

High Resolution™ DisplayPort Copper Cables



FEATURES

- Supports resolutions up to 4096x2160 / 60p
- Supports cable lengths up to 15 meters (~ 50 ft.)¹
- Supports DisplayPort data rates up to 21.6 Gbps.
- Heavy-duty 24AWG copper wires provide minimal insertion loss
- Ultra-low Skew guarantees unsurpassed digital fidelity
- Triple shielded for superior noise immunity
- Gold flash plated connectors provide superior conductivity
- Locking connector mechanism for added security

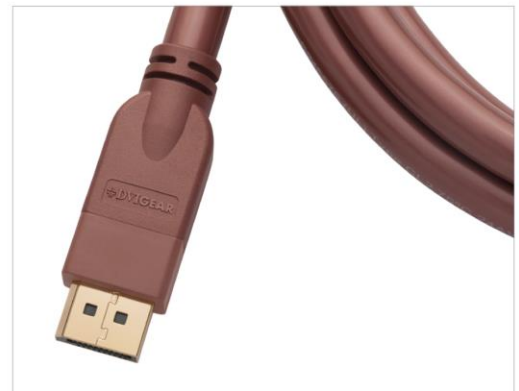
Superior Performance – DVIgear’s High Resolution™ (HR™) DisplayPort cables are engineered for unsurpassed performance and reliability in mission critical applications. These cables are designed to transport high speed digital DisplayPort signals with bit rates up to 21.6 Gbps. over long distances while maintaining pristine signal integrity.

High-Speed Signals – Long distance transport of high resolution DisplayPort signals over copper cables must overcome several challenges, such as insertion loss, differential skew and jitter. Insertion loss is caused by cable capacitance, which acts as a low-pass filter, blocking higher frequency signal components from passing. Skew occurs when the differential DisplayPort signals get delayed and become out of phase as they pass over a long cable. Both factors contribute to increased digital jitter, which degrades the performance of the cable. This jitter becomes more severe with higher resolutions, higher bit rates and longer cable distances. Conventional cables that support lower resolutions at short distances are often unable to support the data rates required by higher resolutions at longer distances. The resulting video can be disrupted by visual artifacts or may not be visible at all.

Advanced Design – Built to overcome these challenges, DVIgear’s HR™ Series DisplayPort Cables are constructed using heavy gauge 24AWG copper wires that provide superior ruggedness and durability. The heavier wire gauge has increased cross-sectional cable area and decreased cable capacitance, which allows signals with higher data rates to pass with minimal jitter. This enables cable lengths of up to 15 meters (~ 50 ft.) with full compliance with DisplayPort 1.2 signal parameters.



DisplayPort Connector Top



DisplayPort Connector Bottom

SPECIFICATIONS

Model	DVI-26xx-HR
Product Designation	High Resolution™ DisplayPort (DP HR™)
Product Description	24AWG DisplayPort Cables
Connectors	
Input / Output Connectors	20-pin DisplayPort Male Connectors with locking mechanism
Contacts	20 pins, 30µ Gold Plated, long life design
Shell	Gold Flash Plated
Performance	
Standards Compliance	DisplayPort 1.2
Maximum Pixel Clock Frequency	540 MHz - up to 15 meters 270 MHz - up to 30 meters
Maximum Bit Rate (per Channel)	5.4 Gbps - up to 15 meters 2.7 Gbps - up to 30 meters
Maximum Bit Rate (Aggregate)	21.6 Gbps - up to 15 meters 10.8 Gbps - up to 30 meters
Maximum Resolution	4096x2160 /60p - up to 15 meters 4096x2160 /30p - up to 30 meters
Cable Equalization	The DisplayPort source and display must support Link Training to achieve maximum cable lengths specified.
Typical Parametric Data	
Voltage Rating	75 V
Differential Impedance	100 ohms ± 5%
Insertion Loss (SDD21)	< 7.5 dB @ 825 MHz with 10 meter cable
Intra-pair Skew	< 1.5 nsec (from 250 MHz - 2.5 GHz) with 10 meter cable
Inter-pair Skew	< 100 psec (from 250 MHz - 2.5 GHz) with 10 meter cable
Far End Crosstalk (FEXT)	< -5 dB
Propagation Delay	4.55 nsec/meter
Cable Lengths	
Available Cable Lengths (meters) ⁽¹⁾	0.5, 1, 2, 3, 5, 7.5, 10, 12.5, 15
Available Cable Lengths (ft.) ⁽¹⁾	1.6, 3.3, 6.6, 9.8, 16.4, 24.6, 32.8, 41.0, 49.2
Maximum Cable Length ⁽¹⁾	15 meters (49.2 ft.)
Mechanical	
Construction	19 Conductor Cable with 5x high speed twisted pairs
High Speed Conductors	24AWG, FM-PE+SKIN Construction
Shielding	Triple Shielding
Jacket Material / Color	PVC / Metallic Copper (Pantone 8560C)
Outside Diameter	10.5 ±0.20 mm
Minimum Bend Radius	40.0 mm
Environmental	
Operating Temperature	-13° to 140° F (-25° to 60°C)
Storage Temperature	-40° to 167° F (-40° to 75°C)
Humidity (storage / operating)	10% to 90% (non-condensing)
Regulatory Approvals	
Compliance	UL13 (CL2) UL758 (AWM20276) RoHS
UL File Numbers	AVLV2.E245407 AVLV8.E245407 QPTZ.E245576
Warranty	
Limited Warranty	3 Years
Accessories Included	
None	

Note 1: Cable lengths > 15 meters are available on special order.