Icron Technologies
USB + DisplayPort Technology
Frequently Asked Questions (FAQs)

Q1: What is DisplayPort and how prevalent is it?
A1: DisplayPort is an open digital display interface standard put forth by the Video Electronics Standards Association (VESA) in 2006. It defines a new royalty-free, digital audio/video interconnect, intended to be used primarily between a computer and its display monitor, or a computer and a home-theater system. The first version was approved in May 2006, version 1.1a was approved on January 11, 2008, and the current version 1.2 was approved on December 22, 2009.

DisplayPort is being adopted across the PC industry as the main display interface that will eventually replace DVI, LVDS and VGA. DisplayPort primarily addresses external display connections between PCs and display devices such as monitors and projectors with other DisplayPort applications including internal graphics on mobile devices such as laptops and Netbooks. In-Stat predicts that DisplayPort-enabled devices will grow to over 600 million in 2012 and 70% of PC interface market share.

Q2: What is Icron's USB over DisplayPort technology?
A2: Icron is shaping the future of desktop computing by successfully combining DisplayPort video with USB on one standard DisplayPort cable at the full 15m distance outlined in the DisplayPort specifications (and beyond the 5m USB specification). Icron's USB over DisplayPort technology is based on Icron's ExtremeUSB® patented technology that extends USB 2.0 at distances up to 10 kilometers. USB over DisplayPort technology can turn a monitor into a full featured docking station with external USB peripheral support and enables the integration of USB devices (e.g. webcam, touchscreens, and speakers). USB over DisplayPort technology delivers rich Interactive Kiosks and Large Format Displays with flexibility to daisy chain workstations so that one PC can service multiple users and monitors simultaneously. This is all enabled with only one standard DisplayPort cable to connect to the PC, reducing cable clutter and minimizing the desktop footprint. Diagrams at http://www.icron.com/products/usb_new/usb-over-displayport.php

Q3: What does adding USB to DisplayPort enable?
A3: *Docking Station Monitors*

USB over DisplayPort gives monitors USB functionality that enables them to act as a single cable docking station. This means consumers can plug any USB device, such as keyboard, mouse, webcam, flash drive, or other USB device directly into their monitor and don't have to worry about cable lengths back to the PC.

Universal Docking Station

By removing the docking station connector on laptops, the cost of the PC is reduced. Ideal for creating universal docking stations that works with any PCs, thus reducing the price of the docking station itself as well.

Multifunction Monitors

USB over DisplayPort technology gives monitors the ability to integrate touchscreens, audio, flash, webcams, stereo speakers, gaming controllers, as well as keyboard and mouse using one DisplayPort cable. The multifunction monitor offers a whole host of interactive options for consumer, industrial, and enterprise applications.

Multi-Client Computing

USB over DisplayPort technology empowers PCs to serve multiple users at the same time; perfect for the educational, financial, and small to medium business (SME) markets.

Interactive Kiosks

USB over DisplayPort technology gives kiosks the ability to integrate touchscreens, card readers, printers, audio, and webcams. This allows for kiosks and digital signs to be interactive while having the computer remotely located for improved security, serviceability, and aesthetics.

Daisy-Chained Workstations

USB over DisplayPort 1.2 technology enables multiple daisy-chained monitors and USB peripherals to be driven from one PC. Gamers can have multiple monitors and separate input devices for each. Medical and industrial customers are able to have multiple computing sessions off one PC.

Single Connector Mobile Devices

Mobile devices can now stream video and USB from one connector instead of just high-speed data that must be rendered on a PC. This saves space and cost in devices such as smartphones, digital video cameras, and mobile Internet devices which will be able to be connected directly to a TV or monitor.

Q4: Does Icron have a USB over DisplayPort prototype?

A4: Icron is demonstrating USB 2.0 over DisplayPort 1.1a at CES 2011 in Las Vegas. The prototype shows a PC delivering USB 2.0 + DisplayPort 1.1a over a standard DisplayPort cable to a monitor with an integrated USB hub. A keyboard, mouse, webcam, USB speakers and a flash drive were directly connected to the monitor enabled by Icron's USB technology. With 2 HD videos, an HD webcam session, audio, and interactivity from the keyboard and mouse, the system performs flawlessly, with reduced cable clutter. Icron is also working with DisplayPort 1.2 market leaders to create a DisplayPort 1.2 demonstration when DisplayPort 1.2 silicon is available.

Q5: Will Icron develop a USB over DisplayPort product?

A5: Icron has plans to create a number of USB over DisplayPort reference designs for OEMs and separate products that can be private labelled or customized for Icron's customers and partners. Icron is interested in partnering with PC OEMs and monitor manufacturers looking to deliver a fast time to market differentiated solution.

Q6: How many monitors do the USB over DisplayPort technology support?

A6: DisplayPort 1.2 supports daisy-chaining and thus would support multiple monitors, all with their own USB peripheral functionality and separate screens. The number of monitors is determined by the maximum resolution desired by the user. DisplayPort 1.2 has 20 Gbps of bandwidth for video which can

be divided between the monitors. In addition, software such as Windows MultiPoint Server can be utilized such that each monitor has a full "PC desktop" experience.

Q7: What is the maximum length of a DisplayPort cable?
A7: Standard DisplayPort cables are up to 15 meters (50 feet) in length. DisplayPort extender technologies, using Cat 5 or Fiber, extend this distance to over 100 meters (330 feet). Icron's USB over DisplayPort technology is compatible with standard DisplayPort cables and DisplayPort extenders.

Q8: Is DisplayPort v1.1a compatible with DP v1.2?

A8: DisplayPort 1.2 devices are backwards compatible with DisplayPort 1.1a devices and will work together perfectly. Icron's USB over DisplayPort technology is also backwards compatible such that it is fully compatible with DisplayPort 1.1a or 1.2 devices.

Q9: Is Icron's USB over DisplayPort compatible with both PC and Mac?
A9: Yes. Icron's USB over DisplayPort technology is based on Icron's ExtremeUSB® technology that is fully compatible with all Windows, Mac, and Linux operating systems. Icron's ExtremeUSB® technology has been successfully adopted in the market for over 12 years.

Q10: What other USB over DisplayPort solutions exist in the market today?
A10: None. Only Icron can enable USB functionality without the need for drivers or software using one standard DisplayPort cable.

Q11: Where can I find out more about DisplayPort?
A11: More information on DisplayPort can be found at the DisplayPort website, www.displayport.org.

Q12: How can I find out more about USB over DisplayPort?
A12: For more information about Icron's USB over DisplayPort technology, please contact Icron sales at info@icron.com or call 604 638 3920.

About Icron Technologies Corp.
Icron Technologies (TSX-V:IT) is an innovative leader in the development and manufacturing of high performance video and USB extension solutions for commercial and industrial markets worldwide. Icron's patented technology extends PC Video and USB devices over many media types including Cat 5, Fiber, Wireless, DisplayPort, Coax, Powerline, and over a corporate LAN. Icron's extension products are deployed in a wide range of applications such as digital home connectivity, industrial automation, medical imaging, aerospace, interactive digital signage, remote desktop extension, security and surveillance, enterprise computing, isolated USB, and point-of-sale markets, or anywhere where a PC needs to be remotely located from a display or peripheral device.

Icron is a publicly traded corporation and trades under the symbol "IT" on the TSX Venture Exchange. For more information on the company and its products, please visit www.icron.com.

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