

KL5A71006



PRODUCT FEATURE

1. INTRODUCTION

KL5A71006 is a single VLSI chip which can compress and decompress still color images based on JPEG (Joint Photographic Experts Group) standard baseline.

2. FEATURE

- 1) Fully compatible with JPEG standard baseline.
- 2) Automatic decodes and generation of some JPEG header data such as marker code.
- 3) Both Pixel and Host Buses with DMA interface.
- 4) Small plastic package.
- 5) Low operating power.
- 6) High cost performance.
- 7) Power save mode.
- 8) JPEG ASIC Core is available integrated with customer logic as KSC ASIC.

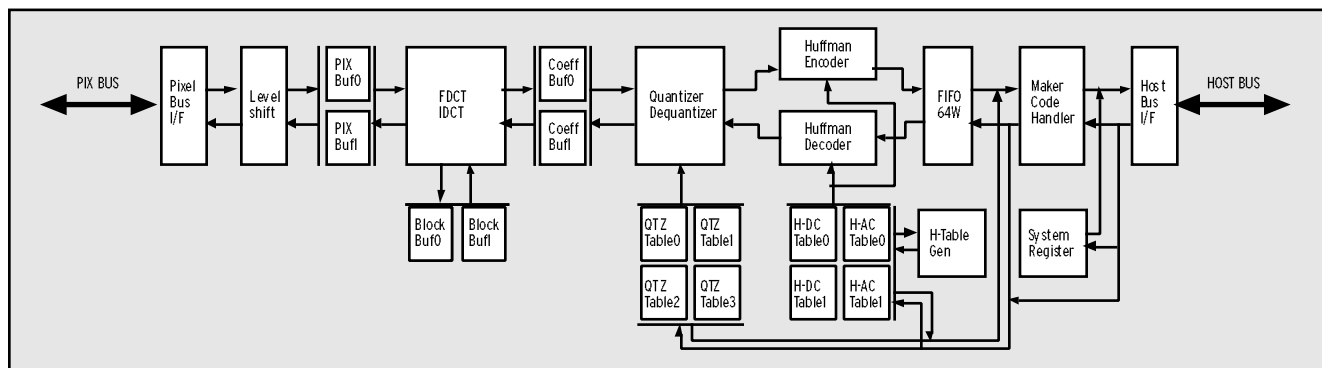
3. APPLICATION

Digital Still Camera, TV-conference, Scanner, Printer and other Multimedia Image Processing.

4. FUNCTIONALITY

- 1) JPEG baseline
Compression/decompression processing.
DCT compression, sequential coding.
Huffman encode (available for 4 on-chip RAM for 2AC and 2DC table store).
Support up to 4 color components.
Quantize dequantize (available for 4 on-chip RAMs for 4 color components).
Block interleave scanning input.
- 2) Pixel Bus (PB) 8/16 bits up to 4Mbyte/sec
- 3) Host Bus (HB) 8/16 bits up to 4Mbyte/sec
Register access mode / DMA slave mode.
- 4) Internal FIFO 64 Words
- 5) Initial preparation
System register setting.
Load table data from CPU or coded data.
- 6) Error reporting function
- 7) Count up compressed data volume automatically, and stop data out when reached preset max value.
- 8) Header data processing
Generate and decode code - SOI, DHT, DQT, SOF, SOS, EOI
Decode only - DNL, DRI, APP0, COM, RST

BLOCK DIAGRAM



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PRODUCT SPECIFICATION

1. ABSOLUTE MAXIMUM RATINGS		3. IMPLEMENTATION
DC Supply Voltage V _{DD}	-0.3 ~ +4.6 V	1) 0.5 μm CMOS double metal layer process. 2) Low power oriented ASIC library cell. 3) Top down design methodology of RTL coding with logic compilation CAD tool. 4) Extremely low stand-by power up to 500 μA.
Input Voltage V _{IN}	-0.3 ~ +7.3 V	
Output Current I _{OUT}	30 mA	
Storage Temperature T _{STG}	-55 ~ +125°C	
2. RECOMMENDED OPERATING CONDITION		4. PACKAGING
DC Supply Voltage V _{DD}	3.0 ~ 3.6 V	1) Plastic LQFP80 2) Size lead pitch 0.5 mm mold size 14 mm x 14 mm, thickness 1.7 mm 3) Pin assignment signal pin 55, test pin 9 power/ground 16
Ambient Temperature T _A	0 ~ +70°C	
Maximum Clock rate	32 MHz	
AC Power (Max)	0.36W	

SYSTEM APPLICATION

Example: PC board application

