

# MIDP: Mobile Media API Support In Nokia Devices

Version 1.0; April 7, 2006

## Overview

This document lists the Mobile Media API (JSR-135) features that are supported in Nokia devices. Note that even though many Nokia devices support the Mobile Media API, the supported features of the API vary because of the device implementation (for example, due to differences in hardware). Also note that a device may not necessarily support a feature using the Java™ Mobile Media API even if it supports it natively (from preinstalled applications or using C++ APIs). You have to carefully design the application so that it can support as many devices as possible. In some cases the application still has to be optimized for different platforms or devices.

For more information on the Mobile Media API, see [MIDP: Mobile Media API Developer's Guide](#).

## Tested Platforms and Devices

The data was collected by using a test MIDlet, using system property values, or based on the information on the Forum Nokia Audio and Video pages at <http://www.forum.nokia.com/audiovideo>. The tests were run on the following devices:

**Series 40 2nd Edition:** Nokia 3220, Nokia 5140i, Nokia 6030, Nokia 6101, Nokia 6230, Nokia 6230i

**Series 40 3rd Edition:** Nokia 6111, Nokia 6280, Nokia 7370

**S60 1st Edition:** Nokia 3650, N-Gage™ QD

**S60 2nd Edition:** Nokia 6600

*Feature Pack 1:* Nokia 3230, Nokia 7610

*Feature Pack 2:* Nokia 6630, Nokia 6680

*Feature Pack 3:* Nokia N70, Nokia N90

**S60 3rd Edition:** Nokia E60

**Series 80 2nd Edition:** Nokia 9300, Nokia 9500

**Nokia 7710**

The only S60 3rd Edition device available at the time of testing was Nokia E60. Information on other S60 3rd Edition devices will be added to the next release of this document. CDMA devices were not included in the tests.

## How to Read the Tables

The data is organized into six tables that cover speech and music audio playing capabilities, synthetic audio playing capabilities, speech and music audio recording capabilities, video capabilities (playing and recording), camera snapshot capabilities, and supported controls.

The features common in each platform are gathered as **baseline** features on the first, gray-colored row of each platform (shown as bold text). To find out the support in a specific platform edition, you should first look at the baseline support of a platform (devices complying with it are listed thereafter). Devices that are tested to differ from the baseline are listed separately below the baseline. Note that the baseline features have only been composed to improve readability of the data and to serve as a baseline among tested devices. The baseline features were created in each table to include the most common features or, if feasible, the minimum set of features in each platform. The baseline does not

mean that all other Nokia devices based on the particular platform would support the features. Note that the set of devices conforming to the baseline may differ between tables.

- 'x' means that the feature was tested to work.
- '-' means that the baseline/device does not support the feature.
- An empty cell means that the device supports the specific feature like the baseline does, that is, the device is according to the baseline.
- Text/figures in the cell define how the feature is supported (for baseline) or how the device differs from the baseline (for separately listed devices).
- p) means that a value for a feature was obtained from system properties (not tested).
- \*) in the column header means that a feature was not tested but the information was taken from device specifications (for example, from <http://www.forum.nokia.com/audiovideo>).

## Speech / Music Audio Playing Capabilities

Platform baseline & sample devices	AMR	AMR WB	Real Audio	MP3	AAC-LC, AAC-LTP	eAAC+, AAC+	WAVE	AU
Extensions	.amr	.awb	.ra, .rm	.mp3	.aac, .mp4, .3gp, .3g2, m4a	.3gp, .mp4	.wav	.au
<b>Series 40 2nd Edition:</b> 3220, 5140i, 6030, 6101, 6230	-	-	-	-	-	-	-	-
6230i	4.75 - 12.2	6.6 - 23.85	-	x	aac	-	1)	-
<b>Series 40 3rd Edition:</b>	<b>4.75-12.2</b>	<b>6.6-23.85</b>	-	<b>x</b>	<b>aac</b>	-	<b>1)</b>	-
6111			-		aac	-		-
6280			-	5)	also m4a	-	1), 2)	-
7370	-		-	5)	also m4a	-	1), 2)	-
<b>S60 1st Edition:</b> 3650, N-Gage QD	<b>4.75-12.2</b>	-	-	-	-	-	<b>2)</b>	-
<b>S60 2nd Edition:</b>	<b>4.75-12.2</b>	<b>6.6-23.85</b>	<b>x</b>	<b>x</b>	<b>aac</b>	-	<b>x</b>	<b>x</b>
3230								
6600	4.75 - 5.9	14.25 - 18.25, 23.05 - 23.85		-	-	-	2), 3)	3), 4)
7610					also 3gp	-		
6630, 6680					also 3gp, mp4	-		
N70, N90					also 3gp, mp4	x		
<b>S60 3rd Edition:</b>	<b>4.75 - 12.2</b>	<b>6.6 - 23.85</b>	<b>x</b>	<b>x</b>	<b>aac, 3gp, mp4</b>	<b>x</b>	<b>x</b>	<b>x</b>
E60								
<b>Series 80 2nd Edition:</b> 9300, 9500	<b>4.75 - 12.2</b>	<b>6.6 - 23.85</b>	<b>x</b>	<b>x</b>	<b>aac, 3gp</b>	-	<b>x</b>	<b>x</b>
<b>Nokia 7710:</b>	<b>4.75 - 12.2</b>	<b>6.6 - 23.85</b>	<b>x</b>	<b>x</b>	<b>aac</b>	-	<b>x</b>	<b>x</b>

**Table 1: Speech / music audio capabilities**

Notes:

x = Tested to work.

1) Tested OK using the audio/wav MIME type.

2) Tested OK using the audio/x-wav MIME type.

3) Tested OK using the audio/basic MIME type.

4) Tested OK using the audio/au MIME type.

5) The device should also support ID3v2 metadata for MP3 and AAC (three tags supported: title, artist, URL).

## Synthetic Audio Playing Capabilities

Platform baseline & sample devices	OTA ring tone	MIDI / SMF	SP-MIDI	Mobile XMF
<b>Series 40 2nd Edition:</b> 6101, 6230	x	type 0, 1	poly 4-24	-
3220			poly 4-16	-
5140i	-			-
6030		-	-	-
6230i			poly 4-64	-
<b>Series 40 3rd Edition:</b> 6111, 7370	x	type 0, 1	poly 4-64	-
6280				1)
<b>S60 1st Edition:</b> 3650, N-Gage QD	-	type 0, 1	poly 4-24	-
<b>S60 2nd Edition:</b> 6600	x	type 0, 1	x	-
3230	-	type 0 only	-	-
7610			poly 4-48	-
6630, 6680			poly 4-24	-
N70, N90			poly 4-64	x
			poly 4-64	x
<b>S60 3rd Edition:</b> E60	x	type 0, 1	poly 4-64	x
<b>Series 80 2nd Edition:</b> 9300, 9500	x	type 0, 1	poly 4-24	2)
<b>Nokia 7710:</b>	-	type 0, 1	poly 4-24	2)

**Table 2: Synthetic audio playing capabilities**

Notes:

x = Tested to work.

1) Tested OK using the audio/x-beatnik-rmf MIME type.

2) Tested OK using the audio/vnd.nokia.mobile-xmf MIME type.

### Speech / Music Audio Recording Capabilities

Platform baseline & sample devices	Default encoding	WAV (pcm)	AMR	AU (u-law, a-law)	RAW	GSM	MP4
Extensions		.wav	.amr, .awb	.au			
Series 40 1st, 2nd, 3rd Edition:	-						
S60 1st Edition:	-						
S60 2nd Edition: 6630, 6680, N70, N90	pcm	x	x	p	p	-	-
6600	- 1)	- 1)	- 1)	- 1)	- 1)	-	-
3230, 7610			p			-	-
S60 3rd Edition: E60	pcm	x	x	p	-	p	p
Series 80 2nd Edition: 9300, 9500	pcm	x	-	p	p	-	-
Nokia 7710:	pcm	x	-	p	p	-	-

Table 3: Speech / music audio recording capabilities

Notes:

x = Tested to work.

p = Value obtained from system properties; not tested.

1) Although the system properties of Nokia 6600 stated that recording would be supported, it did not work in tests.

## Video Capabilities

Platform baseline & sample devices	Video recording					Video playing				
	Video codecs	Audio codecs	Image size *)	Frame rate (fps) *)	Max file size, KB *)	Video codecs	Audio codecs	Optim. image size *)	Max frame rate (fps) *)	Max bit rate (Kbit/s) *)
<b>Series 40 2nd Edition:</b> 3220, 6030, 6101, 6230, 5140i	-	-	-	-	-	-	-	-	-	-
6230i	-	-	-	-	-	H.263 P0 L10, MPEG-4 VSP	AMR-NB	176 x 144	25	128
<b>Series 40 3rd Edition:</b> 6111, 7370	-	-	-	-	-	H.263 P0 L10, MPEG-4 VSP	AMR-NB	352 x 288	30	384
6280	H.263	AMR-NB	128 x 96	15	100					
<b>S60 1st Edition:</b> N-Gage QD	-	-	-	-	-	H.263 P0 L10, NIM	AMR-NB	176 x 144	10	64
3650	yuv420 p)	-	-	-	-					
<b>S60 2nd Edition:</b> 3230, 6630, 6680, 7610	H.263 P0 L10	AMR-NB	176 x 144	7	100 or extended	H.263 P0 L10, MPEG-4 VSP, RealVideo 7,8 (rm)	AMR-NB, AMR-WB, RealAudio 7,8, AAC	176 x 144	15	128
6600			128 x 96		95		No AAC		10	64
N70, N90		AAC	352 x 288	15	300 or extended		also AAC+, eAAC+	352 x 288 (H.263 & MPEG-4); 176 x 144 (RealVideo)		
<b>S60 3rd Edition:</b> E60	MPEG-4, VSP 0,2	AAC	352 x 288	15	300 or extended	H.263 P0 L10, MPEG-4 VSP, RealVideo 7,8,9,10 (rm)	AMR-NB, AMR-WB, RealAudio 7,8,10, AAC,AAC+, eAAC+	352 x 288 (H.263 & MPEG-4); 176 x 144 (RealVideo)	15	128
<b>Series 80 2nd Edition:</b> 9300	-	-	-	-	-	H.263 P0 L10, MPEG-4 VSP, rm	AMR-NB, AMR-WB, RealAudio 8, AAC	176 x 144	15	128
9500	H.263 P0 L10	AMR-NB	176 x 144	15	95 or extended					
<b>Nokia 7710:</b>	H.263 P0 L10	AMR-NB	176 x 144	15	100 or extended	H.263 P0 L10, MPEG-4 VSP, rm	AMR-NB, AMR-WB, RealAudio 8, AAC	176 x 144	15	128

Table 4: Video capabilities

**Notes:**

p = Value obtained from the device's system properties; not tested.

\*) Information taken from specifications; not tested.

Video recording was tested with H.263 and AMR-NB codecs. Video playing was tested with H.263, MPEG-4 VSP, AMR-NB, and Real Audio codecs, or the information was taken from device specifications.

Other information, such as image size, frame rates, maximum bit rate, and maximum file size, were not tested but the data was taken from available device specifications.

**Note :** HTTP streaming is not supported on any current platform. RTSP streaming is supported from S60 2nd Edition, Feature Pack 3 onwards.

## Camera Snapshot (Picture) Capabilities

Platform baseline & sample devices	Default size	Default encoding	Locators
<b>Series 40 2nd Edition:</b> 3320, 5140i, 6030, 6101, 6230, 6230i	-	-	none
<b>Series 40 3rd Edition:</b>	-	-	-
6111	-	-	-
6280	160 x120	jpeg	capture://image
7370	- (no camera)		
<b>S60 1st Edition:</b>	-	-	-
3650	160 x120	jpeg	capture://video
N-Gage QD	- (no camera)		
<b>S60 2nd Edition:</b> 3230, 6600, 7610	<b>160 x 120</b>	<b>png</b>	<b>capture://video</b>
6630, N90			capture://video, capture://devcam0
6680, N70			capture://video, capture://devcam0, capture://devcam1
<b>S60 3rd Edition:</b>			
E60	- (no camera)		
<b>Series 80 2nd Edition:</b>	-	-	-
9300	- (no camera)		
9500	160 x120	png	capture://video
<b>Nokia 7710:</b>	<b>160 x120</b>	<b>png</b>	<b>capture://video</b>

**Table 5: Camera snapshot (picture) capabilities**

Notes:

- Devices may support larger snapshot images than the default size.
- On S60 3rd Edition devices, snapshots are always taken with the next largest image size supported by the product. For example, if 460 x 345 is requested, a 640 x 480 image is taken and resized down.

## Supported Controls

Platform baseline & sample devices		Common media controls		MIDI & tone controls					Video controls	
		StopTimeControl	VolumeControl	MIDIControl	TempoControl	PitchControl	RateControl	ToneControl	VideoControl	GUJControl
	Content type									
<b>Series 40 2nd Edition:</b> 3220, 5140i, 6101, 6230	speech music	-	-	-	-	-	-	-	-	-
	synthetic audio	x	x	x	x	x	x	1)	-	-
	video	-	-	-	-	-	-	-	-	-
6030	speech music	-	-	-	-	-	-	-	-	-
	synthetic audio	-	x	-	-	-	-	-	-	-
	video	-	-	-	-	-	-	-	-	-
6230i	speech music	x	x	-	-	-	-	-	-	-
	synthetic audio									
	video	-	x	-	-	-	-	-	x	x
<b>Series 40 3rd Edition:</b> 6280, 7370	speech music	x	x	-	-	-	-	-	-	-
	synthetic audio	x	x	x	x	x	x	x	-	-
	video	x	x	-	-	-	-	-	x	x
6111	speech music			-	-	-	-	-	-	-
	synthetic audio									
	video	-		-	-	-	-	-	-	-
<b>S60 1st Edition:</b> 3650	speech music	-	-	-	-	-	-	-	-	-
	synthetic audio	-	-	-	-	-	-	x	-	-
	video	x	x	-	-	-	-	-	x	x
N-Gage QD	speech music	x	x	-	-	-	-	-	-	-
	synthetic audio	x	x	-	-	-	-	-	-	-
	video			-	-	-	-	-		
<b>S60 2nd Edition:</b> 6600	speech music	x	x	-	-	-	-	-	-	-
	synthetic audio	x	x	-	-	-	-	x	-	-
	video	x	x	-	-	-	-	-	x	x
3230, 7610	speech music			-	-	-	-	-	-	-
	synthetic audio	2)		-	-	-	-	-	-	-
	video			-	-	-	-	-		
6630, 6680, N70, N90	speech music			-	-	-	-	-	-	-
	synthetic audio	3)		-	-	-	-	-	-	-
	video			-	-	-	-	-		
<b>S60 3rd Edition:</b> E60	speech music	x	x	-	-	-	-	-	-	-
	synthetic audio	x	x	x	x	x	x	x	-	-
	video	x	x	-	-	-	-	-	x	x
<b>Series 80 2nd Edition:</b> 9300, 9500	speech music	x	x	-	-	-	-	-	-	-
	synthetic audio	3)	x	-	-	-	-	x	-	-
	video	x	x	-	-	-	-	-	x	x
<b>Nokia 7710:</b>	speech music	x	x	-	-	-	-	-	-	-
	synthetic audio	3)	x	-	-	-	-	x	-	-
	video	x	x	-	-	-	-	-	x	x

Table 6: Supported controls

**Notes:**

x = Tested to work.

- 1) Tested to be supported on all devices except Nokia 6230.
- 2) Only supported by ring tone.
- 3) Only supported by Mobile XMF and ring tone.

**Note :** Currently MetaDataControl and FramePositioningControl are not supported by the selected devices. RecordControl is supported if the device supports either audio or video recording.

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