



Quick Reference Guide: Products Designed for DisplayPort Standard

DisplayPort is a universal interface specification designed for internal and external system solutions that reduce device complexity by significantly improving performance for high bandwidth audio and video data transfer over one cable. The need for LVDS electronics is removed, which allows for a significantly smaller form factor in notebooks and LCD displays. Connectors designed for DisplayPort standard are designed in conjunction with Video Electronics Standards Association (VESA) DisplayPort 1.1a standards to be used primarily within the notebook and PC markets.

FEATURES AND BENEFITS

- Future foundation for new display usages featuring higher color depths, display resolutions, and refresh rates
- User-friendly and cost effective
- Smaller footprint takes up less PCB space yet provides scalable performance in terms of resolution
- Reduces number of wires required
- Supports embedded clock
- Superior shielding against EMI
- Replace DVI & VGA interfaces
- Optional latching feature prevents longer cables from detaching

PRODUCT APPLICATIONS

- PCs
- External display interconnects
 - TV monitors
 - Panels
 - Set-Top Boxes
 - Projectors
- DVD players
- Game consoles
- Mobile Devices
- Digital Video Cameras
- Optical disc players

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DVI is a trademark or registered trademark of Digital Display Working Group
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LVDS is a trademark of National Semiconductor.
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<http://www.tycoelectronics.com/products/displayport>

PCB MOUNTING STYLES



Top Mount

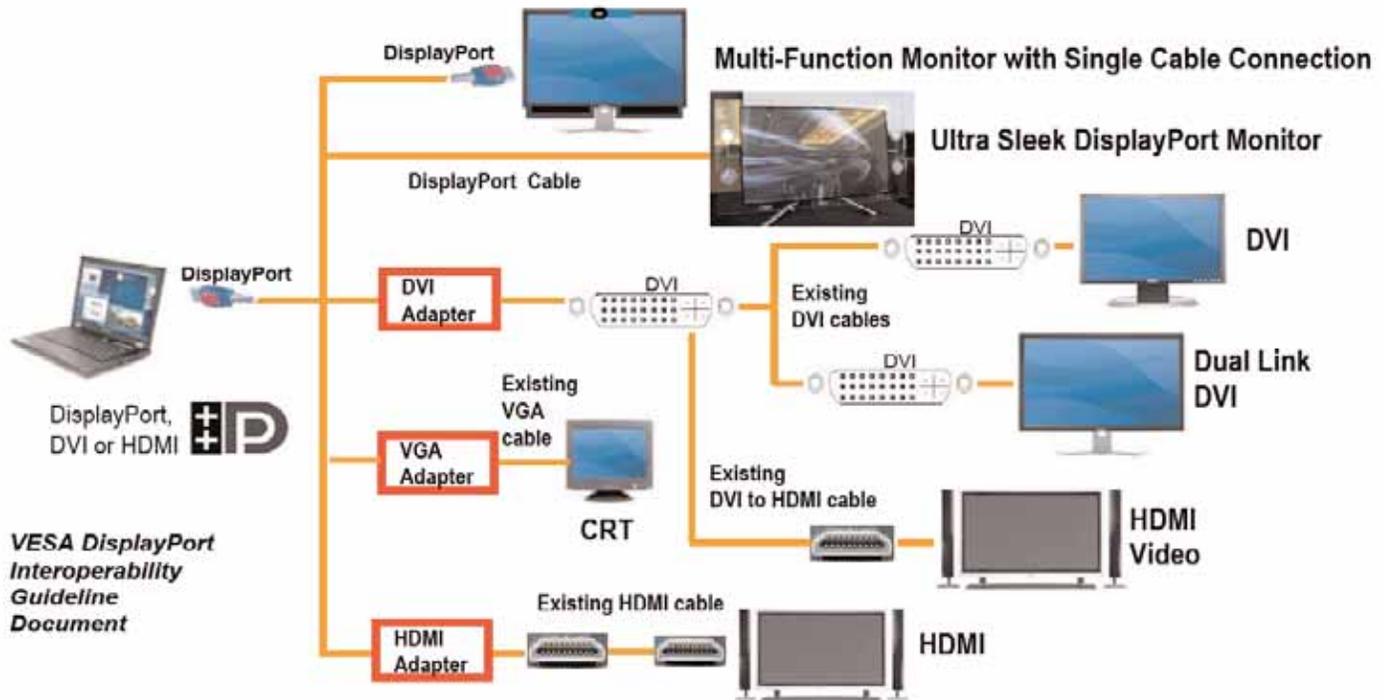


Bottom Mount



Off Set Mount

DISPLAYPORT APPLICATION GUIDE INCORPERATING HDMI AND DVI



DISPLAYPORT - DVI STANDARDS COMPARISON

	DISPLAYPORT STANDARD	DVI
No. of high - speed differential pairs	1, 2 or 4 pairs (No clock pairs)	4 pairs for single link, 7 pairs for dual link (1clock pair)
For 1680 x 1050 @ 18bpp	1 Pair	4 Pairs
For 1600 x 1200 @ 30bpp	2 Pairs	7 Pairs
For 2048 x 1536 @ 36bpp	4 Pairs	N/A (or two cables)
Bit rate, per pair	2.7Gbits / sec, fixed rate (1.62Gbps option available)	Up to 1.64 Gbits / sec
Total raw capacity per 4-differential pairs	10.8 Gbits / sec	4.95 Gbits / sec
AC - coupled for proccess migration	Yes	No
Audio Support	Yes	None
Aux. Channels	1 Mbps AUX CH, 500us max. latency	DDC, No max. latency limit
Channel Coding	ANSI8B/10B (open)	TMDS (Proprietary)
Content Protection	Philips's DPCP optional	HDCP
Protocol	Micro-Packet-based extensible in the future to add features	Digitized and serialized analog video raster
Internal Connection	Included in first release of spec.	None
Controlling Authority	VESA	Digital Display Working Group

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COMPUTER DISPLAY TIMELINE



Products designed for DisplayPort standard offer a user friendly interface in a smaller form factor than past VGA and DVI standards.

PRODUCTS DESIGNED FOR DISPLAYPORT STANDARD



PART NUMBER	CONTACT TERMINATION TYPE	PCB MOUNTING POSITION	PCB RETENTION METHOD	MOUNTING FLANGE	COMMENT
2040247	Surface Mount	Top	Surface Mount Legs	With	
2040204	Surface Mount	Top	Through Hole Legs	With	
2040210	Through Hole	Top	Through Hole Legs	With	
2040388	Surface Mount	Top	Surface Mount Legs	Without	
2013655	Surface Mount	Top	Through Hole Legs	Without	
2013656	Surface Mount	Bottom	Through Hole Legs	Without	
2013659	Through Hole	Top	Through Hole Legs	Without	2.0MM Tine
2040276	Through Hole	Top	Through Hole Legs	Without	2.6MM Tine
2040277	Through Hole	Offset (PCB Cut-out Required)	Through Hole Legs	Without	

PRODUCT SPECIFICATION: 108-78515

CABLE ASSEMBLIES CERTIFIED TO DISPLAYPORT STANDARD

PART NUMBER	CABLE JACKET	FERRITE CORE	LATCH
2069230-2	Normal (PVC) Cable Jacket	Without Ferrite Core	Without Latch
2040685-2	Normal (PVC) Cable Jacket	Without Ferrite Core	With Latch
2006457-2	Normal (PVC) Cable Jacket	With Ferrite Core	Without Latch
2006454-2	Normal (PVC) Cable Jacket	With Ferrite Core	With Latch
2040686-2	Halogen - Free Cable Jacket	Without Ferrite Core	Without Latch
2040687-2	Halogen - Free Cable Jacket	Without Ferrite Core	With Latch
2006459-2	Halogen - Free Cable Jacket	With Ferrite Core	Without Latch
2006453-2	Halogen - Free Cable Jacket	With Ferrite Core	With Latch



CABLE ADAPTERS DESIGNED TO DISPLAYPORT STANDARD

PART NUMBER	DESCRIPTION	LATCH	LENGTH
MGC00-00163	End designed for DisplayPort standard to end designed for DVI-D standard	DisplayPort Standard End - With Latch	0.2 Meters

Please inquire about our other cable assemblies:
 End designed for DisplayPort standard to end designed for HDMI standard
 End designed for DisplayPort standard to end designed for VGA standard

All part numbers are RoHS compliant.

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Products Designed for DisplayPort Standard

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QUESTIONS TO ASK AT DESIGN IN

- **What is the voltage rating for products designed for DisplayPort standard?**
The voltage rating is 40 vac (rms)
- **What is the current rating for products designed for DisplayPort standard?**
Current rating: signal application only, 0.5 ampere maximum per contact
- **What is the temperature rating for products designed for DisplayPort standard?**
The temperature rating is -40°C to +85°C unless limited by cable overmold
- **Are your connectors certified by some DisplayPort body or group?**
The VESA requires certification electrically of the cable assemblies, transmitter and receiver not individual connectors. The certification documents can be found at a listing under: <http://www.displayport.org/>. Tyco Electronics has multiple cable assemblies certified and using certified items, meaning you can be assured your video link will operate.
- **How can I get a copy of the DisplayPort specification?**
You can get a copy of the latest released specification (1.1a) at no charge, by filling out an application at: https://fs16.formsite.com/VESA/form608559305/secure_index.html.
- **The DisplayPort specification calls for standard 2.0+/-10% meter cable assemblies. Can I get other lengths?**
Yes, other lengths can be built under custom orders. One must realize that the physical cable construction will be different as the length increases so that signal integrity losses can be limited.

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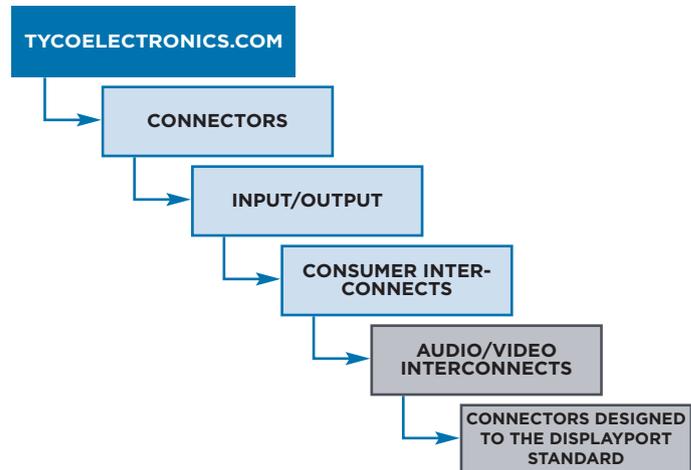
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- Cross-Reference from Non-compliant to Compliant Products
- Ability to browse RoHS Compliant Products in our on-line catalog
- Downloadable Technical Data Customer Information Presentation
- More detailed information regarding the definitions used above
- So whatever your questions when it comes to RoHS, we've got the answers at www.tycoelectronics.com/leadfree

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Dimensions are in millimeters with inches (if shown) in brackets. Specifications subject to change.

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