

GR701A

PCI to SpaceWire and 1553 Bridge



Introduction

The PCI to SpaceWire and 1553 Bridge (GR701A) has been developed as a companion chip for space processors and systems with PCI interfaces. The GR701A provides a complete solution with three SpaceWire links, redundant Mil-Std-1553B interfaces, CAN 2.0B interface, two UARTs, I/O port and interface to external memory.

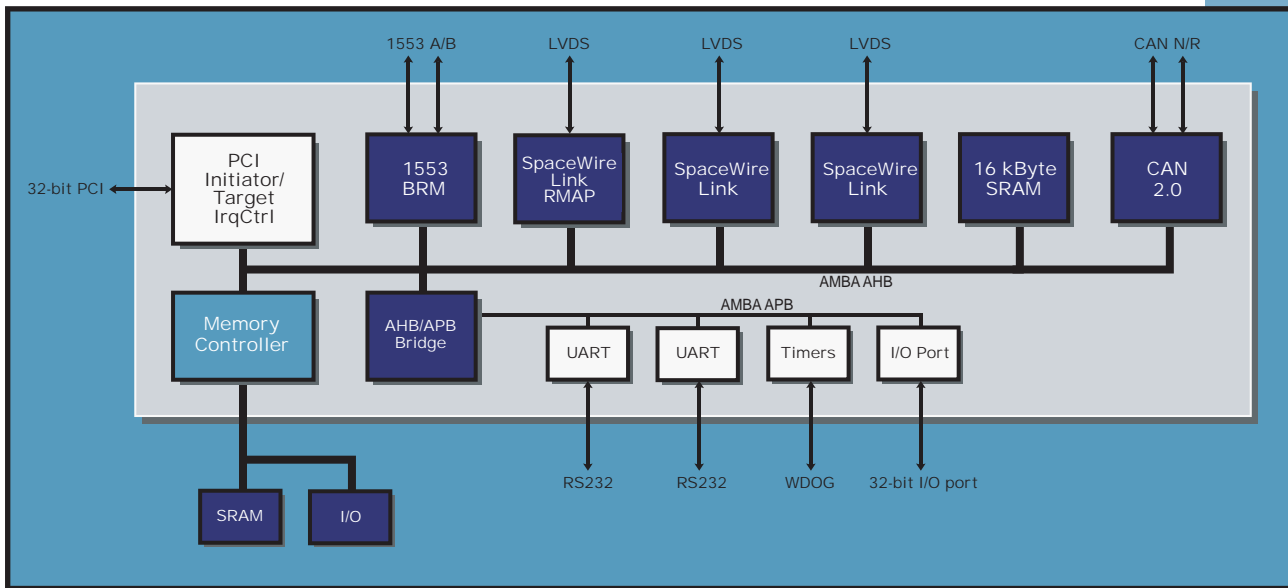
The GR701A is available as a standard component using the Actel RTAX2000S Field Programmable Gate Array. The design is fault tolerant and in combination with the radiation tolerant FPGA this gives a total immunity to radiation effects. This makes it ideally suited for space and other high-rel applications.

All the blocks and interfaces are currently used in European and US space programmes and have been successfully validated and qualified. The Mil-Std-1553B and PCI blocks are designed by Actel, whereas all other blocks including the SpaceWire are designed by Aeroflex Gaisler.

The GR701A is also available in a commercial grade AX2000 device for evaluation and prototyping purposes.

Specifications

- PCI bus Initiator and Target, 32-bit, 33 MHz
- 3 SpaceWire interfaces (ECSS-E-ST-50-12C), with RMAP support (ECSS-E-ST-50-11C) on one link, 100 Mbit/s
- Redundant Mil-Std-1553B interface
- Redundant CAN 2.0B interface
- 2 UART/RS232 interfaces
- 32-bit I/O port
- 16 kByte EDAC protected on-chip SRAM
- 8-bit EDAC protected bus to external memory
- 16-bit memory mapped I/O bus
- 32-bit timers and watchdog
- Interrupt controller
- CQ352 package
- Power consumption < 500 mW @ 33 MHz



CONTACT INFORMATION

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