Semicustom Products

UT 0.6µ Gate Array Family

Advanced Information Sheet

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FEATURES

- ❑ Greater than 400,000 usable equivalent gates
- ❑ Clock rates up to 150 MHz
- ❑ Advanced 0.6µ radiation-hardened silicon gate CMOS
- ❑ Operating voltage of 5V and 3.3V
- ❑ QML Class Q & V compliant
- ❑ Designed specifically for high reliability applications
- ❑ Radiation-hardened to meet space requirements and SEU-immune to less than 1.0E-10 errors/bits day
- ❑ JTAG (IEEE 1149.1) boundary-scan registers built into I/O cells
- ❑ Low noise package technology for high speed circuits
- ❑ Design support using Mentor Graphics®, Synopsys™ and VHDL tools on HP® and Sun® workstations

PRODUCT DESCRIPTION

The high-performance UT 0.6µ gate array family features densities greater than 400,000 equivalent gates and is available in MIL-PRF-38535 QML Q and V quality levels and radiation-hardened.

For those designs requiring stringent radiation hardness, UTMC's 0.6µ process employs a special processing module that enhances the total dose radiation hardness of the field and gate oxides while maintaining circuit density and reliability. In addition, for both greater transient radiation-hardness and latchup immunity, the UTMC 0.6µ process is built on epitaxial substrate wafers.

Developed from UTMC's patented architectures, the UT 0.6µ 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 three levels of metal interconnect.

The UT 0.6µ family of gate arrays is supported by an extensive cell library that includes SSI, MSI, and 54XX equivalent functions, as well as, configurable RAM and other megafunctions. UTMC's megacell library includes the following functions:

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