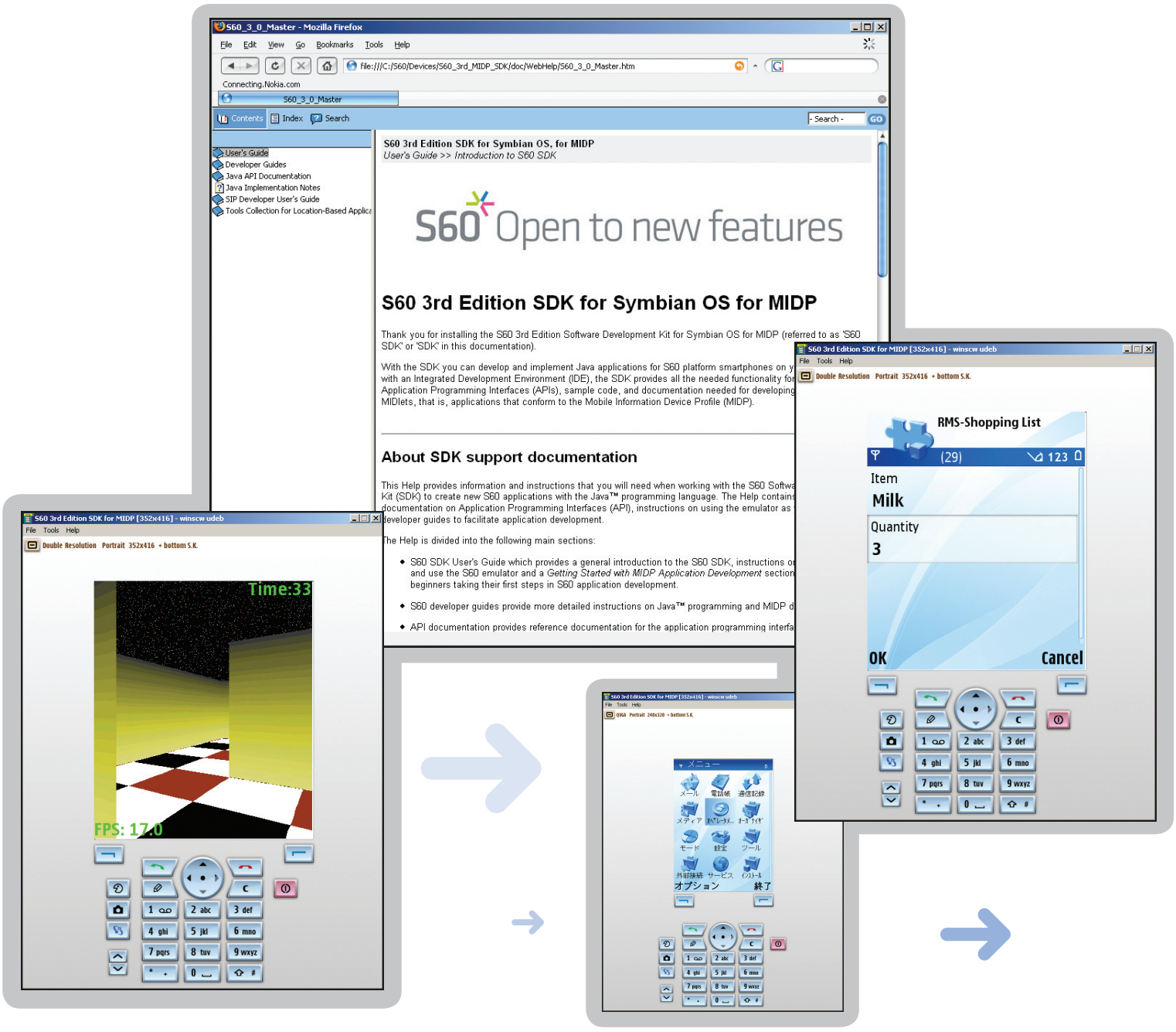
S60 Platform SDKs for Symbian OS, for Java™ MIDP



The S60 Platform SDKs for Symbian OS, for Java™ MIDP, allow Java developers to quickly and efficiently run and test Java applications for devices that are built on the S60 platform. Using a Java integrated development environment (IDE), development with the SDK is hosted on a PC. The SDK delivers all the tools required to build Java applications. Each SDK includes an S60 device emulator, Java API implementations, documentation, and sample applications. The S60 device emulator allows developers to run and test applications without a device.

S60 Platform SDKs for Symbian OS, for Java™ MIDP — Features and Description

Key Features Summary	1st Edition, Feature Pack 1	2nd Edition, Feature Pack 1	2nd Edition, Feature Pack 2	2nd Edition, Feature Pack 3	3rd Edition
S60 1st Edition support	•	•	•	•	•
S60 2nd Edition support		•	•	•	•
S60 3rd Edition support					•
CLDC 1.0 support	•	•	•	•	•
CLDC 1.1 support			•	•	•
MIDP 1.0 support	•	•	•	•	•
MIDP 2.0 support		•	•	•	•
Nokia UI API support	•	•	•	•	•
FileConnection API (JSR-75) support			•	•	•
PIM API (JSR-75) support			•	•	•
Java™ APIs for Bluetooth (JSR-82) support	•	•	•		
Java™ APIs for Bluetooth (JSR-82) with OBEX support				•	•
Wireless Messaging API (JSR-120) support	•	•	•	•	•
Wireless Messaging API 1.1 (JSR-120) support		•	•	•	•
Mobile Media API (JSR-135) support	•	•	•	•	•
Mobile Media API 1.1 (JSR-135) support		•	•	•	•
J2ME™ Web Services Specification (JSR-172) support				•	•
Security and Trust Services API for J2ME™ (JSR-177) support					•
Location API for J2ME™ (JSR-179) support					•
SIP API for J2ME™ (JSR-180) support					•
Mobile 3D Graphics API for J2ME™ (JSR-184) support			•	•	•
Wireless Messaging API 2.0 (JSR-205) support					•
Bluetooth technology support					BCSP and H4
Infrared device support					•
Connectivity support	•	•	•	•	•
Debugging support	•	•	•	•	•
Command-line interface	•	•	•	•	•
Scalable UI support (176 x 208 pixel)				•	•
Scalable UI support (352 x 416 pixel)				•	•
Scalable UI support (416 x 352 pixel)				•	•
Language Versions					
Chinese		•	•	•	•
Japanese			•	•	•
Thai				•	•

System Requirements	
Operating system	Windows 2000 (SP 4) or Windows XP (SP 2)
RAM (minimum)	256 MB
RAM (recommended)	512 MB
Processor	1-GHz or faster Pentium-class processor
Disk space (SDK only)	600 MB
Color support	16-bit
Monitor resolution	1,024 x 768 pixels
Keyboard and mouse	•
Java™ Runtime Environment (JRE) version	1.4.2_06
Sound	Microsoft Windows compatible sound card
Other requirements	• UNZIP software for unpacking the download. • Administrator rights for installation. • Internet connection for registration.

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CLDC Support

The SDKs support the Connected Limited Device Configuration (CLDC) of Java™ 2 Platform, Micro Edition (J2ME™): CLDC 1.0 in SDKs up to 2nd Edition Feature Pack 1 and CLDC 1.1 in SDKs from 2nd Edition Feature Pack 2. This specification sets the standard for highly portable, minimum-footprint Java applications for resource-constrained connected devices. The SDKs provide the same implementation as the devices, guaranteeing the closest possible emulation of device behavior.

Scalable UI Support

The SDK for 3rd Edition platform supports three screen resolutions in both portrait and landscape orientations.

MIDP Support

The SDK for 1st Edition supports the Mobile Information Device Profile (MIDP) 1.0 API. From the SDK for 2nd Edition, support was added for the MIDP 2.0 API, with features that include multimedia and game functionality, enhanced user interface, greater connectivity, over-the-air (OTA) provisioning, and end-to-end security. The SDKs provide the same implementation of the MIDP specification that real devices provide, guaranteeing the closest possible emulation of device behavior.

Java API Support

The SDKs support all the Java APIs available on devices that are compliant with the corresponding edition of the S60 platform, including the Nokia UI API. The SDKs support the FileConnection and personal information manager (PIM) APIs (JSR-75), the Java APIs for Bluetooth (JSR-82), the Wireless Messaging API (JSR-120), the Mobile Media API (JSR-135), J2ME™ Web Services Specification (JSR-172), the Security and Trust Services API for J2ME (JSR-177), the Location API for J2ME (JSR-179), the SIP API for J2ME (JSR-180), the Mobile 3D Graphics API (JSR-184), the Wireless Messaging API 2.0 (JSR-205), and the Wireless Messaging API 2.0 (JSR-205).

Connectivity Support

The SDKs support HTTP communications over a LAN, allowing developers to test and verify applications with network functionality.

Debugging Support

The SDKs support debugging as defined in the J2ME CLDC specification. Using an IDE with Java™ Debug Wire Protocol (JDWP) support, applications can be debugged with line-by-line execution and breakpoints in the S60 emulator.

Bluetooth Technology Support

The 3rd Edition SDK adds support for Bluetooth protocols BCSP and H4. Bluetooth support has been tested with the following devices:

- Brainboxes BL-500.
- Casira Bluetooth Development Kit.
- Universal Serial Bus (USB) dongles with Cisco Carrier Sensitive Routing (CSR) Version 1.1 chipset equipped with Cyberabi BH4-X wrapper software.

Infrared Support

The SDKs provide tested support for the Extended Systems, Inc. Jeteye pod ESI 9680.

"Always On" Emulator Support

From the S60 3rd Edition SDK, the emulator can be opened and left running. MIDlets can then be started on an existing emulator instance. This improves development productivity, since testing can be started immediately, without waiting for the emulator to start.

Emulator Location Support

From the S60 3rd Edition SDK, support is provided for simulating location information, allowing location-based applications to be tested on a PC.

Support for Development of Asian-Language Applications

Support for the development of Chinese- and Japanese-language applications is provided from the S60 2nd Edition SDKs. From the S60 2nd Edition Feature Pack 3 SDK, support was added for the Thai language.

Command-Line Interface

A command-line interface allows use of the emulator in conjunction with other IDEs and proprietary environments and the adaptation to other specific needs.

S60 Platform Support

The SDKs provide support for developing applications on the S60 platform, with versions that support S60 1st Edition, S60 2nd Edition, and S60 3rd Edition.

IDE Support

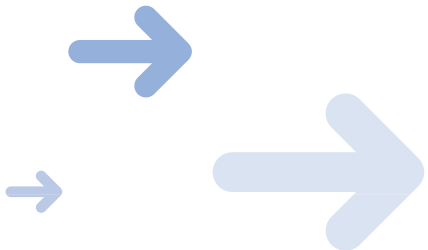
The IDEs compatible with each SDK are listed in the Supported IDEs table. For more information on the supported IDEs, see www.forum.nokia.com/toolpartners.

The SDKs can be used with Carbide.j to provide features that enhance development undertaken using the SDKs. Features include a class creator, a package creator, a package signer, an application deployer, an audio converter, a UI designer, and emulator management. For more information on Carbide.j, see www.forum.nokia.com/carbide.

Documentation and Examples

Comprehensive online documentation provides a detailed introduction and a getting-started tutorial for each SDK; a comprehensive emulator guide and Javadocs API documentation are included as well. A dedicated developers-guide section provides an excellent starting point for developers who are not familiar with the basics of the S60 platform, and it gives guidelines for designing and testing Java applications for the platform.

In addition, extensive example applications are provided to demonstrate the use of the APIs available in S60 3rd Edition.



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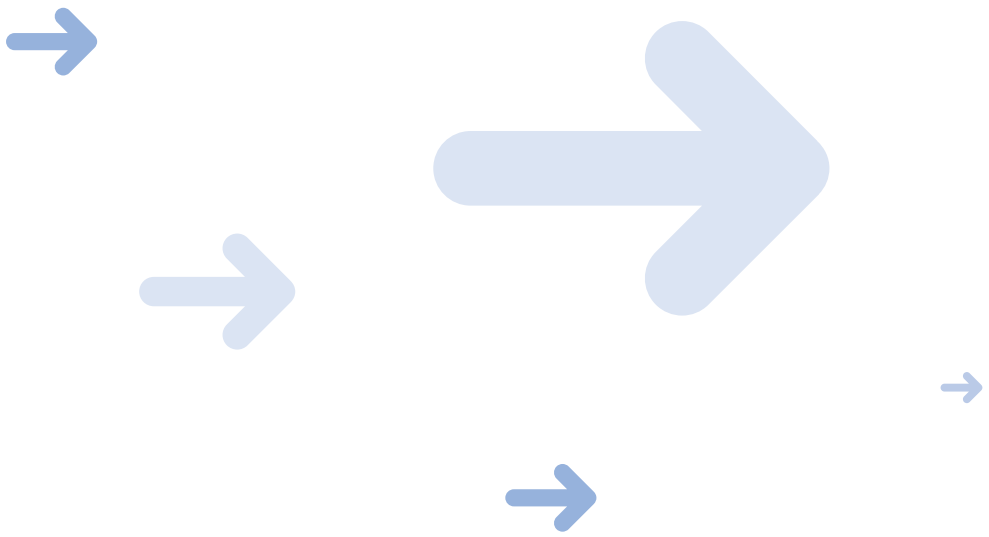
Supported IDEs	1st Edition, Feature Pack 1	2nd Edition, Feature Pack 1	2nd Edition, Feature Pack 2	2nd Edition, Feature Pack 3	3rd Edition
Borland JBuilder	9 Mobile Edition or X Mobile Edition	9 Mobile Edition or X Mobile Edition	9 Mobile Edition or X Mobile Edition	2005 Developer	2005 Developer
Sun ONE Studio 4 update 1, Mobile Edition	•	•			
Sun ONE Studio 5 update 1, Mobile Edition	•	•			
IBM WebSphere Studio Device Developer	5.6	5.6	5.7	5.7	5.7
Sun Java™ Wireless Toolkit	2.0	2.0	2.1	2.2	2.2
Sun Java™ Studio			Mobility 6 2004Q3		
Eclipse			3.1[1]	3.1[1]	3.1[1]
NetBeans IDE				4.0 and 4.1	5.0 + Mobility Pack 5.0

[1] To enable integration, Carbide.j must be installed after the Eclipse IDE and before installing any SDKs.



www.forum.nokia.com/tools