



# AS3822 - 6 channel white LED controller for LCD backlight

8 channel white LED controller for LCD backlight



## Description

The AS3822 is a 8 channels precision LED controller for use in LCDbacklight panels. Dynamic power feedback controls the external power supply to guarantee best efficiency. Build in safety features include thermal shutdown as well as open and short LED detection. The device is programmable via serial interface.

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## Key Features

- ▶ 8 Channel LED driver
- ▶ Output voltage only limited by external transistor
- ▶ Output current only limited by external transistor
- ▶ Linear current setting using 10-bit DAC
- ▶ Current accuracy  $\pm 0.5\%$  @ VDAC=250mV
- ▶ Channel to Channel current accuracy  $\pm 0.2\%$
- ▶ BJT base current compensation
- ▶ Output slew rate programmable
- ▶ Digital current control with 8 independent PWM generators
- ▶ Free programmable 12-bit resolution (period, high time and delay)
- ▶ PWM-generator clock
  - - Internal RC-oscillator
  - - External Clock
  - - PLL-synthesized clock from external signal
- ▶ H-Sync, V-Sync inputs to synchronize with TV-set
- ▶ Direct PWM mode
- ▶ Undervoltage detection (open LED)
- ▶ Undervoltage auto-turnoff and retrieval
- ▶ Short LED detection
- ▶ Temperature shutdown
- ▶ Register lock/unlock function
- ▶ Fault interrupt output
- ▶ 2 configurable supply regulation feedback outputs
- ▶ Enhanced digital feedback operation
- ▶ LDO (3.2V / 20mA) for external MCU supply

- ▶ SPI interface
- ▶ 2kV ESD
- ▶ Package: 32-pin TQFP

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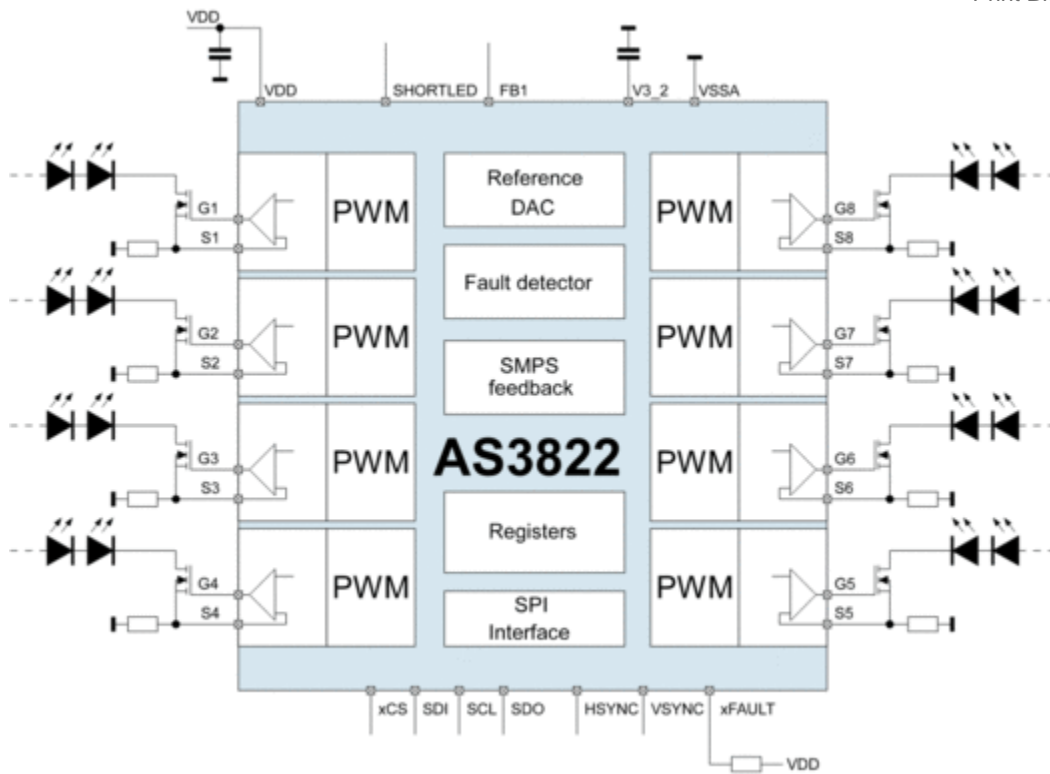
## Applications

The AS3822 is suitable for LED backlighting for LCD such as TV sets and monitors.

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## Block diagram for 8-channel LED controller AS3822

[Print Block diagram for 8-channel LED controller AS3822](#)



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