



# JAVA BROCHURE – OVERVIEW

Gemalto Simplifies and Speeds the Internet of Things with Java™

# Gemalto Simplifies and Speeds the Internet of Things with Java

Java is the most pervasive open standards programming language in the world running on billions of devices and machines ranging from mobile phones to enterprise servers to supercomputers. As the global leader in Machine-to-Machine (M2M) technology, Gemalto created a strategic alliance with Oracle to integrate Java across its end-to-end portfolio of Cinterion® solutions and services. Embedded Java simplifies the complex M2M value chain and speeds M2M application development, which in turn, accelerates time to market, incoming revenue, and return on investment.



## Key Features

### Embedded Java Cinterion Technology Answers All M2M Needs

Gemalto delivers a unique combination of end-to-end Cinterion M2M solutions and services including:

- > A range of advanced M2M wireless modules enabling reliable communications
- > Ruggedized Machine Identification Modules™ (MIMs) for secure connectivity to mobile networks
- > Flexible subscription management and security services
- > The cloud-based SensorLogic application enablement platform to connect assets and enterprises

Gemalto's complete Cinterion solution answers the needs of all M2M customers. By offering Java ME, an M2M optimized version of Java, across the entire Cinterion portfolio, Gemalto facilitates end-to-end interworking, transparently passing critical data between the application and the backend server. In short, Gemalto's Java strategy simplifies technology architecture, speeds application development, and elevates M2M to the next level helping to accelerate the expanding Internet of Things.

### Simplicity and Streamlining

Including Java on M2M Modules and MIMs provides developers with a powerful Java Virtual Machine (JVM) that eliminates the need for additional processors and memory chips while reducing design complexity and the expense of extra components. The JVM streamlines application software and device management solutions, which can now be hosted directly on Cinterion solutions already inherent to the M2M application.

### Speeding Time to Market

Located on the application layer of the software, the JVM allows simultaneous development of software and hardware without disrupting or interfering with M2M solution approvals. This allows developers to change, add or delete features at any time during development, even after the product is in production, which significantly shortens development cycles. A swift time to market means quicker revenue for OEMs and faster return on investment for implementers.

## Edge-to-Enterprise Connectivity

Embedded Java connects all elements of the M2M ecosystem, from M2M modules and sensors in devices to the cloud-based SensorLogic application enablement platform. The JVM serves as the command center of the M2M ecosystem connecting device sensors, M2M Modules, application software, security elements, and end-user computer systems. It enables easy interworking and value added features such as over-the-air provisioning and remote data and application updates, which are important to keep solutions current over the long life of M2M solutions.



## Enhanced Sandbox Security

Embedded Java strengthens security by executing applications within a secure, defined environment, commonly known as the "Java sandbox". The Java sandbox separates the Java part from the host system. Access between these two parts is controlled through a clearly defined API. Thereby the Java Virtual Machine is isolated from the core cellular functionality, safeguarding the system integrity.

## Accelerating IOT Evolution

The Java Developer Community is among the largest and most well established in the industry with extensive tools to simplify design, debug, and enable application testing in commonly used development environments. Java developers are able to contribute to the growing Internet of Things by quickly leveraging Gemalto's embedded Java Cinterion solution along with an extensive library of existing APIs to create tomorrow's most innovative applications today.

## Cinterion Concept Board: An Incubator for Java Innovation and the IOT Revolution

Open standards and a large ecosystem of freely available tools and code were a key ingredient in the growth and success of Java. Gemalto is moving this concept forward in M2M with the Cinterion Concept Board, a first-of-its-kind, user-friendly development kit that leverages embedded Java, Cinterion solutions, and the SensorLogic Application Enablement Platform to quickly design next generations M2M solutions. The Concept Board provides a simple environment with everything a developer needs to quickly transform ideas into cutting edge, market ready M2M applications. For hobbyists, tinkerers, and artists, the Concept Board can be connected to Arduino-style sensor boards and includes a powerful Cinterion M2M module for global 2G and 3G cellular connectivity.



With its intelligent Java strategy and providing the tools and open source resources necessary for innovation, Gemalto is accelerating the exciting growth of the Internet of Things, which in turn is enhancing today's modern mobile lifestyle, simplifying the way we live and work in the world. From smart cars and energy systems to mHealth, Gemalto's Cinterion M2M technology is leading the way to the connected future.

**For more information, please visit**

[m2m.gemalto.com](http://m2m.gemalto.com), [www.facebook.com/gemalto](http://www.facebook.com/gemalto), or Follow @gemaltom2m on twitter.

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