

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

**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<sup>^</sup> (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.

<sup>^</sup> High Definition Multimedia Interface and HDMI are trademarks of HDMI Licensing, LLC.

The DisplayPort<sup>\*</sup> 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.

<sup>\*</sup> 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<sup>™</sup> 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"><li>• Supports both analog and digital signals</li><li>• Plug and play interface (without shutting down or reconfiguring)</li><li>• Excellent EMI/RFI (Fully Shielded)</li><li>• LFH™ contact design is rugged and reliable, provides two points of contact for optimal signal integrity</li><li>• Protruding shield, first make - last break for ESD considerations</li><li>• Single and dual link digital signaling allows high speed digital transmission (4.95 Gbps and 9.9 Gbps)</li><li>• Analog coaxial lines allow high speed transmission (2.5 GHz)</li><li>• Carries uncompressed audio / video in a single cable (5 Gbps)</li><li>• HDMI^ to DVI cables are DVI backward compatible</li><li>• Fully shielded ESD protection</li><li>• Triad signal layout, low impedance mismatch</li><li>• Detent locks, strong mating between plug and receptacle</li><li>• Metal shielding on all sides against EMI</li><li>• Small footprint, less PCB real estate</li><li>• Latches, for long cable latching</li><li>• Solder tab, secure PCB retention</li></ul>	<ul style="list-style-type: none"><li>• Desktop computers</li><li>• Multimedia equipment</li><li>• Flat panel displays</li><li>• Digital TVs/Plasma Displays/LCDs</li><li>• Audio/Video Receivers</li><li>• Set-Top Boxes</li><li>• DVD Players/Recorders/D-VHS Players</li><li>• High Definition Monitors</li><li>• PC (Personal Computer)</li><li>• External display interconnect</li><li>• Projector</li><li>• TV display</li><li>• DVD player</li></ul>

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Features and Benefits continued	Applications continued
<ul style="list-style-type: none"><li>• Side metal shielding, against EMI/RFI</li><li>• Panel grounding pins for ESD protection</li><li>• Stand-offs for anti-solder bridging</li><li>• Kinked boardlocks, strong PCB retention</li><li>• Small footprint saves PCB real estate</li><li>• Inlet dimples, locking feature</li><li>• Operates at speeds up to 480 Mbps</li><li>• Fully compliant with USB 2.0</li><li>• Compact and Low-profile, ideal for mobile applications</li><li>• 1/8 the size of standard USB-B</li><li>• 5,000 mating cycles, rugged durability</li><li>• Lead-in features provide blind mating</li><li>• Stainless steel shell provides high mating durability &amp; strength</li><li>• Latching windows with angular tabs prevent accidental unmating of plug</li><li>• Pick &amp; place area (3mm diameter) enhances assembly process</li><li>• Beveled profile B style locks out A-type</li></ul>	<ul style="list-style-type: none"><li>• Desktop and Notebook PCs</li><li>• PC Peripherals: Scanner, Printer, Monitor, Modem, Keyboard, Joystick, &amp; Mouse</li><li>• Telephony systems: ISDN, PBXs, &amp; Handsets</li><li>• Cell phones</li><li>• Digital still cameras</li><li>• Digital video cameras</li><li>• PDAs</li><li>• MP3 Players</li><li>• Other portable and hand-held devices</li><li>• Mobile Phones</li><li>• Portable devices</li><li>• MP3 players</li><li>• Portable digital video players</li><li>• Digital Still Cameras</li><li>• Digital Video Cameras</li></ul>

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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 <sup>^</sup> to DVI-Digital Cable Assembly, 28 AWG, 1.00m (3.30')	1
47151-0002	China	1.00mm (.039") Pitch HDMI <sup>^</sup> Receptacle, Rt Angle w/Screw Flange,w/o Back Cover	1
47151-1002	China	1.00mm (.039") Pitch HDMI <sup>^</sup> Receptacle, Rt Angle w/Screw Flange, w/Back Cover	1
47151-1005	China	1.00mm (.039") Pitch HDMI <sup>^</sup> 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](http://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**