



Enea Software Solution for Texas Instruments OMAP-L137/L138

Enea is the only software vendor with a complete solution for heterogeneous devices like the Texas Instruments OMAP-L137/138 and other systems-on-chip (SoC) that feature both a general purpose processor (GPP) and a digital signal processor (DSP).

Traditionally, software development would require a realtime operating system (RTOS) or Linux from one vendor running on the CPU, the DSP/BIOS OS running on the DSP and an unsupported, open source technology like DSPLink to provide interprocess/inter-core communications (IPC) - three technologies, three programming models, multiple tool chains, multiple vendors and differing levels of features and support.

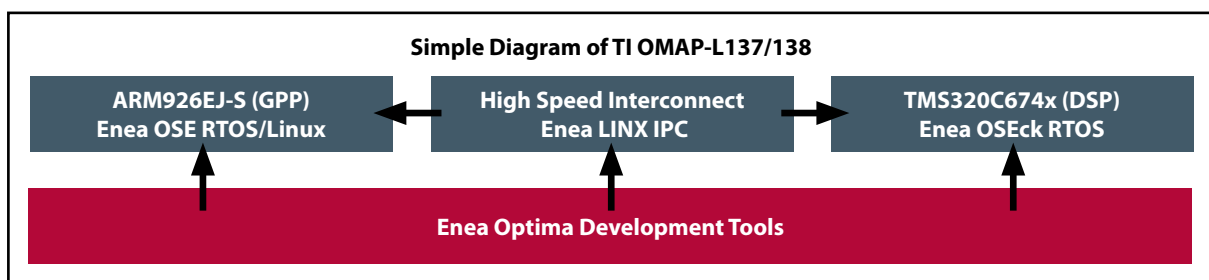
But there is a better way.

Enea offers a comprehensive software solution that allows development on both the GPP and DSP with one programming model, one tool chain and one vendor offering fully featured and proven products with global support. Simplifying the runtime software, tools and support accelerates development through more efficient programming, transparent debugging and reduced integration times.

ABOUT THE TI OMAP L137/138

TI's OMAP-L137/138 is a low-power applications processor based on an ARM926EJ-S and a TMS320C674x™ DSP core. It is designed to allow OEMs to quickly bring to market devices requiring robust operating system support, rich user interfaces, and high processing performance life through the maximum flexibility of a fully integrated mixed processor solution. The dual-core architecture of the device provides the benefits of both fixed/floating point DSP and Reduced Instruction Set Computer (RISC) technologies for optimal performance and programming flexibility.

The Enea solution consists of:



Operating System for the ARM926EJ-S Core (GPP)

Depending on the application Enea can provide our full featured RTOS Enea OSE or a Linux distribution. Enea OSE is a modular, high-performance, full-featured realtime operating system optimized for complex distributed systems that require the utmost in availability and reliability.

Key OS Features

- Complete Linux or RTOS for ARM core – full featured, supported
- Crash-proof journaling file system for OSE on GPP with complete support for booting an image from the flash based file system
- Dual mode IPv4 / IPv6 networking stack with security (IPSEC, SSL, etc.)

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Operating System for TI TMS320C764x (DSP)

OSEck (OSE Compact Kernel) is a DSP-optimized version of Enea's full-featured OSE RTOS. Occupying as little as 8 kbytes of memory, OSEck delivers fully-preemptive, event-driven, real-time response and features built-in error detection and handling. DSP management services include boot loading, start up and configuration, supervision, monitoring, logging and tracing, diagnostics and statistics, file system access and in-field debugging.

Key OSEck Features

- Remote mount file system to the DSP core, enables file read/write from DSP to GPP persistent storage
- Remote shell to DSP core, provides flexible CLI facility
- Logging and event trace capability with low overhead transfer to GPP core
- Strong exception handling/post mortem crash dump capability

- Dual Mode IPv4 / IPv6 networking stack with support for security

Interprocess Communications

Enea LINX provides reliable, high-performance, interprocess communications services that make complex distributed systems easier to conceptualize, model, partition, and scale. Enea LINX supports OSE, OSEck and Linux.

Key IPC Features

- Full integration with OSE, OSEck and Linux
- High performance IPC
- Supported by Enea

Development Tools

Enea's Eclipse-Based Optima Integrated Development Environment (IDE) provides a flexible, extensible platform for developing, debugging, building and deploying device software. Powerful system level tools give deep trace and profiling visibility into both the GPP and DSP core through the same development environment.

Key Tool Features

- Common tool chain across both GPP and DSP cores
- Complete kernel awareness and JTAG support for both cores and all operating systems
- Extensive profiling tools for both GPP and DSP cores
- Powerful logging and event trace capability
- Strong exception handling/post mortem crash dump capability

Summary

Only one vendor can deliver a complete solution for heterogeneous SoC devices like the TI OMAP-L137/138. The Enea solution spans both the ARM core and TI DSP simplifying development, speeding debugging and optimization and reducing integration. To learn more about our solution visit: www.enea.com/omapl138 or to reach our global sales team info@enea.com.

What others are saying about Enea's Solution

Texas Instruments

"With Enea's new solution based on TI's OMAP-L137/138 applications processor, customers immediately gain the powerful operation system support they need. Enea's software platform will help OMAP-L138 developers achieve the integration, programmability and debugging ease that they require on the processor's DSP and ARM cores."

Joy Ji

OMAP-L1x Product Line Marketing Manager
Texas Instruments

Enea Customer

"Enea's complete development solution saved us at least 6 months of development for our applications based on the OMAP-L138. Having a single programming model, powerful debug and profiling tools and one source for support really made a huge difference."

Director of Engineering

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