

# Java™ Platform, Micro Edition Mobile Service Architecture Custom Binary Solution

The Best-in-Class MSA Solution for Your Mobile Phones



## Highlights

- One-stop shop for all your Java™ Platform, Micro Edition implementation needs
- All certifications are done by Sun
- High performance, robust, extensively tested
- No source-code or TCK fee
- Flexible business model, with minimal up-front payment
- Competitive royalty rates
- Dramatically shortened time to market
- Fewer resources required from your engineering team

**>** Introducing the latest Java Platform, Micro Edition (Java ME) mobile services architecture offering, based on the industry-proven MSA implementation: Sun's Custom Binary solution. This solution targets leading phone manufacturers and smaller companies that need a high-quality, performance-optimized MSA implementation.

The Custom Binary solution includes the latest high-performance, multitasking virtual machine, all MSA-required Java Specification Requests (JSRs), and implementations of leading operators' specifications. To simplify and accelerate the development process, Sun provides an extensive set of tools, documentation, sample code, and an interactive test suite to verify the accuracy of the ported code. The porting layer, defined by the Sun Engineering Services group, is optimized for performance and ease of integration, thanks to the reduced set of uniformly named APIs. The latest MSA stack is fully compliant with the JSR 248 MSA specification and all related technologies.

### About Sun Engineering Services

Engineering Services is a worldwide organization that works together with your engineers to create a robust, high-performance implementation for your device, with Custom Binary delivery, training, maintenance, and support. We can also help you create an operator-defined Java ME platform that enables you to differentiate your offering and deploy new, compelling services quickly and easily. Engineering Services' portfolio includes full-fledged porting projects with extendable support and maintenance, proof-of-concept ports, performance tuning, certification, quality testing, platform creation, content deployment, consulting, and training.

### Reduced cost, risk, and effort

The heart of Sun's Custom Binary offering is our commitment to provide you with a complete Java ME solution, while reducing your cost, risk, and effort. Sun takes full responsibility for the Java ME implementation's quality, certification, and performance. With a Sun Custom Binary solution, you no longer need to invest in highly specialized Java technology porting engineers, nor do you need to invest in Java implementation QA testing. Test Compatibility Kit (TCK) execution and certification are done by Sun, relieving you of both TCK fees and execution effort.

### Best-in-class implementation

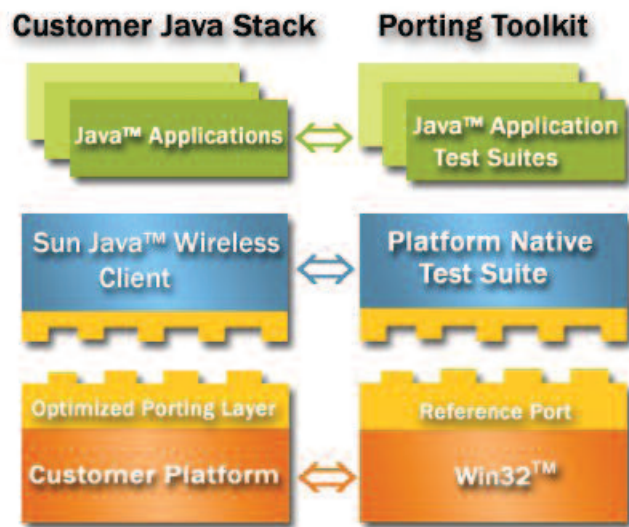
At the core of our solution is Sun's revolutionary virtual machine. Based on Sun Java HotSpot™ technology, HotSpot implementation VMs incorporate several innovations in design that allow the virtual machine to run and perform on resource-constrained devices. It delivers cutting-edge performance, fast application startup time, and a minimal footprint that preserves battery life. The higher level Java implementation is based on Sun Java Wireless Client software but is extended to include a complete, optimized set of MSA JSRs.

### Extensive tools and documentation

An important part of the Custom Binary offering is an extensive set of tools and documentation that allows you to understand the required functionality and minimize the implementation work itself. It contains a clearly defined porting layer, with exact definitions of the required functionality of each API set.

A platform native test suite is used to verify the porting layer implementation. This is a highly portable, quality-verification tool for testing the porting interface on your device. It's designed to ensure that the porting implementation is complete, robust, and bug-free. Test cases are drawn from Sun's extensive experience in porting to dozens of platforms.

A reference port is also provided to allow you to verify your porting layer implementation and compare it to the reference code, if needed. The reference port is an executable implementation on a standard development platform, using the porting interface. This port can be used as a reference whenever questions arise regarding the porting APIs.



*Illustration of porting methodology*

### Operators requirements built in

With the world's leading mobile operators deploying Java in their networks, the need arises to support the requirements of specific operators as part of the Java ME implementation. Sun has worked directly with many of the key operators, including Vodafone, Sprint, Orange, and Cingular. Because Sun Engineering Services is continually working with leading operators, assisting them in successfully creating and deploying new Java architectures and services for their customers, Sun is in the unique position of offering handset implementations based on operator specifications that we helped create.

### Technical characteristics

- Full implementation of Java ME MSA specification; support for JTWI and MSA-subset specifications and clarifications
- Based on Sun's leading virtual machine technology — the HotSpot implementation, with built-in support for true, robust, efficient multitasking (MVM)

- Preintegrated with leading engine providers, such as 3D graphics, multimedia and sound, SVG, GPS, BT, and more
- Complete, extensive documentation for all porting layer interfaces and requirements; a native test suite is provided to allow you to pretest the porting layer and underlying implementation before integrating the code with the Java implementation Custom Binary
- Built-in complete Application Management System (AMS)

### Flexible and competitive commercial terms

Traditionally, Sun has licensed its Java technology in source form. Acknowledging the industry need for Custom Binary as well as source, the Custom Binary offering introduces a different licensing approach. When using the Custom Binary solution, no source code license is needed, nor is any TCK license or fee required. A straightforward agreement is signed between you and Sun that allows for the delivery of a

Custom Binary Java ME implementation. This flexibility is extended to commercial terms as well. Sun is able to offer minimal up-front fees, competitive royalty rates, and flexible payment methods.

### About Sun

A singular vision, "The Network is the Computer™", drives Sun in delivering industry-leading technologies that focus on the whole system — where hardware, software, and services combine. With a proven history of sharing, building communities, and innovation, Sun helps create opportunities, both social and economic, around the world. You can learn more about Sun at [sun.com](http://sun.com).

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