			X		X			
	45LP			X	X	X			
	40LP			X	X	X		X	X
	28HP/HPM			X	X	X	X	X	X
	28LP			X		X		X	X
SMIC	28HPL			X	X	X		X	X
	16FF			X		X			X
	180G			X	X	X	X		
	130G			X	X	X	X	X	
	55LL			X	X	X		X	
	65LL			X	X	X		X	
	40LL			X	X	X		X	X
GLOBAL FOUNDRIES	28HK	X				X		X	X
	28LP	X				X			X
	130G			X	X	X	X	X	
	110G			X	X	X	X	X	
	65LPE		X			X			
	40LP			X	X	X		X	X
	20LPM		X			X			X
IBM	14LPP		X			X			X
	8RF			X (QC*)	X	X			
	10LPe			X		X			
UMC	45SOI			X				X	
	130SP	X				X	X	X	
	110AE		X			X			
	110SP		X		X	X	X	X	
	55SP			X	X	X		X	
	55LP			X		X		X	
	40LP			X	X	X		X	X
	28HLP			X		X			X
	28HPM			X		X		X	X
Dongbu	180AN			X	X	X			X
	180G			X	X	X	X	X	
	180BCD			X		X		X	
	130G			X		X	X	X	
	110G			X	X	X	X	X	
Grace	150LV			X (QC*)	X	X			
TowerJazz	180G			X		X	X		
	130G			X		X	X	X	

*QC-Qualified



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Kilopass Overview

With over 170 customers and more than 10 billion units shipped, Kilopass has ported its NVM IP to over 40 processes at pure-play foundries and IDMs. Since its technology is implemented in standard logic CMOS without any modifications to the foundry processing steps, Kilopass' NVM technology has been enabled quickly and reliably in a large variety of processes and foundries. Kilopass NVM IP is uniquely suited for a rapidly growing number of applications that require small area, low power, high reliability and tight security.

**Kilopass NVM IP products are available from
180nm to 16nm FinFET from 16bits to 4Mbits**

Broadest OTP Technology Offerings:

Gusto-2: Ultra-Low Power Code Storage

Security: Best in Class Protection

FinFET: Enablement in Progress

Kilopass NVM IP Features:

- » Programming bus width ranging from x1 to x8
- » Read bus width ranging from x1 to x64
- » Access time 20ns-70ns
- » Low standby and active current
- » Error correction scheme including redundancy or SEC-DED
- » Lock bit to prohibit memory content modification
- » Integrated charge pump to provide programming voltage
- » Comprehensive manufacturing built-in test features
- » ROM conversion option with ROM-it!

Technology Benefits:

1. Manufacturability for mass production and yield

- » No additional tolerance or process control required
- » Standard NMOS transistor
- » Follows DFM design rules
- » No additional wafer processing
 - No wafer bake
 - No UV erase

2. Reliability matching foundry process

- » Standard CMOS baseline logic process technology
- » Exclusive use of low or standard Vt NMOS devices as supplied from the foundry

**Ask Us About Our
FinFET Enablement**