

Datasheet for 76650-0143

General Information

Part Number:	76650-0143
Manufacturer:	Molex / Waldom
Title:	Deluxe Audio Video Data Application Kit
Description:	Includes HDMI, HDMI to DVI-D, MicroCross DVI-D and DVI-I, DisplayPort, IEEE1394-1395, USB Type A and B, USB OTG (On-the-Go) mini-B, Micro USB-B Product Families. Pitches range: 0.05mm (.002)" - 2.0mm (.079)"
Product Family(s):	MicroCross™ DVI, HDMI^, DisplayPort*, USB, mini-B™ USB OTG, and Micro-USB
Certificates:	(Molex Parts within this kit) - EU RoHS Compliant
Country of Origin:	Kit assembled in U.S.A.

Specifications

Design

Configuration:	Wire-to-Board
Connector Type:	Receptacles and Plugs, Cables

Mounting

Orientation:	Upright, Right Angle and Vertical
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Pitch:	0.5mm (.020"), 0.65mm (.0256"), 1.00mm (.039")
Speeds:	(2.5 GHz), 480 Mbps, 4.95, 5, 9.9 Gbps
Current Rating:	0.5, 1, 1.5, 1.8 and 3 Amps
Voltage:	30, 40, 100, 150, 750 Volts

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Product Highlights

The MicroCross™ DVI (Digital Visual Interface) connector family is based on an innovative use of "crossing" ground blades to provide high-speed electrical performance and a high-bandwidth in a low-cost connector.

Molex's HDMI[^] (High Definition Multimedia Interface) connectors and cable assemblies provide an uncompressed digital link between consumer electronics equipment and audio/video monitors. HDMI is a small, user-friendly interconnect that can carry up to 5 Gbps of combined video and audio in a single cable. This system eliminates the cost, complexity and confusion of multiple cables used to connect current A/V systems.

[^] High Definition Multimedia Interface and HDMI are trademarks of HDMI Licensing, LLC.

The DisplayPort^{*} is designed for internal and external system solution for high bandwidth audio and video data transfer in the notebook and PC market. It reduces cost (by having high definition digital audio-video and graphics stream via the interface through the same cable) and provides ease of use (through the plug-and-play feature), making it user-friendly for consumers. It also provides performance scalability for future developments of high quality displays, high color depths and high refresh rates display.

^{*} DisplayPort is a Trademark of VESA

The USB (Universal Serial Bus) connector has been one of the most popular I/O connectors for the PC industry due to its low cost and hot plugging feature. It was developed to integrate a variety of existing PC I/O ports into a single interface with hot-plugging, automatic configuration capabilities and increased bandwidth to enhance serial I/O throughput.

Molex's mini-B™ USB OTG (On-The-Go) connectors and cables help enable mobile devices to exchange data directly without the need for a host PC. All Molex USB OTG connectors are compatible with the On-The-Go supplement (Rev. 1.0) to the USB 2.0 specification, and operate at speeds up to 480Mbps.

The new Micro-USB connector technology has given the opportunity for portable device and mobile phone makers to further reduce their real estate in their applications. The Molex Micro-USB supports the current USB OTG supplement. This allows communication between portable devices without going through a host.

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Features and Benefits	Applications
• Supports both analog and digital signals • Plug and play interface (without shutting down or reconfiguring) • Excellent EMI/RFI (Fully Shielded) • LFH™ contact design is rugged and reliable, provides two points of contact for optimal signal integrity • Protruding shield, first make - last break for ESD considerations • Single and dual link digital signaling allows high speed digital transmission (4.95 Gbps and 9.9 Gbps) • Analog coaxial lines allow high speed transmission (2.5 GHz) • Carries uncompressed audio / video in a single cable (5 Gbps) • HDMI^ to DVI cables are DVI backward compatible • Fully shielded ESD protection • Triad signal layout, low impedance mismatch • Detent locks, strong mating between plug and receptacle • Metal shielding on all sides against EMI • Small footprint, less PCB real estate • Latches, for long cable latching • Solder tab, secure PCB retention	• Desktop computers • Multimedia equipment • Flat panel displays • Digital TVs/Plasma Displays/LCDs • Audio/Video Receivers • Set-Top Boxes • DVD Players/Recorders/D-VHS Players • High Definition Monitors • PC (Personal Computer) • External display interconnect • Projector • TV display • DVD player

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Features and Benefits continued	Applications continued
• Side metal shielding, against EMI/RFI • Panel grounding pins for ESD protection • Stand-offs for anti-solder bridging • Kinked boardlocks, strong PCB retention • Small footprint saves PCB real estate • Inlet dimples, locking feature • Operates at speeds up to 480 Mbps • Fully compliant with USB 2.0 • Compact and Low-profile, ideal for mobile applications • 1/8 the size of standard USB-B • 5,000 mating cycles, rugged durability • Lead-in features provide blind mating • Stainless steel shell provides high mating durability & strength • Latching windows with angular tabs prevent accidental unmating of plug • Pick & place area (3mm diameter) enhances assembly process • Beveled profile B style locks out A-type	• Desktop and Notebook PCs • PC Peripherals: Scanner, Printer, Monitor, Modem, Keyboard, Joystick, & Mouse • Telephony systems: ISDN, PBXs, & Handsets • Cell phones • Digital still cameras • Digital video cameras • PDAs • MP3 Players • Other portable and hand-held devices • Mobile Phones • Portable devices • MP3 players • Portable digital video players • Digital Still Cameras • Digital Video Cameras

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Bill of Materials for Part No. 76650-0143

Molex Part No.	Country of Origin	Description	Quantity in Kit
74320-9010	China	DVI-I Receptacle Header, Right Angle Panel Mount	1
74320-5000	China	DVI-D Receptacle Header, Vertical Panel Mount, 30micro inches Gold	1
74320-1000	China	DVI-I Receptacle Header, Right Angle	1
74320-4000	China/HK	DVI-D Receptacle Header, Right Angle Panel Mount	1
74320-3000	China	DVI-I Receptacle Header, Vertical Panel Mount	1
88768-3500	China	HDMI [^] to DVI-Digital Cable Assembly, 28 AWG, 1.00m (3.30')	1
47151-0002	China	1.00mm (.039") Pitch HDMI [^] Receptacle, Rt Angle w/Screw Flange,w/o Back Cover	1
47151-1002	China	1.00mm (.039") Pitch HDMI [^] Receptacle, Rt Angle w/Screw Flange, w/Back Cover	1
47151-1005	China	1.00mm (.039") Pitch HDMI [^] Receptacle, Right Angle, Gold	1
47272-0001	China	0.5mm (.020") Pitch, Receptacle, Right Angle, SMT, Display Port*	1
67068-8000	China	USB Type B Receptacle, Right Angle, BLACK	1
67068-9000	China	USB Type B Receptacle, Right Angle, WHITE	1
48037-1000	Taiwan	USB Plug, Type A, Right Angle, Surface Mount, 30μ" Gold Plating,	1
89485-8000	China	USB Type A Receptacle, Single Upright, Right Angle	1
48037-0001	Taiwan	USB Plug, Type A, Right Angle, Through Hole	1
88732-9000	China	USB Shielded I/O Cable Assembly: A-to-B Full-Rated, 0.82m (2.69')	1
88728-3200	China	USB-A Plug to Pigtail White Cable Full-Rated 810mm	1
88732-8600	China	USB (OTG) Shielded I/O Cable, USB-A To mini-B™, USB 2.0, 1.0m (3.28'), White	1
54819-0519	Japan	USB (OTG) mini-B™ Receptacle, Right Angle, Through Hole	1
47491-0001	China	0.65mm (.0256") Pitch Micro-USB B Receptacle, Mid-Mount, SMT, Lead Free	1
47346-0001	China	0.65mm (.0256") Pitch Micro-USB B Receptacle, Bottom Mount, SMT, Lead Free	1
53462-0629	China	IEEE 1394-1995 Receptacle, Right Angle, SMT	1
67503-1020	China	USB On-The-Go (OTG) mini-B™ Receptacle, Right Angle, SMT	1
500075-1517	Japan	USB On-The-Go (OTG) mini-B™ Receptacle, Vertical, Through Hole	1

For additional Molex / Waldom Design and Solution Kits please go to www.molexkits.com

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68784-0001	China	USB-A/MICRO B CABLE 1M	1
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No Recommended Molex Tool for Part No. 76650-0143