



JPEG Encoder/Decoder Release Notes (Linux)

S3C6400/6410

August 29, 2008

REV 3.10

Important Notice

The information in this publication has been carefully checked and is believed to be entirely accurate at the time of publication. Samsung assumes no responsibility, however, for possible errors or omissions, or for any consequences resulting from the use of the information contained herein.

Samsung reserves the right to make changes in its products or product specifications with the intent to improve function or design at any time and without notice and is not required to update this documentation to reflect such changes.

This publication does not convey to a purchaser of semiconductor devices described herein any license under the patent rights of Samsung or others.

Samsung makes no warranty, representation, or guarantee regarding the suitability of its products for any particular purpose, nor does Samsung assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation any consequential or incidental damages.

"Typical" parameters can and do vary in different applications. All operating parameters, including "Typicals" must be validated for each customer application by the customer's technical experts.

Samsung products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, for other applications intended to support or sustain life, or for any other application in which the failure of the Samsung product could create a situation where personal injury or death may occur.

Should the Buyer purchase or use a Samsung product for any such unintended or unauthorized application, the Buyer shall indemnify and hold Samsung and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, expenses, and reasonable attorney fees arising out of, either directly or indirectly, any claim of personal injury or death that may be associated with such unintended or unauthorized use, even if such claim alleges that Samsung was negligent regarding the design or manufacture of said product

S3C6400/6410 RISC Microprocessor JPEG Release Note

Copyright © 2008 Samsung Electronics Co., Ltd.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electric or mechanical, by photocopying, recording, or otherwise, without the prior written consent of Samsung Electronics Co., Ltd.

Samsung Electronics Co., Ltd.
San #24 Nongseo-Dong, Giheung-Gu
Yongin-City Gyeonggi-Do, Korea
446-711

Home Page: <http://www.samsungsemi.com/>

E-Mail: mobilesol.cs@samsung.com

Printed in the Republic of Korea



Preliminary product information describe products that are in development, for which full characterization data and associated errata are not yet available. Specifications and information herein are subject to change without notice.

Revision History

Revision No	Description of Change	Refer to	Author(s)	Date
1.00	Initial Version	-	Jiun Yu	2007-07-20
2.00	Change buffer allocation	-	Jiun Yu	2007-12-22
2.10	Some bugs are fixed	-	Jiun Yu	2008-01-16
3.00	Supporting JPEG driver on S3C6410		Jiun Yu	2008-07-05
3.10	Tested on linux kernel 2.6.24		Jiun Yu	2008-08-29

Contents

1	INTRODUCTION	1
2	RELEASE DETAIL	1
2.1	FEATURES	1
3	DIRECTORY STRUCTURE	1
4	LIMITATIONS & KNOWN ISSUES	1
5	CHANGES & DEFECT FIXES	2
5.1	V2.00	2
5.2	V2.10	2
5.3	V3.00	2
5.4	V3.10	2

1 Introduction

The purpose of the document is to describe the JPEG Encoder/Decoder API for easy portability into different platforms by developers

2 Release Detail

Software	JPEG Encoder/Decoder API
Version	3.10
Hardware Platform	Samsung Application Processor - S3C6400/6410
Host Operating System	Linux 2.6.24
Software Dependencies	Loading JPEG driver module
Release Date	29-August-2008
Contact Person	Jiun Yu jiun.yu@samsung.com

2.1 Features

The following are the features offered by the Samsung JPEG Encoder/Decoder Package

- Compression/decompression up to UXGA(1600*1200).
- Encoding format: interleaved YCBYCR (input format of JPEG engine).
- Decoding format: YCbCr4:4:4, YCbCr4:2:2, YCbCr4:2:0, YCbCr4:1:1 or Gray.
- Support Exif file and Thumbnail encoding.
- The resolution of thumbnail is up to 320*240.
- Support 4 different image quality levels during encoding.
- Support of direct compression from the camera output.
- Support of compression of memory data in interleaved YCBYCR.

3 Directory Structure

Directory	Files	Description
/jpeg_app/	*.c	JPEG API source file, test file
/jpeg_app/	*.h	JPEG API header file
/jpeg_drv/	*.c, *.h	JPEG Device Driver file
/jpeg_app/testVector/testInp	*.jpg, *.yuv	Test input vector
/jpeg_app/testVector/testOut	*.jpg, *.yuv	Test output vector
/doc	*.doc, *.pdf	JPEG documents

4 Limitations & Known Issues

5 Changes & Defect Fixes

5.1 V2.00

1. support both H/W and S/W scaler
2. support image quality setting
3. buffer allocation is changed

5.2 V2.10

1. Mutex unlock is added
2. How to handle incorrect input size is added in API document
3. JPEG driver and test application are compiled as Toolchain 4.2.2-eabi

5.3 V3.00

1. JPEG driver supports on S3C6400 and S3C6410

5.4 V3.10

1. JPEG driver was tested on linux kernel 2.6.24