

# Runtime feature table

Area	Feature	Explanation	Flash Lite	Java ME	Webkit Browser	WRT Widgets	P.I.P.S./ Open C	Symbian C++ ①
Camera	Take picture	The application can take a picture.	✗	✓	✗	✗	✓*	✓
	Record video	The application can record video.	✗	✓	✗	✗	✓*	✓
	Access image data directly from camera	The application has the ability to process image data directly from camera, e.g., for motion detection.	✓*	✓	✗	✗	✓*	✓
Communication	Send via Bluetooth	The application can send data via Bluetooth.	✓*	✓	✗	✗	✓	✓
	Receive via Bluetooth	The application can receive data via Bluetooth.	✓*	✓	✗	✗	✓	✓
	Accept Bluetooth connection	The application can accept a Bluetooth connection from another device.	✓*	✓	✗	✗	✓*	✓
	Send via infrared	The application can send data via infrared.	✓*	✓	✗	✗	✓*	✓
	Receive via infrared	The application can receive data via infrared.	✓*	✓	✗	✗	✓*	✓
	Accept infrared connection	The application can accept an infrared connection from another device.	✓*	✓	✗	✗	✓*	✓
	Send via cable connection	The application can send data via cable connection.	✓*	✓	✗	✗	✓	✓
	Receive via cable connection	The application can receive data via cable connection.	✓*	✓	✗	✗	✓	✓
	Send via TCP/IP	The application can send data via TCP/IP.	✓*	✓	✗	✗	✓	✓
	Receive via TCP/IP	The application can receive data via TCP/IP.	✓*	✓	✗	✗	✓	✓
	Accept TCP/IP connection	The application can accept a TCP/IP connection from another device.	✓*	✓	✗	✗	✓	✓
	Initiate GPRS connection	The application can control initiation of GPRS connection, e.g., APN, QoS, etc.	✓*	✓	✓	✓	✓	✓
Initiate WiFi connection	The application can initiate WiFi connection.	✓*	✓	✓	✓	✓	✓	
Messaging	Send SMS	The application can send SMS	✓	✓	✓	✓	✓*	✓
	Receive SMS	The application can receive SMS.	✓*	✓	✗	✗	✓*	✓
	Intercept SMS	The ability to detect an incoming SMS/MMS and process it without the 'normal' message application reacting so that, e.g., there is no alert to the user and it does not show up in the inbox.	✓*	✓	✗	✗	✓*	✓
	Suppress SMS	The ability to block/alter a message that the user has sent, e.g., for firewalling or auditing purposes.	✓*	✗	✗	✗	✓*	✓
	Send MMS	As for SMS.	✓	✓	✓	✓	✓*	✓
	Receive MMS	As for SMS.	✓*	✓	✗	✗	✓*	✓
	Intercept MMS	As for SMS.	✓*	✓	✗	✗	✓*	✓
	Suppress MMS	As for SMS.	✓*	✗	✗	✗	✓*	✓
Read contacts	The application can read contacts on device.	✓*	✓	✗	✗	✓*	✓	
PIM	Write contacts	The application can write contacts on device.	✓*	✓	✓	✓	✓*	✓
	Alter contacts fields	The application can create contacts fields.	✓*	✓	✗	✗	✓*	✓
	Read calendar	The application can read calendar items.	✓*	✓	✗	✗	✓*	✓
	Write calendar	The application can write calendar items.	✓*	✓	✗	✗	✓*	✓
LBS	Get location from GPS	The application can get location information from GPS.	✗	✓	✗	✗	✓*	✓
	Get location from WiFi	The application can get location information from WiFi.	✗	✗	✗	✗	✓*	✓
	Get location from cell	The application can get location information from cellular network.	✗	✗	✗	✗	✓*	✓
	Share/transmit location	The ability to enable a remote server to ask for the location of the device under the control of an application (on device).	✗	✗	✗	✗	✓*	✓

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<b>File system</b>	Read files	The application can read files on device subject to underlying security permissions.	✗	✓	✗	✗	✓	✓
	Write files	The application can write files on device subject to underlying security permissions.	✗	✓	✗	✗	✓	✓
	Read XML	The application can read XML files subject to underlying security permissions.	✓	✓	✗	✗	✓*	✓
	Write XML	The application can write XML files subject to underlying security permissions.	✓	✓	✗	✗	✗	✗
	Limited file size	Is the file size limited other than by available storage space on device?	✓	✗	✗	✗	✗	✗
<b>Call functions</b>	Dial	The application can dial a call.	✓	✓	✓	✓	✓*	✓
	Answer	The application can answer a call.	✓*	✗	✗	✗	✓*	✓
	Terminate	The application can terminate a call.	✓*	✗	✗	✗	✓*	✓
	Conference	The application can make a conference call.	✗	✗	✗	✗	✓*	✓
	Record voice calls	The application can record voice calls.	✗	✗	✗	✗	✓*	✓
<b>Multimedia</b>	Play audio	The application can play audio.	✓	✓	✓	✓	✓*	✓
	Record audio	The application can record audio.	✓*	✓	✗	✗	✓*	✓
	Play video	The application can play video.	✓	✓	✓	✓	✓*	✓
	Record video	The application can record video.	✓*	✓	✗	✗	✓*	✓
	Display image	The application can display an image.	✓	✓	✓	✓	✓*	✓
<b>Environment awareness</b>	Incoming calls	The application can be notified on incoming calls.	✓*	✗	✗	✗	✓*	✓
	When SMS received	The application can be notified when SMS received.	✓*	✓	✗	✗	✓*	✓
	When MMS received	The application can be notified when MMS received.	✓*	✓	✗	✗	✓*	✓
	When WiFi detected	The application can be notified when WiFi detected.	✗*	✗	✗	✗	✓*	✓
	When camera activated	The application can be notified when the camera is activated.	✗*	✗	✗	✗	✓*	✓
	Signal strength	The application can detect signal strength.	✓	✗*	✗	✓	✓*	✓
	Active connections	The application can detect active connections.	✓	✗	✗	✓	✓*	✓
<b>Lifecycle</b>	Always on	Once the application has been started, it continues to run until the phone is shut down/rebooted (also known as background running).	✗	✓	✗	✗	✓	✓
	Start on boot	The application can be started automatically when the phone is switched on, without user intervention. Combined with 'Always on,' this guarantees an application to be running whenever the phone is switched on.	✗	✗	✗	✗	✓*	✓
	From browser	The application can be started from browser.	✗*	✓	✗	✗	✓*	✓
	From other application	The application can be started from other applications.	✗*	✓	✓	✓	✓	✓
<b>UI capability</b>	On homescreen	The application shows on the homescreen.	✓	✗	✗	✗	✓*	✓
	Context menus	The application shows in the Context menu.	✓	✓	✗	✓	✓*	✓
	Native look-and-feel	The application has a native look-and-feel.	✓	✓	✓	✓	✓*	✓
	Advanced animation	The application can have advanced animation.	✓	✓	✓	✓	✓*	✓
<b>Web protocol/content support</b>	HTTP	Supports HTTP.	✓	✓	✓	✓	✓*	✓
	HTML, etc., markup languages	Supports HTML, etc., markup languages.	✓	✗	✓	✓	✗	✗
	JavaScript	Supports JavaScript.	✓	✗	✓	✓	✗	✗
<b>Fragmentation (1 – 5, where 1 is the least fragmented)</b>			1	4▲	2	1	4★	2
<b>Programmer availability (1 – 5, where 1 is the least available)</b>			3	4	5	5	2◆	1
<b>Skill level required (1 – 5, where 1 is the least skill required)</b>			2	3	1	1	4	5
<b>Tool availability (1 – 5, where 1 is the least available)</b>			2	5	5	5	3	1
<b>Training availability (1 – 5, where 1 is the least available)</b>			2	5	3	3	4	2
<b>Content availability (1 – 5, where 1 is the least available)</b>			4	5	3	1	4	2

- Note:**
- ✓ In standard platform release.
  - ✓\* The feature does not come as standard, the developer needs to extend the runtime or call out to the underlying native OS APIs, e.g., C and C++.
  - ✗\* OEM/device/platform dependent.
  - ✗ Not in standard platform release.
  - ① Third-party developer.
  - ▲ Generally Java ME has heavy fragmentation; on Symbian OS the fragmentation is light.
  - ★ Standard C is heavily fragmented, while P.I.P.S./Open C have little fragmentation.
  - ◆ Wide C/C++ programmer base, however porting applications to Symbian often requires some Symbian experience to fill the holes that P.I.P.S. does not provide, e.g., UI.