RoweBots

Software Data Sheet

Unison RTOS version 4.1

for

Actel®

SMARTFUSION™ **SoftConsole**

Features

- **Ultra tiny embedded Linux™ or POSIX™ compatible RTOS**
- Open Standards
- Open Source without licensing risks
- Actel SmartFusion ARM Cortex M3
- Complete integrated development using:
    - SoftConsole Eclipse IDE
- Seamless integration of target components
- POSIX Nano Kernel
    - Fast
    - Tiny
    - Compliance tested
- Total Integrated POSIX I/O
    - Networking options†
    - Serial I/O
    - File System
- Tiny footprint software components
- Off the shelf evaluation board support
- Single click install
- Documentation including:
    - Index and Release Notes
    - Tutorial Guide for Unison 5.1*
    - Programmer's Guide for Unison 5.1*
    - Reference Guide for Unison 5.1*
    - Quickstart Guide featuring 9 demos to get you up and running in 10 minutes
- FREE source code††
- FREE
- Interface compatible with other DSPnano and Unison versons

* separately purchased item.

† free non-commercial use, separate commercial license purchase option.

†† avialable with documentation.
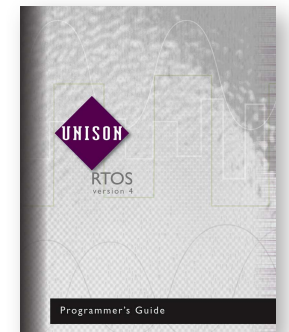
Benefits

The key benefits from this approach are significant for developers.

1. Unison is an ultra tiny Linux or POSIX compatible RTOS with complete System on Chip (SoC) support for 32 bit processors. It eliminates training and supports standards based development on tiny processors where other Linux variants or larger RTOS solutions don't run.

2. Unison 4 is extremely easy to configure and use compared to Linux or any other RTOS. Six simple primitives, a nano-kernel architecture and intuitive device driver structures make optimized driver development simple and fast.

3. Unison provides integrated support for evaluation modules, and the SoftConsole IDEs. Users can create and execute a new project in minutes without errors or configuration issues. It is fast and easy both to learn and to use!

4. Integrated software components with complete I/O can save significant time in OEM application development. Today, all systems are connected and the integration of Unison along with networking support, serial support and a file system will allow you to build whatever you need quickly.

5. A single click install on Windows® makes Unison simple to deploy. Our no-nonesense **Quickstart Guides** – a comprehensive (yet surprisingly concise) collection of some 9 step-by-step demos – will have you up and running with a solution in sight in no time. Get your project team started without the usual barrage of questions and early difficulties.

6. With extensive documentation, the Rowebots approach walks the user through the system with minimum distraction or delay. From a conceptual understanding of it through to actual hands on operation on standard hardware, users come up to speed quickly and develop confidence with the system before encountering more challenging problems.

7. Interface compatibility with other Unison and DSPnano versions provide seamless upgrade and downgrade paths to more or less powerful processors without source code changes.

Feature Mapping

Hardware Feature	Software Support	High Level Software Support
Timer	OS timers, real-time clock	
Serial Ports	tty_server, busywait I/O	iolib, stdio
Ethernet MAC/PHY	udp only, tcp/udp/ip,	iolib
SD Interface	fsys file system	

Unison Operating System Architecture
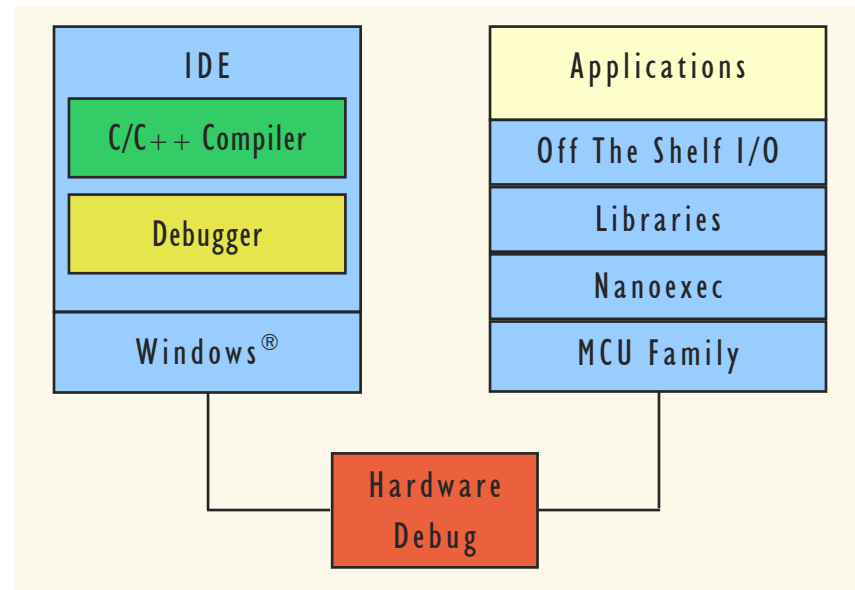
| **Software Version** | • Unison 4.1 | **Supported Hosts** | • Windows XP™
• Windows Vista™
• Windows System 7™ | **Availability** | • Production
• Q2, 2010 |

Supported Devices
- **ARM**
  - Cortex-M3
- **Chip Vendors**
  - **Actel**
    - SmartFusion
  - **Boards**
    - SmartFusion™ Evaluation Kit

UNISON

RTOS
version 5

RoweBots