

Gamma Trimster™ AGB1818

FEATURES

- 18 Programmable Gamma References
- Replaces Resistor Ladder Networks and Buffers
- Wide Gamma Output Range: 0.1V to 15.9V
- High Precision: 1mVolt Programming Resolution
- High Current Gamma Output Buffers – 100mA
- Nonvolatile Storage of 8 Gamma Reference Profiles and 8 Backlight Profiles
- Fast Gamma and Backlight Voltage Switching
 - <2 μ sec for a 0.5V Change (typ.)
 - Facilitates Dynamic Gamma Compensation and Backlight Modulation
- Programmable VCOM Output
- Simple Programming Interface Using the Alta AP100 Programmer

APPLICATIONS

- For all LCD Displays
 - Dynamic Gamma Compensation
 - Temperature Compensated Gamma
 - Ambient Light Gamma Compensation
 - Application Specific Gamma Control
 - Backlight Control for Improved Picture Quality and Power Savings

DESCRIPTION

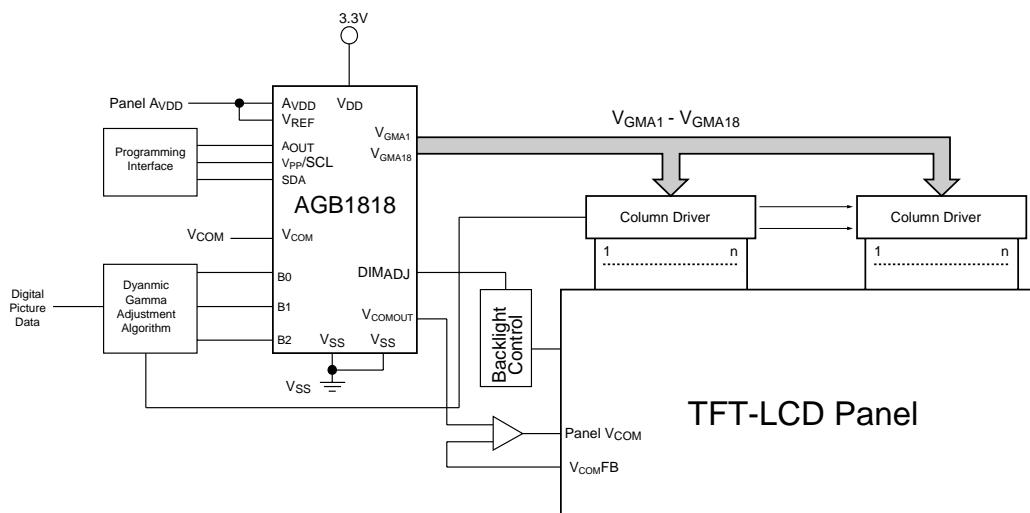
The AGB1818 is a programmable gamma reference generator that is designed to enable programmable/selectable gamma setting in high-resolution LCD panels.

The AGB1818 provides eighteen (18) gamma reference outputs (V_{GMA1} - V_{GMA18}), each output is programmed with eight (8) gamma reference voltages that are selectable by three address inputs (B0-B2) or through a serial interface. The DIM_{ADJ} output also has 8 programmed values and they are selected in the same manner as the VGMA outputs.

The 8 nonvolatile profiles allow a simple dynamic gamma correction scheme to be implemented. A dynamic gamma controller, FPGA or Microcontroller, will monitor the digital picture data and then select the optimum gamma correction by controlling the three digital bank select inputs (B0-B2).

The programmable DIM_{ADJ} output is provided to set the level of the backlight brightness. A separate backlight level can be stored with each set of gamma reference voltages to facilitate Dynamic Gamma and Backlight Control. Providing a method of optimizing picture quality while reducing power consumption; ideal for battery operated applications.

A separate, trimmable V_{COMOUT} is provided to further enhance the picture quality.



Typical Application