



**Weltrend Semiconductor, Inc.**

# WT6803

## Monitor On-Screen Display

### Data Sheet

REV. 1.01

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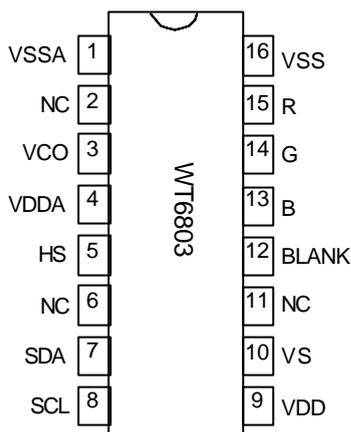
## GENERAL DESCRIPTION

WT6803 is designed to interface with a MCU to do the OSD (On Screen Display) function in CRT monitor. The on-chip PLL generates a wide-ranged system clock up to 160 MHz to meet the resolution requirements (OSD resolution is programmable) of different display modes. The full OSD screen size is 30 columns x 15 rows, and setting the internal registers can freely program the OSD position. Special functions include color font, character bordering, shadowing, blinking, double height, double width, all blanking effect, row to row spacing control, 4 windows with shadowing and programmable fin in / fan out effect.

## FEATURES

- Programmable horizontal resolutions up to 2040 dots per line
- Horizontal frequency up to 150kHz
- Dot Frequency generated by On-chip PLL up to 160MHz
- Fully programmable character array of 15 rows by 30 columns
- 12x18 dot matrix per character
- 256 characters and graphic symbols ROM including 16 multi-color fonts
- 8 colors per display character
- 7 colors per display character background
- 4 programmable windows
- 8 colors per display window
- 8 colors per display window shadowing
- Double character height and width control
- Programmable character height (18 to 69 lines)
- Programmable row-to-row spacing
- Programmable OSD vertical and horizontal starting position
- Bordering, shadowing and blinking effect
- Fade-in/fade-out effects
- I<sup>2</sup>C interface with slave address \$7AH
- Power supply: 5V
- Package type: 16-pin plastic DIP

## PIN CONFIGURATION



**PIN DESCRIPTION**

Pin No.	Pin Name	I/O	Description
1	VSSA		Analog ground.
2	NC		No connection.
3	VCO	I/O	Loop filter of PLL.
4	VDDA		Analog power supply
5	HS	I	Horizontal sync input.
6	NC		No connection.
7	SDA	I/O	Serial data of I <sup>2</sup> C interface.
8	SCL	I	Serial clock of I <sup>2</sup> C interface.
9	VDD		Digital power supply
10	VS	I	Vertical sync input.
11	NC		No connection.
12	FBKG	O	Fast Blanking output. This pin controls the mixer of video amplifier to cutoff the video signal while displaying character or window.
13	B	O	Blue color output
14	G	O	Green color output
15	R	O	Red color output
16	VSS		Digital ground