

Java™ 2 Platform, Micro Edition Mobile Information Device Profile Reference Implementation Release Notes

Version 1.0.3



Sun Microsystems, Inc.
901 San Antonio Road
Palo Alto, CA 94303 USA
650 960-1300 fax 650 969-9131

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Introduction

Supported Platforms

The J2ME™ *Mobile Information Device Profile Reference Implementation* (MIDP RI) runs on Windows 2000 platforms. This is the only officially supported platform. However, Sun has successfully ported the RI to the Solaris and Linux platforms. A build environment including makefiles is included in the RI for those other platforms.

1.1 Differences Between 1.0.1 and 1.0.3 Releases

This release is named 1.0.3 to track with the corresponding 1.0.3 release of the Connected, Limited Device Configuration (CLDC). There was no 1.0.2 release of the MIDP RI.

The MIDP 1.0.3 release contains a number of bug fixes and improvements.

Note – The RI still supports the *MIDP 1.0 Specification*. No new APIs or API changes have been added to the specification.

However, a Recommended Practices addendum was published related to OTA Provisioning (see “OTA Provisioning” on page 2).

The MIDP 1.0.3 release features several key enhancements over prior releases of the RI:

- Enhancements to support OTA (over-the-air) provisioning.
- Graphical Application Management Software (AMS) included.
- Optional HTTPS support, including KSSL (subject to export controls.)
- Changes to the porting layer (removal of the helper class.)
- Keyboard entry enhancements.

Note – These new features are provided as examples and their support is not required to pass the MIDP Technology Compatibility Kit (TCK). Therefore, MIDP compliant devices need not support this functionality.

OTA Provisioning

OTA Provisioning is a recommended practice to help wireless network operators deploy applications in a consistent way. It is written as an addendum to the *MIDP 1.0 Specification*, and was finalized by the MIDP 1.0 expert group on May 7, 2001:

<http://java.sun.com/products/midp/OTAProvisioning-1.0.pdf>

AMS

In past releases, AMS was sometimes referred to as JAM (Java Application Manager), but this is misleading because JAM properly refers to a feature of the CLDC specification.

HTTPS Support

Beginning with the MIDP 1.0.3 RI, HTTPS support is provided.

Note – HTTPS support is not provided in the default binary version of the MIDP 1.0.3 reference implementation.

In order to enable HTTPS support, you must rebuild the binary from the source, using the `INCLUDE_HTTPS` configuration option, as documented in `Compile.html` in the `docs` directory.

Note – The *MIDP 1.0 Specification* and the MIDP 1.0.3 RI specifies an HTTP 1.1 proxy server for HTTPS communication through a proxy. If you are developing or testing HTTPS communication through an HTTP 1.0 or HTTP 1.1 proxy server, the proxy must be configured to enable SSL tunneling.

JDK 1.3 (or later) is required for HTTPS support, because of the security features needed for the offline tool used to extract runtime keys from certificates. (KSSL is a small-footprint Secure Socket Layer (SSL) implementation for J2ME devices.)

The MIDP HTTPS only supports X.509 certificates signed with either “MD5 and RSA” or “SHA1 and RSA”. Certificates signed with “MD2 and RSA” will not work.

Note – If you use JDK 1.4, you must include the option “-target 1.1” in the command line for `javac`.

Helper Class Removed

The 1.0 release of the MIDP RI contained a helper class that served as a porting layer. That helper class was useful when initial porting was done. But, since many method calls had to go through that porting layer, it slowed down performance.

To improve performance, the helper class was removed in MIDP1.0.3. As a result, native methods that used to be the implementation of helper class methods now implement native methods in, for example, `Display.java`, `Graphics.java`, `Font.java`, and `Image.java`.

For more details on changes to the porting layer, refer to the *MIDP Porting Guide*.

Keyboard Entry Enhancements

This enhancement allows the keyboard to be used for character entry into `TextFields` and `TextBoxes` when running the RI’s emulator.

For more details on new features, refer to the Preface of the *MIDP Porting Guide*.

Prerequisites and Dependencies

The 1.0.3 release requires CLDC version 1.0.3.

The release implementation should be built with the Java Development Kit version 1.3 or later.

For more information about required software versions, see `InstallGuide.html` in the `docs` directory.

All Source Files Modifiable

If you are a MIDP RI licensee, you can freely modify any source code in this release to port or implement for your target platform. This includes source files under the `share` directory.

HTML Documentation

The `docs` directory of this release contains the present document, the *MIDP RI Release Notes*, as well as the *MIDP Porting Guide*, in PDF format. Other important documentation is included in this release in HTML format. Refer to `document_roadmap.html` in the `docs` directory.

Installation Notes

Unzipping the Distribution

Unzip the distribution into any directory of your choice. It creates the directory `midp1.0.3` with the following subdirectories:

- `appdb`
- `bin`
- `build`
- `classes`
- `docs`
- `example`
- `lib`
- `src`
- `tools`

Please refer to the file `DirectoryStructure.html` (in the `docs` directory) for further information on the contents of these directories.

Note: The distribution contains a binary version of the RI, as well as the source files. The binary version has all internationalization features turned on. To build a version without internationalization, compile the RI with the flag `"INCLUDE_I18N=false"`. (This reduces the build size by approximately 35K on Windows platforms.)

For other options to reduce the build size, refer to Chapter 7 of the *MIDP Porting Guide*.

Building the RI

The RI is officially supported on Windows 2000 platforms.

See `InstallGuide.html` in the `docs` directory for information about the requirements for a development machine, configuration that must be done before MIDP is compiled, and instructions on building and running the RI.

Known Bugs

A number of bugs have been dispatched for re-engineering but remain open at the time of this release. Bugs that pertain to CLDC are filed in the `kvm` category, and those that pertain to the MIDP RI are filed in the `mid-profile` category.

To report MIDP 1.0.3 RI bugs, please write to `midp-comments@sun.com`.

For further information about any of these bugs, log in to the Java Developer Connection (JDC) web site: <http://developer.java.sun.com/developer>

Bug Id	Synopsis
4491071	External http server can not handle messages without "Content-Length"
4497321	Bad error message is displayed for a missing parameter to "-remove" command
4488716	HTTP Protocol not thread-safe (clean up of failed <code>openInputStream()</code>)
4499260	Mismatch between <code>Configuration.getProperty</code> keys and names in <code>intern.config</code>
4494498	Inconsistentsy in <code>getSize()</code> and <code>getSizeAvailable()</code> returned values
4474728	Gauge should be changed to include its own arrow keys
4496218	<code>pngDecode</code> doesn't correctly handle the <code>tRNS</code> chunk for 16bit images
4496325	<code>pngDecode</code> ignores the <code>bKGD</code> chunk
4498504	Old ticker text doesn't erase immediately when a new Ticker is set
4486645	<code>TextEditor</code> applies changes to <code>TextField</code> as they are made, instead of on 'save'
4500759	When calling the <code>flush()</code> method without <code>write()</code> ing any data - causes Exception
4502683	PNG images could not be loaded in PhotoAlbum demo
4501284	Screen does not return to the main screen after message "Installation cancel"
4504343	In ASM, Item's label is not displaying
4504347	The Items of the ASM's menu is not scrolling properly
4504263	<code>TextBox</code> doesn't repaint properly in ASM

