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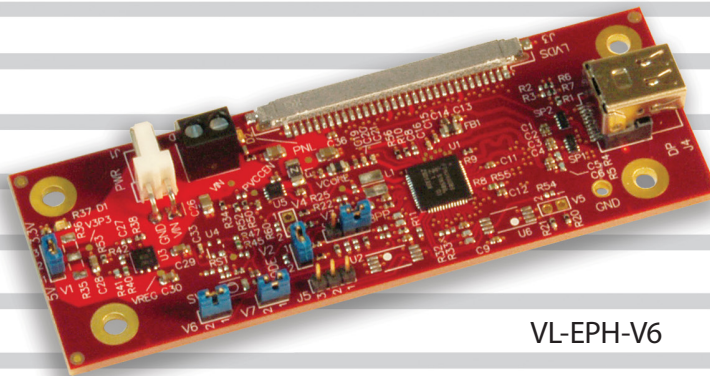
[VL-CBR-2031](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

Display Converter

DisplayPort to Dual LVDS Stand-alone Converter Module



VL-EPH-V6

Actual Size!

Overview

The VL-EPH-V6 module provides a rugged converter from standard mini-DisplayPort video output to LVDS (Low Voltage Differential Signaling) display panel output. It allows system designers the ability to utilize their existing LVDS video panels with the latest embedded computer video output (mini-DisplayPort).

As with all VersaLogic products, the VL-EPH-V6 is designed to support OEM applications where high reliability and long-term availability are required. From application design-in support, to the 5+ year production life guarantee, and a full 5-year warranty, the VL-EPH-V6 provides reliable video conversion for demanding applications.

Highlights

- **DisplayPort to LVDS converter**
- **Input:** Mini-DisplayPort (1 or 2 lanes)
- **Output:** 30-pin LVDS (single- or dual-channel)
- **Rugged bolt-down format**
- **MIL-STD-202G**
Qualified for high shock / vibration environments
- **5+ Year production life guarantee**
Worry-free availability
- **5-year warranty**

Tailor a Module to Your Exact Requirements

Product customization is available, even in low quantities. Options include conformal coating, application-specific testing, BOM revision locks, special labeling, and more.

EPH-V6/Display Converter

Product Data Sheet

Stand-alone Converter Module

Ordering Information

Model	Function	Operating Temp.
VL-EPH-V6SA	Video Signal Converter. Mini-DisplayPort to Single- or Dual-Channel LVDS.	0° to +60°C

Supported LVDS Panels

Model	Supported Panel Characteristics	Recommended Panels	LVDS Signal Cable	Backlight Power Cable
VL-EPH-V6SA	Single channel 18 / 24 bit 800 x 600 (SVGA)	LQ121S1LG84 800x600 12.1" 18-bit	VL-CBR-3003	VL-CBR-0601
	Single channel 18 / 24 bit 1024 x 768 (XGA)	LQ150X1LG91 1024x768 15" 24-bit	VL-CBR-3002	VL-CBR-0601
	Single channel 18 / 24 bit 1280 x 800 (SXGA)	LQ121K1LG52 1280x800 12.1" 24-bit	VL-CBR-3002	VL-CBR-0601
	Dual channel, 16.7M colors, 1920 x 1080 (HD 1080)	LG LM230WF3 1920x1080 23" Dual LVDS	VL-CBR-3001	
	Other Resolutions and configurations are available! Contact VersaLogic sales at (503) 747-2261 for more information.			

Specifications

General	
Board Size	32 mm x 90 mm (1.26" x 3.55")
Mounting	4 mounting points for M3 hardware. Two mounting points align with PC/104 spacing for convenience.
Power Requirements	3.3V or 5V $\pm 10\%$ @ 1W Typical
Power Input	2-pin terminal block or 2-pin latching header.
Manufacturing Standards	IPC-A-610 Class 2
Regulatory Compliance	RoHS
Environmental	
Operating Temperature	0° to +60°C Derate -1.1°C per 305m (1,000 ft.) above 2,300m (7,500 ft.).*
Storage Temperature	-40° to +85°C
Altitude	Operating * To 4,570m (15,000 ft.) Storage To 12,000m (40,000 ft.)
Airflow Requirements	None (free air)
Thermal Shock	5°C/min. over operating temperature
Humidity	Less than 95%, noncondensing
Vibration, Sinusoidal Sweep †	MIL-STD-202G, Method 204, Modified Condition A: 2g constant acceleration from 5 to 500 Hz, 20 min. per axis.
Vibration, Random †	MIL-STD-202G, Method 214A, Condition A: 5.35g rms, 5 min. per axis.
Mechanical Shock †	MIL-STD-202G, Method 213B, Condition G: 20g half-sine, 11 msec. duration per axis.
Video	
Controller	NXP PTN3460BS
Display Input Interface	Mini-DisplayPort (1 or 2 lanes) Factory configurable for most LVDS panels.
OEM Flat Panel Interface	Single- or Dual-channel LVDS interface. Up to 1920 x 1200 18/24-bit Four standard panel selects (refer to "Supported LVDS Panel" table, above) Additional panel support available.
Panel Power	3.3V or 5V supply for Panel (4A max)

* For extended altitude information contact VersaLogic Sales Dept.

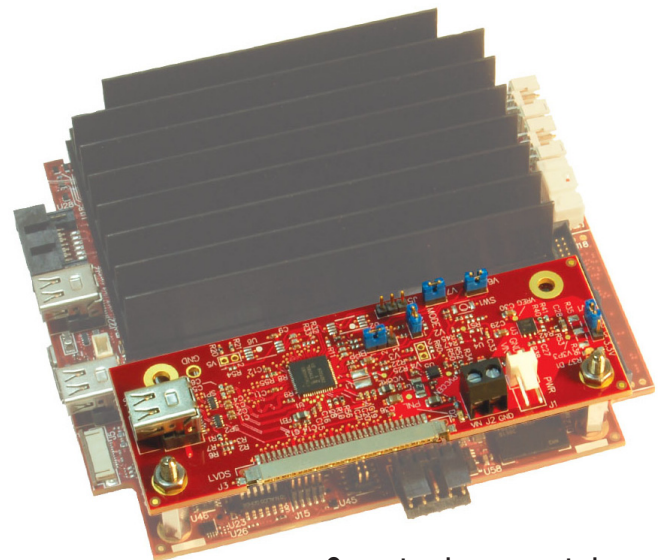
† MIL-STD-202G shock and vbe levels are used to illustrate the ruggedness of this product in general. Testing to higher levels and/or different types of shock or vibration methods can be accommodated per the specific requirements of the application. Contact a VersaLogic Sales Engineer for further information.

Specifications are subject to change without notification. DisplayPort is a registered trademark of the VESA, PC/104 is a registered trademark of the PC/104 Consortium. All other trademarks are the property of their respective owners.

Accessories

Part Number	Description
Cables	
VL-CBR-2031	Cable 500mm mDP to mDP
VL-CBR-3001	20" 2-Ch LVDS 30-pin JAE to 30-pin JAE
VL-CBR-3002	20" 1-Ch LVDS 30-pin JAE to 20-pin Hirose
VL-CBR-3003	20" 1-Ch LVDS 30-pin JAE to 20-pin JAE
VL-CBR-0601	12" 12V 6-pin LED Backlight Cable
Hardware	
VL-HDW-105	0.6" standoff package (metric thread)
VL-HDW-106	0.6" standoff package (English thread)

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Converter shown mounted on a PC/104 single board computer.