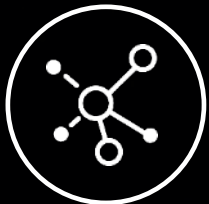# About us

Gaisler overview presentation

ADCSS 2024

A world leader in embedded computer systems for harsh environments
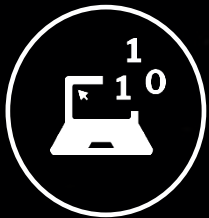
Experts in fault-tolerant computing

We provide a full ecosystem to support hardware and software design for:

- Standard components
- Semi-custom FPGA
- Full custom ASIC

Based on SPARC and RISC-V architectures

FRONTGRADE
Gaisler

FRONTGRADE Gaisler

- Established 2001 as a spin-off from the European Space Agency and Chalmers

- Located in Gothenburg, Sweden

- 60+ employees in Sweden, Spain, Germany, France and the United Kingdom

- Capabilities: software and ASIC/FPGA design
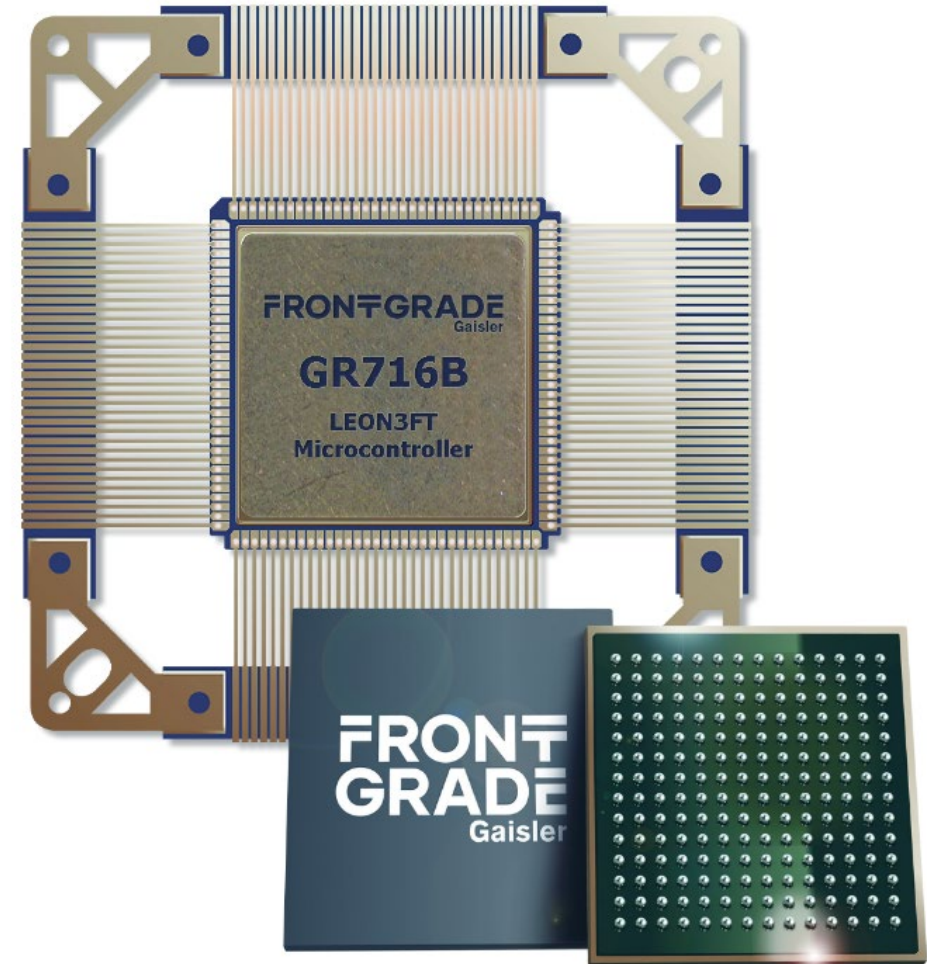 Facilities: component lab

GR716B LEON Mixed-signal Microcontroller

- Follow-on design based on GR716A
- Improved analog performance and extended digital functionality
- Cost effective, High Reliability solution

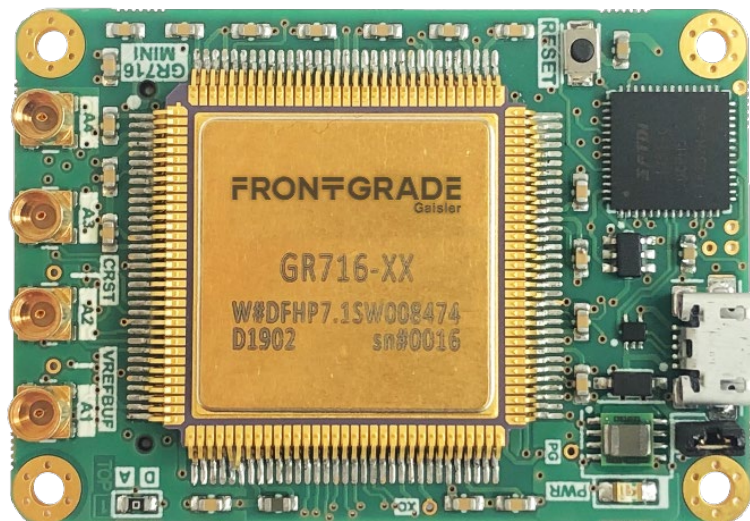The GR716B features dedicated hardware to support:
- DC/DC conversion
- Motors control: BLDC, PMSM and micro-stepper
- Magnetorquer control
- Peak-current control
- Simultaneous sampling of ADC channels
- FPGA Supervisor (power & configuration scrubbing)
- Latch-up detection
- Distributed multi-interface communication node

GR716-MINI, Evaluation Board

Software Evaluation board for GR716 microcontroller

- SPI Flash PROM (32 MiB)

- SRAM (2 MiB)

- Oscillator

- LED for power indication etc.

- 50mm x 35mm (37.5% of a credit card)

The board can be borrowed for free!
We also provide evaluation versions of:
- GRMON3 debugger
- Compilers and operative systems

Website for complete information

Interfaces

- FTDI USB interface (Debug & Power)

  - GRMON3 debug I/F via Debug UART

  - 2x UART interfaces, 1x I2C interface

  - Control of reset, configuration pins etc.

  - Power supply

- 4x MMCX (micro-miniature coaxial):

  - 2x ADC, 2x DAC

- Miniature 80 pin mezzanine connector:

  - Addition ADC, DAC, LVDS, GPIO, etc.

GR716B-MIDI-BOARD

- Small form factor
- USB-C connector for debug and power
- GR716B Microcontroller
    - 1 x Ethernet for communication
    - 1 x SpaceWire to FMC+ connector
    - 1 x SpaceWire to FPGA
    - 64Mb x 16 MRAM
    - 512Mb SPI FLASH
    - 2 x High performance ADC to on-board MMCX connector
    - 1 x DAC channel to on-board MMCX connector
    - 1 x on board thermistor
    - 41 x GPIO connected to FMC+ connector
- CertusPro FPGA
    - 1 x Ethernet for communication and debug
    - 4 x SerDes to FMC+ connector
    - LVDS to FMC+ connector
    - 3V3 I/O to FMC+ connector
    - 1GB DDR3
    - 512Mb SPI FLASH
    - 4 x Analog channels to on-board MMCX connector

Available for free of charge, time-limited loans