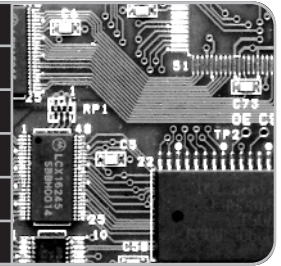




# CodeWarrior™ Development Studio

## SmartDSP OS

Embedded Systems  
Development Tools  
from Metrowerks



### Overview

The SmartDSP OS product is an operating system designed specifically for high performance multi-core DSP systems based on the Motorola StarCore integrated circuits. It works seamlessly with CodeWarrior™ Development Studio for StarCore® DSP Architectures (IDE). Developers can debug the executing OS via the CodeWarrior Task Aware Debugging plugin module. That means developers debug in the context of the OS, not just the machine level, so they can understand how the different tasks in the system interact.

The SmartDSP OS comes with the CodeWarrior Development Studio for StarCore DSP Architectures so users don't have to buy anything new. Developers can evaluate the OS without purchasing, since binaries are included in the CodeWarrior Development Studio for StarCore DSP Architectures evaluation copy.

### Product Highlights

- Fast. Lightweight OS optimized for DSP applications
- Task Aware Plug-in Compatible with CodeWarrior Development Studio for StarCore DSP Architectures.
- Run to completion tasks preempt-able by higher priority tasks (Hardware/Software Interrupts)
- Core to Core synchronization
  - Spinlocks
  - Barriers
- Core to Core communications
  - Messaging
- Stack sharing for fast context switch
- Nested Interrupts
- Heap-free design
- Flexible priority mechanisms
- Time & Memory management built-in
- Over 60 functions that developers can just use out of the box (not counting drivers).
- Preconfigured drivers
  - HDI
  - TDM
- Source code and drivers are included.
- Binaries are available for evaluation

### Supported Processors

- MSC711X, 8101, 8102, 8122, 8126 DSP's

### Available Source Code/Modules

- TDM
- HDI
- Fast Ethernet Controller (2 types)
- UART
- DMA
- Network library
  - UDP/IP software modules
  - MII module
- Code Examples

### Related Products

- CodeWarrior Development Studio for StarCore DSP Architectures
- Host Target Interfaces: USB/Ethernet HTI, Parallel Command Convertor
- Smart Packet Telephony Development Kit(s)
- Development Boards: 8101EVM, 8102ADS, 8102ADS-HOST, 711XEVM, 711XADS, 8122/26ADS

### Available

#### Additional Information:

<http://www.metrowerks.com/MW/Develop/Embedded/StarCore>

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#### Metrowerks United States

7700 West Parmer Lane  
Austin, TX 78729  
Phone +1.512.996.5300  
Fax: +1.512.996.4910  
E-mail: [info@metrowerks.com](mailto:info@metrowerks.com)

#### Metrowerks Europe

Metrowerks GmbH  
Schatzbogen 7, D-81829 München  
Phone: +49 (0)89 92103 555  
Fax: +49 (0)89 92103 607  
E-mail: [info\\_europe@Metrowerks.com](mailto:info_europe@Metrowerks.com)

#### Metrowerks Japan

Shibuya Mitsuba Bldg. 5F Udagawa-cho 20-11  
Shibuya-ku Tokyo 150-0042 Japan  
Phone +81.3.3780.6091  
Fax +81.3.3780.6092  
E-mail: [asia-sales@metrowerks.com](mailto:asia-sales@metrowerks.com)

**metrowerks™**