

Key Features

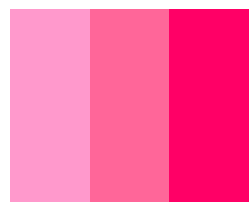
- Raw gate density: 110 K gates/mm², offering the high density needed for the low cost applications
- Provides a complete set of models for the industry-standard EDA tools
- Supports the arithmetic cells for the data-path design
- Provides the gated clock buffers for the power-saving function
- Supports the flexible row abutment
- Supports the cells of various drive strengths
- Provides all flip-flops with the corresponding scan cells
- Supports a rich set of AOI/AO/OAI/OA complex cells

General Description

This library, tailored for UMC's 0.18 μm Mixmode/RFCMOS process, is especially suitable for the high performance and high-density applications. The 9-track (5.04 μm) cell height along with a wide selection of the drive strengths enables the implementation of the high performance designs with the smallest possible area. This library can be customized to provide the new cells which follow Faraday's internal evaluation procedures.

Quick Reference

Characteristic		Description
Physical	Process	UMC 0.18 μm Mixmode/RFCMOS process
	Drawn gate length	0.18 μm
	Gate density	110,000 gates/mm ²
	Core cell height	5.04 μm (9-track)
	Vertical/Horizontal routing grid	0.56/0.62 μm
	Power/Ground rail width	0.76 μm
	Layout resolution	0.01 μm
Electrical	Recommended operating conditions	Power supply voltage: 1.62 V ~ 1.98 V Junction temperature: -40 °C ~ 125 °C
	Speed	Td = 42.2 ps/stage Measured from 101-stage NAND2 ring for the typical process at 1.8 V and 25 °C
	Power consumption	29.9 nW/MHz/gate Measured from NAND2 chain, output load = 2 INV1 load in the typical process at 1.8 V and 25 °C
	Drive strength level	Up to 8 (depending on the cell)





HEADQUARTERS

Hsinchu, Taiwan,
Tel: 886-3-578-7888
Fax: 886-3-578-7889
twsales@faraday-tech.com

USA OFFICE

Sunnyvale, USA
Tel: 1-408-522-8888
Fax: 1-408-522-8889
ussales@faraday-tech.com

EUROPE OFFICE

Hoofddorp, Netherlands
Tel: 31-2356-20496
Fax: 31-2356-36297
eusales@faraday-tech.com

JAPAN OFFICE

Tokyo, Japan
Tel: 81-3-5214-0070
Fax: 81-3-5214-0076
jpsales@faraday-tech.com

CHINA OFFICE

Shanghai, P. R. China
Tel: 86-21-6406-7523
Fax: 86-21-6406-5327
cnsales@faraday-tech.com