CONTROLLER LSI HD66840 LVIC

T-52-33-47

- **Graphic LCD Module Controller LSI**
- **Applied types: LM254XP · LM252X · LM755CXGP · LM268CXP · LM254XNP · LM272CXGNR · LM384XF · LM383XF · LM383CXFR · LM296DXBF · LM837DXF**

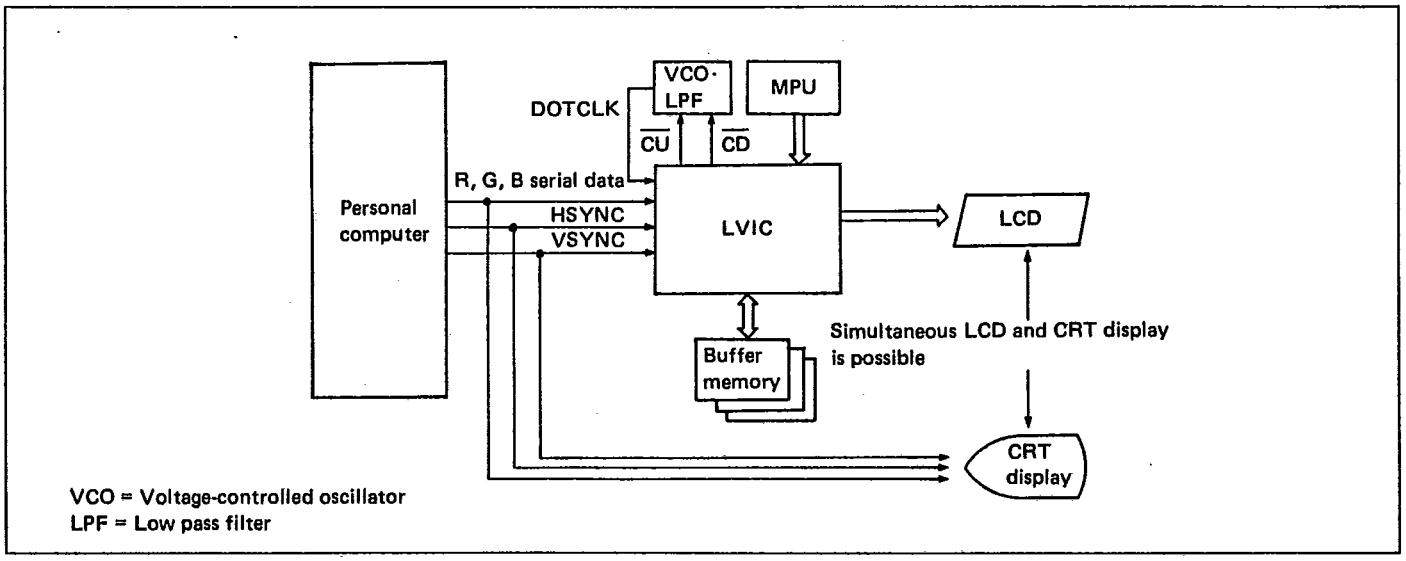
The HD66840 LCD Video Interface Controller (LVIC) converts the standard video signals R, G, B for CRT display into LCD data. It enables a CRT display system to be replaced by an LCD system without any changes. It also enables the software originally intended for CRT display to control the LCD.

Since the LVIC can control TFT-type LCDs in addition to the current TN-type LCD, it can support color display as well as monochrome display. It can program screen size and can control a large-panel LCD of 720 dots x 512 dots (max).

■ Features

- Converts video R, G, B signals for CRT display into LCD data:
  - —Monochrome display data.
  - —8-level gray scale display data.
  - —8-color display data.
- Can select LVIC control method:
  - —Pin programming method
  - —Internal register programming method (either with MPU or ROM)
- Can program screen size:
  - —200, 350, 400, 480, 512, or 540 dots (lines) in height and 640, or 720 dots (80, or 90 characters) in width by pin programming method.
  - —4-1024 dots (lines) in height and 32-4048 dots (4-506 characters) in width by internal register programming method.
- Can regenerate the display timing signal from HSYNC and VSYNC
- Internal PLL circuit can generate the dot clock (external charge pump, low pass filter (LPF), and voltage-controlled oscillator (VCO) required)
- Can control both TN-type LCD and TFT-type LCD.
- Maximum operating frequency: 30 MHz (dot clock for CRT display)
- LCD driver interface: 4-, 8-, or 12-bit (4 bits each for R, G, B) parallel data transfer.
- Recommended LCD drivers: HD61104, HD61105, and HD66106
- CMOS 1.3 μm process
- Single power supply: +5 V ±10%
- 100-pin quad flat plastic package (FP-100A)

■ System Block Diagram (MPU Programming Method, Regenerates DOTCLK)



Note; If you need detailed information, please contact following office. Semiconductor & Integrated Circuit Div. Karukozaka MN Bldg., 2-1, Agebacho, Shinjuku-ku, Tokyo 162, Tel: Tokyo (03) 266-9381