i.MX23 SDK Windows Embedded CE 6.0

Multimedia Framework

Release Notes

1 Introduction

This document contains important information about the package contents, and instructions for building Freescale components on an i.MX23 SDK platform running Windows Embedded CE 6.0.

This document does not provide any details of the architecture or APIs in the codecs.

You should have a basic understanding of Microsoft DirectShow framework.

All features are believed to function correctly, except as noted in this document.

Contents

2 Release Contents

2.1 SDK Documentation Package

The documentation package provided with this release includes all of the documents in the documentation package.

Table 1. Document Package

Document Package	Descriptions
WCE600_MX23_10.05.02_SDK_MM_DOCKIT.zip	Documentation set

The compressed file includes all of the related documents in the document package.

Table 2. Document Contents

Document Name	Descriptions
iMX23_WinCE60_MMFW_RN.pdf	Release notes
iMX23_WinCE60_MMFW_UG.pdf	SDK user's guide

2.2 SDK Software Packages

Multimedia framework Software Development Kit (SDK) software packages are the collection of both Freescale developed codec and 3-rd party codec. Freescale developed codec will be archived as the installer package (in .exe files). And the 3-rd party codec are archive as SDK patches (in .zip files).

Table 3. Software Packages Contents

Document Name	Descriptions
WCE600_MX23-EVK_10.05.02_SDK_MM.exe	SDK installer with framework source codes, framework binaries, core lib binaries, core lib header files and support documents

3 System Requirements

3.1 Hardware Requirements

- MX23 EVK Rev C

3.2 Software requirements

- Build machine should be running Microsoft Windows XP.

- Build machine should have the following installed:
  — Windows Embedded CE 6.0 with Platform Builder
  — i.MX23 SDK Windows Embedded CE 6.0 BSP for S1005 release

4 What is new

This section describes the new changes in this release (version 10.05.0), including new features and defect fixes.

4.1 New Features and Enhancements

The following table describes the new features and enhancements since last release.

Table 4. New Features and Enhancements

Changes and improvements	Descriptions
New feature	Support WMA Pro M0 audio playback
Remove Filter source code in the release package	Remove the source code file under folder **component**, remove folder **core_libs** and **docs**

4.2 Defect Fixes

Table 5 describes the issues that have been resolved since the previous release.

Table 5. Defect Fixes List

NO.	CR ID	Headline
1	ENGR00123401	[WMX23_SDK]MPEG4Dec: Green screen then normal screen after seek for one stream.
2	ENGR00121235	Ford Sync (i.MX51) - one AAC Main profile file causes system to re-boot
3	ENGR00123333	[WMX23_SDK] AACLC: One stream does not stop normally when play to the end, player still display "playing".
4	ENGR00120287	[i.MX23 / Minor Problem on the i.MX23 Windows CE Codec package]
5	ENGR00119808	[WINCE_MP4Parser] MP4 parser can not support file size larger than 2GB
6	ENGR00119389	[WMX23_DOC] DOC: There is some mistake in the "iMX23_WinCE60_MMFW_UG.pdf"

5 Supported Features

Table 6~Table 7 identifies the features provided by this release.

Table 6.   Audio Features List

Feature		Profile	Channel	Sample Rate (Hz)	Bit rate (bps)
Audio decoding	AAC	MPEG-2 and MPEG-4 audio low complexity (LC) profile	<=5.1	8K~96K	8K~256K
	MP3	MPEG-1 Audio Layer I MPEG-1 Audio Layer II MPEG-1 Audio Layer III	Mono / Stereo	<=48K	8K~320K
	WMA Standard	WMA V10 Standard L1 profile	Mono / Stereo	44.1K	64K~161K
		WMA V10 Standard L2 profile	Mono / Stereo	<=48K	<=161K
		WMA V10 Standard L3 profile	Mono / Stereo	<=48K	<=385K
	WMA Professional	WMA V10 Professional M0a profile	Mono / Stereo	<=48K	48K~196K
		WMA V10 Professional M0b profile	Mono / Stereo	<=48K	<=192K
Audio encoding	MP3	MPEG-1 Audio Layer III	Mono / Stereo	32/ 44.1/ 48K	8K~320K

Table 7.   Video Features List

Feature		Profile	Max Resolution	Min Resolution
Video decoding	H.264	Supports MPEG-4, Part 10 video H.264 Baseline Profile (BP) decoding	320 x 240@30fps	16 x 16
	MPEG4	Supports MPEG-4 Part 2 video simple / advanced simple profile (SP/ASP@L5)	320 x 240@30fps	16 x 16

Table 8 identifies the feature matrix for audio/video playback.

Table 8.   Playback Feature Matrix

Filename Extension	Container	Video Codec	Audio Codec
.mp3	MPEG-1 Audio Layer III	N/A	MP3
.wma	Advanced Systems Format	N/A	WMA10
.aac		N/A	AAC
.mp4 .mov .3gp	MPEG-4 Part 14	H.264, MPEG4	AAC, MP3
.avi	Audio Video Interleave	H.264, MPEG4	AAC, MP3
.m4a	MPEG-4 Part 14	N/A	AAC, MP3

.m4b	MPEG-4 Part 14	N/A	AAC
.m4v	MPEG-4 Part 14	H.264, MPEG4	N/A

Table 9 identifies the version number for each component in this release.

Table 9.   Component Versions

Components		Version
Audio codecs	AAC decoder	03.04.00
	MP3 decoder	02.05.00
	MP3 encoder	02.02.00
	WMA decoder	03.03.00
Video codecs	H.264 decoder	02.06.01
	MPEG4 decoder	01.01.00
Parsers	MP4 Parser	05.15.06
	AVI Parser	02.04.06

6 Known Problems

This section will cover known problem with this release.

6.1 Known Defects

Table 10 identifies the engineering change requests that have not been resolved.

Table 10.   Known Defects List

NO.	CR ID	Headline

6.2 Limitations/Issues

Table 11 identifies the limitations of each component.

Table 11.   Limitations/Issues List

Item	Description
Audio feature limitations	AAC ADIF File format decoding does not support trick mode seeking, so the Windows CE media player does not display a time progress bar
	WMA codec supports WMA10 Standard and Professional M0 profile decoding
	Playback AAC (in *.aac file) and MP3 in the Windows CE player does not support Fast Forward or Rewind in trick mode
	Playback WMA in the Windows CE media player does not support Fast Rewind, but only supports 2x Fast Forward

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