AVERLOGIC

AL330B
Digital LCD Display SOC
Flyer

Preliminary
Version 0.2

©2007~2009 by AverLogic Technologies, Corp.

Doc Number: 1-F-PMK333-0001

Amendments

Revision Date	Contents	Page
08.04.03	Preliminary Version 0.1	
09.03.20	Preliminary Version 0.2	2,3,4

Disclaimer

THE CONTENTS OF THIS DOCUMENT ARE SUBJECT TO CHANGE WITHOUT NOTICE. AVERLOGIC TECHNOLOGIES RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. AVERLOGIC DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

CUSTOMERS ARE ADVISED TO CONSULT WITH AVERLOGIC OR ITS COMMERCIAL DISTRIBUTORS BEFORE ORDERING.

1. FEATURES

◆ **Analog Input:**

Supports 9 analog video inputs

Supports CVBS, S-Video & YPbPr
(480P/576P) inputs

Supports Analog RGB input

3-Ch, 10-bit ADC, AGC & ACC

Supports Auto Multi-Standard
NTSC/PAL/SECAM mode detection

Adaptive 2D Comb-Filter video decoding for
Y/C separation

◆ **Digital Input:**

Supports CCIR-656/YCbCr Digital Input

◆ **Video Processing & Scaler:**

Supports VBI decoding

Macrovision copy protection detection

Contrast/Brightness/Hue/Saturation
adjustment

Sharpness adjustment for Edge
Enhancement

Black Level Extension(BLE)

White Level Extension(WLE)

YCbCr to RGB Color Space Conversion

Programmable H/V up/down Scaling

4:3 to/from 16:9 conversion

Programmable 3-Channel Gamma Correction

◆ **OSD**

Built-in internal OSD 4K bytes of RAM for
programmable OSD function

Supports up to 8 OSD colors

Supports OSD Blinking & Blending

Supports OSD X,Y mirror for rear view or flip
down applications

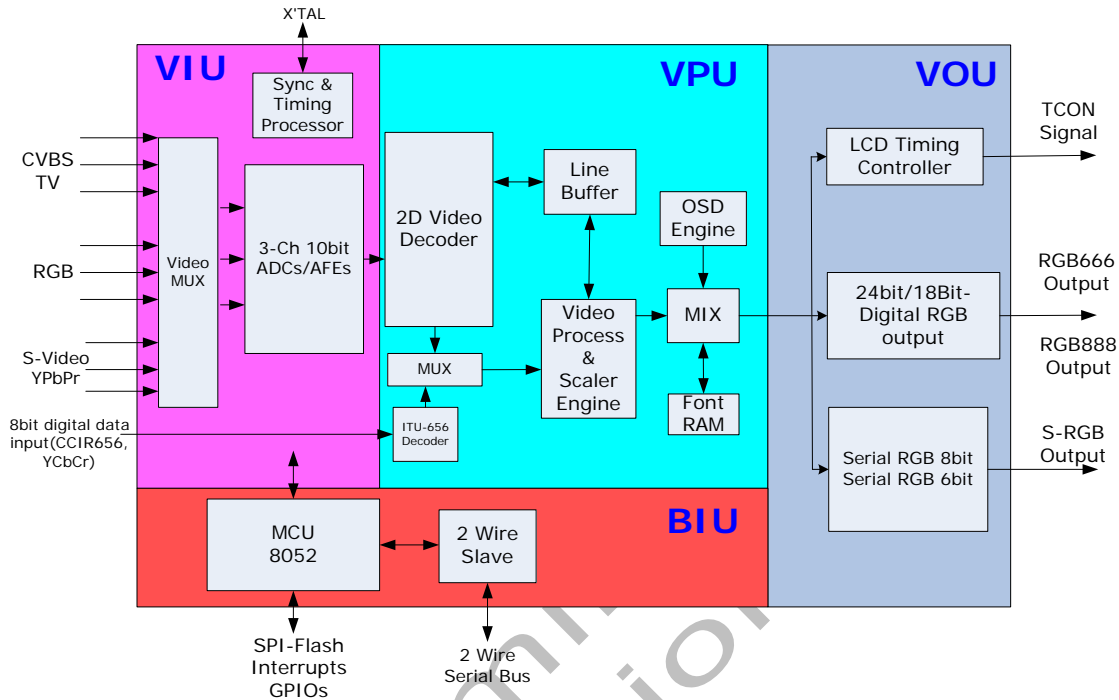Supports external OSD signals

◆ **Digital Output & Tcon**

24-bit/18-bit/12-bit Digital RGB Output

Supports Digital LCD panels: 160*120,
320*240, 640*480, 800*480, 800*600 etc.

Programmable TCON for various Digital LCD
panels

Supports Image Mirror and Flip functions

Supports Serial RGB format interface for
LTPS Digital Panels (Such as Toppoly and
AUO)

Supports AMOLED Panels (Such as CMEL)

◆ **Miscellaneous**

Built-in 8052 MCU and 1K byte internal SRAM

Dedicated UART & INT pins

Supports SPI-Flash and ISP (In-System
Programming) function

Supports three PWM generators for general
purpose control

Supports interrupt output pin for hardware
mode detection

Built-in Test Pattern Generator (Color Bar,
Grey Scale, etc.)

Low power design

128-pin LQFP 14 x 14 mm

2. FUNCTION BLOCK DIAGRAM

3. APPLICATIONS

- In-Car TV/GPS/Navigation & Entertainment Display System
- Video Door Phone, Baby Monitor, Digital Photo Frame etc.
- Small to Medium Multimedia TFT-LCD Display Monitor
- Portable TV/DTV(ATSC,DVB-T/-S)

4. ORDERING INFORMATION

Part number	Package	PB Free
AL330B-LF-PBF	128-pin LQFP (14x14mm)	Yes

Note: AverLogic Technologies PB-free products employ special PB-free material sets; molding compounds/die that attach materials and 100% matte tin plate termination do not use materials containing PBB, PBDE or red phosphorus for green-product chips. AverLogic's PB-free products are MSL classified at PB-free peak reflow temperatures that meet or exceed the PB-free requirements of IPC/JEDEC J Std-020C."