

# Vector Signal & Image Processing Library

*Industry Standard API  
for Application Portability*

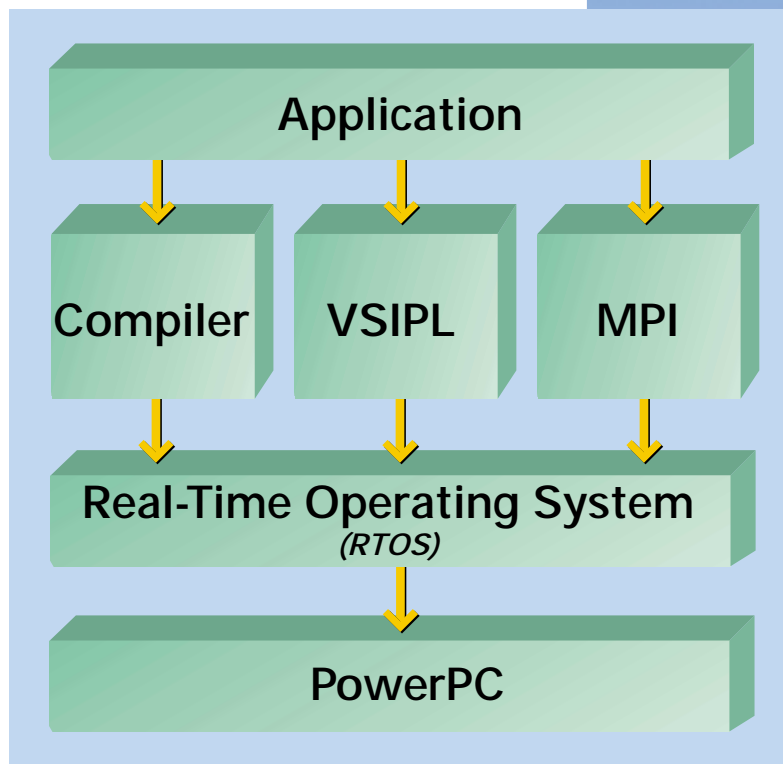
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## VS IPL

The Vector Signal and Image Processing Library (VS IPL) is the result of a DARPA sponsored effort to define an open, industry standard API for vector, signal, and image processing primitives targeted at embedded real-time signal processing systems.

Implemented according to the Core Lite profile, VS IPL is a library of 125 functions for vector-based signal processing applications. The function calls are organized into four primary categories: support functions, basic scalar operations, basic vector operations and signal processing. Support functions facilitate object creation and interaction as well as memory management. The scalar and vector operations allow the programmer to perform numerical computation on dense rectangular arrays. Signal processing functions include FFT operations, filtering, correlation and convolution.

The object-based design of the VS IPL API employs the concept of blocks and views to provide a level of abstraction from the memory and processor architecture of the underlying machine. A block is a logically contiguous area of memory used for data storage. Views are a method for classifying the data as vectors or matrices. Blocks and views are created, accessed and destroyed via library functions. Manipulating blocks and views via library functions assists the application programmer in writing code that is truly portable and compatible.



Features	Benefits
Standard Application Programming Interface	Ensures Application Portability
Common Set of Mathematical Functions	Reduces Development Time
Facilitates development of portable sensor software	Allows for Code re-use and interoperability resulting in higher productivity, lower cost
ANSIC Interface	POSIX compliance for threaded applications

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<http://www.vsipl.org>

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