

Semicustom Products
UT0.25 μ CRH ASIC Family
Advanced Information Sheet



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FEATURES

- ☐ Up to 3,000,000 usable equivalent gates using gate array
- ☐ Toggle rates up to 1000 MHz
- ☐ Advanced 0.18 μ L_{eff} silicon gate CMOS processed in a commercial fab
- ☐ Operating voltage of 3.3V and 2.5V
- ☐ Multiple product assurance levels available, QML Q and V, military, industrial, etc.
- ☐ Radiation hardened from 100Krad(Si) to 1 Megarad total dose available using UTM C RadHard techniques
- ☐ SEU-immune to less than 1.0E-10 errors/bits-day available using special library cells
- ☐ Robust UTM C Design Library of cells and macros
- ☐ Design support for Mentor Graphics®, Synopsys™, in Verilog and VHDL design languages on HP, Sun and NT workstations
- ☐ Full complement of industry standard IP cores
- ☐ Configurable RAM compilers
- ☐ Supports cold sparing for power down applications
- ☐ Power dissipation of 0.04 μ W/MHz/gate at 2.5V and 20% duty cycle

PRODUCT DESCRIPTION

The high-performance UT0.25 μ Commercial RadHard™ ASIC gate array family features densities up to 3,000,000 equivalent gates and is available in multiple quality assurance levels such as MIL-PRF-38535, QML Q and V, military and industrial grades and non-RadHard versions.

For those designs requiring stringent radiation hardness, UTM C's 0.25 μ deep sub-micron process employs a special technique that enhances the total dose radiation hardness from 100Krad(Si) to 1 Megarad while maintaining circuit density and reliability. In addition, for both greater transient radiation hardness and latch-up immunity, the deep submicron process is built on epitaxial wafers.

Developed from UTM C's patented architectures, the deep submicron gate array family uses a highly efficient continuous transistor architecture for the internal cell construction. Combined with state-of-the-art placement and routing tools, the utilization of available transistors is maximized using five levels of metal interconnect.

The UT0.25 μ CRH ASIC family is supported by an extensive cell library that includes SSI, MSI, and 54XX equivalent functions, as well as configurable RAM and cores. UTM C's core library includes the following functions:

- Intel 80C31® equivalent
- Intel 80C196® equivalent
- MIL-STD-1553 functions (BRCTM, RTI, RTMP)
- MIL-STD-1750 microprocessor
- RISC microcontroller
- Configurable RAM