



AL330B  
Digital LCD Display SOC  
Flyer

Preliminary  
Version 0.2

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## Amendments

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

Preliminary  
Version

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## 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

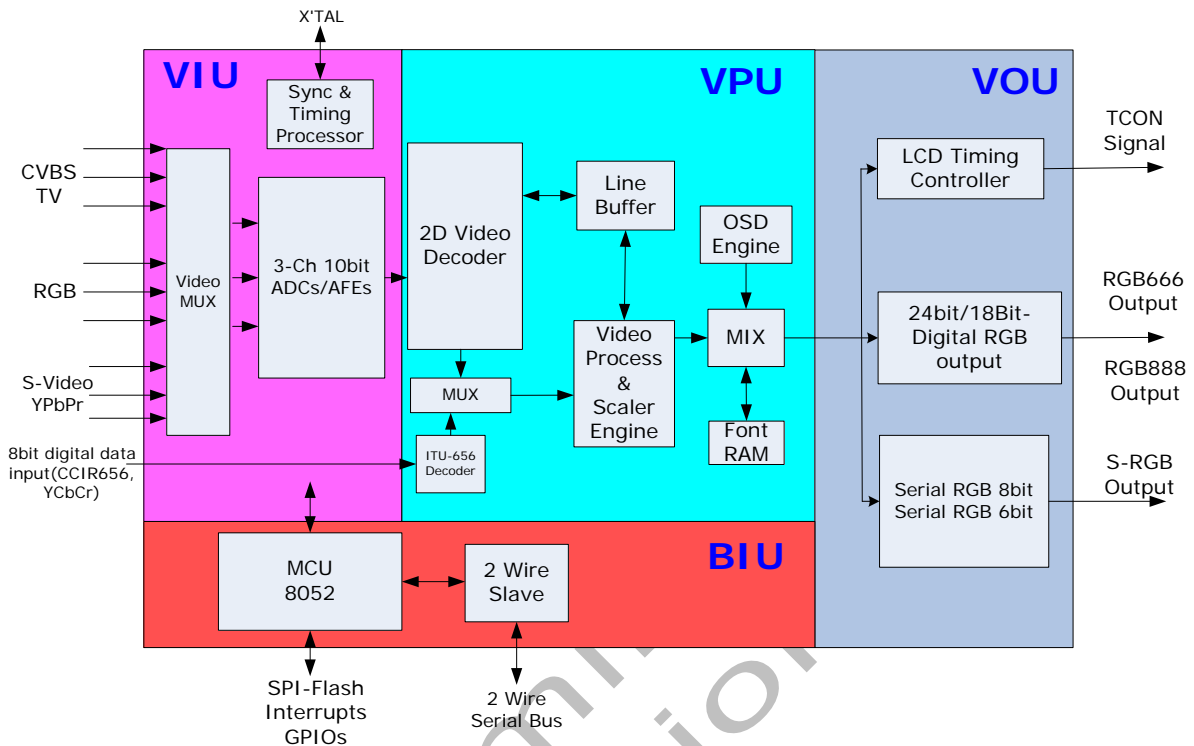
### ◆ **Digital Output & Tcon**

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."