

Quadros™ Software for Blackfin® Processors

RTOS and Integrated Software for the Analog Devices BF5xx family

Get the most out of your next development project with Quadros Systems and the Analog Devices Blackfin processor!

■ Efficiently manage DSP/dataflow AND control operations

The RTX/Quadros dual-mode real-time operating (RTX/dm) delivers the design flexibility of both control plane architecture and a data plane architecture in a single kernel. This allows you to take full advantage of the DSP and control processing capabilities of Blackfin processors.

When a traditional RTOS is used to execute DSP application code, processing efficiency and overall data throughput can be adversely affected. The same is true when control system application code runs in an executive designed for DSP and dataflow processing.

RTX/dm brings these two processing models together in a single RTOS allowing you to build a much more responsive and tunable system. Combine control processing with high speed algorithms. Run high speed DSP or data acquisition processes using the low-overhead threads while processes such as TCP/IP run as tasks.

■ Maximize your networking performance

Need high data throughput and/or fast stack response? The RTX/Quadnet TCP/IP networking stack has been optimized to help you get the most out of the Blackfin processor and the on-chip Ethernet controller. Ask your sales representative for the results of our benchmark tests.

■ Leverage our Blackfin expertise

Quadros Systems has years of experience with the Analog Devices Blackfin architecture and VisualDSP++ development and debug software environment. Let us put that know-how to work on your application.

■ Develop your next project with confidence

Quadros Systems' integrated software is already hard at work in thousands of products in a wide range of applications including, Data Acquisition, Multimedia Devices, Portable Music Players, Video Capture and Display, Mobile Phones and Base Stations, CAN-to-Ethernet Gateways, Building Control, Security, Data Logging, Remote Diagnostics and Monitoring, Motor Control, POS Kiosks and Scanners, Chemical Monitors, Environmental Controls and much more.

■ Get started quickly with Evaluation and Demo packages

Want to take the software for a test drive? We have free demo software for download from the Quadros website. Visit www.quadros.com/blackfin for details. Want more? Ask your sales representative for details on our evaluation packages.

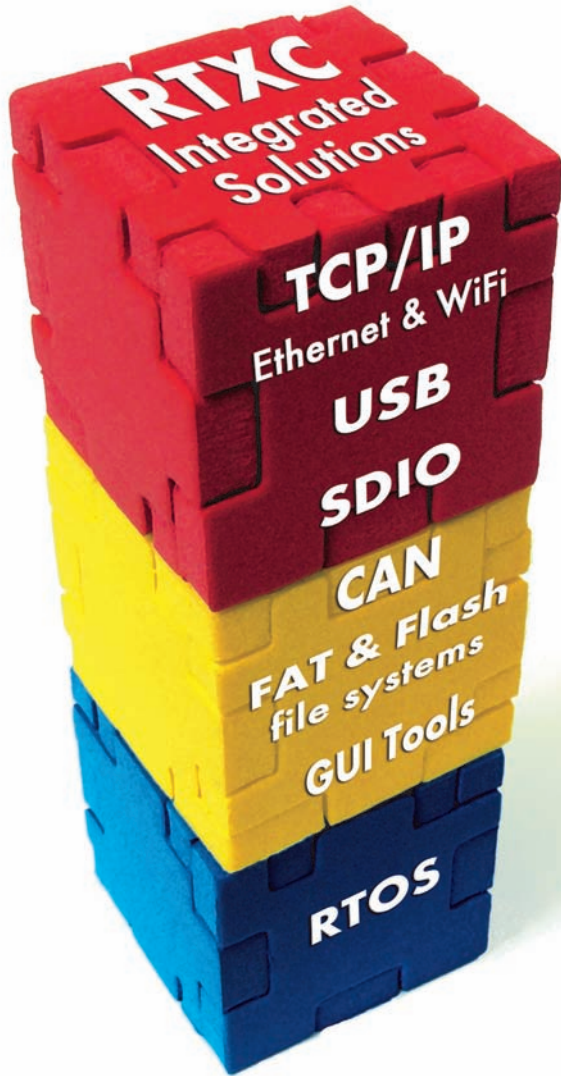


The Blackfin embedded processor combines RISC and DSP functionality into a unified architecture that allows flexible partitioning between control and signal processing needs.

The RTX/Quadros dual mode RTOS is designed to support both DSP and Control processing, minimizing the impact of context switching in a system with high interrupt frequency. High-speed dataflow operations are handled with lightweight tasks called threads for rapid switching. Control processes are managed with a traditional multi-tasking architecture with event-driven preemptive scheduling.

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Contact and Ordering Information

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RTOS, Stacks and Middleware

Quadros Systems offers a family of integrated software products to help you maximize the power and performance of the Analog Devices Blackfin processor.

RTXC Quadros Real-time Operating System

Flexible and Configurable. Choose the configuration that will deliver the performance, size and features for your application.

Scalable. Easy to control your memory footprint; tailor RTOS resources to your application.

Easy to Use. Intuitive and well documented with a user-friendly manual.

Fast. Designed and coded to ensure low system overhead, low latency and responsive services.

Powerful. Use the rich set of kernel objects and services to manage thread/task execution, move data, and manage time and other events and interrupts.

Integrated Stacks and Middleware

RTXC Quadnet TCP/IP. IPv4-only or dual IPv4/IPv6 stack. Full range of add-on protocols for Communications, Security & Mobility. Ethernet & Wi-Fi drivers available.

RTXCusb. Support for Host, Device and OTG. Class drivers for mass storage, printer, HID, CDC Ethernet & serial.

RTXCsdio. Bus and host stacks with support for SD/SDIO 1bit and 4bit.

RTXCcan. Support for CANopen master and slave.

RTXCflashfile. High performance, fail-safe file system for resident flash devices. Wear-leveling and ECC algorithms.

RTXCfatfile. Windows-compatible file system for removable storage media.

PEG+ and C/PEG. Tools and libraries for developing graphical user interfaces, graphics over video and LCD support.

Development Environment

VisualDSP++ Support. The RTXC Quadros RTOS is fully integrated with the VisualDSP++ development and debug software environment and includes a kernel-aware debugging plug-in.

RTXCgen. Host-based utility allows you to specify the exact RTOS configuration to fit your requirements. Scale the kernel with simple mouse clicks and create application objects through high-level dialog boxes.

