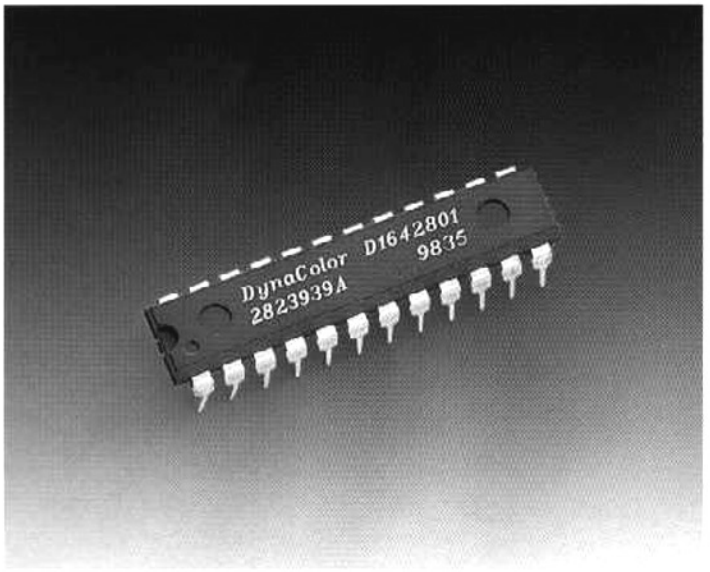

D1642
OSD Controller

D1642 X_1 X_2 X_3

- X_2 — Customer Font
- X_1 — PWM Number
  - 0 : 0 PWM
  - 8 : 8 PWM

D1642 is an advanced low cost On Screen Display (OSD) controller specifically designed for monitor display application. It's OSD special effects like color fonts, fade-in/fade-out effect, character border/shadow allows the monitor designer to construct fresh and elegant OSD messages that stands out in the crowd. 256 character/symbol make more choice and flexibility for designer.

I²C bus MCU interface fits the trend of monitor design. 30 columns and 15 rows are huge room for clear and concise messages. Rich features and low price, D1642 is your best choice for OSD display monitor at a low budget.

Feature

- Package Options:
  16 pin DIP
  24 pin DIP
- OSD Screen:
  30 columns x 15 rows
- Character:
  12 (H) x 18 (V) dot matrix
- Font:
  256 characters, including 16 color fonts
- Max Internal PLL System Clock:
  92.2 MHz
- Wide Operating Frequency Range:
  15KHz ~ 120KHz
- Fancy Fade-In/Fade-Out Effects
- Character Bordering or Shadowing
- Character/Symbol Blinking Function
- Shadowing on Windows with Programmable
- Shadow Width/Height
- Two Resolutions: 384 (CGA) or 768 (SVGA) Dots/Line
- MCU interface:
  I²C bus
- Programmable Vertical and Horizontal
  Positioning for Display Center
- Color (R,G,B with intensity attribute)
  Character foreground ..... 8 (R,G,B)
  Character background ... 7 (no black)
  Window ..... 8 (R,G,B)
- Programmable Height of Character to Meet
  Multi-Sync Requirement
- PWM ports (D16428XX only)
  8 Channels 8-bit Synchronous PWM DAC
  with Push-Pull Output

D1642 Pin Assignment & Description

Pin# D16428	Pin# D16420	Symbol	Pin name	Input/ Output	Description
1	1	VSSA	Analog ground	—	
2	2	NC	No connection	—	
3	3	VCO	VCO	—	Connected to external loop filter circuit
4	4	VDDA	Analog power	—	+5 V
5	5	HS	Horizontal SYNC	Input	Horizontal synchronous input signal
6	6	NC	No connection	—	
7	7	SDA	Serial data	Input/output	I^2C data
8	8	SCL	Serial clock	input	I^2C clock
9-16		PWM0- PWM7	PWM	output	8 channels of 8-bit PWM DACs.
17	9	VDD	Digital power	—	+5 V
18	10	VS	Vertical SYNC	input	Vertical synchronous input signal
19	11	INTN	Intensity	output	Color intensity
20	12	BLANK	Blank	output	Blank signal
21	13	B	Blue	output	Blue signal
22	14	G	Green	output	Green signal
23	15	R	Red	output	Red signal
24	16	VSS	Digital ground	—	

Developed and Manufactured by: _____ Represented by: _____

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