

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
<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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
<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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