



# CASE STUDY

## **Adder Technology Limited**

KVM Solutions Provider Improves Accessibility  
of Cat 5 KVM Extension System

Adder is a UK based leading developer and manufacturer of KVM products with distribution in over 60 countries.

The global market for KVM products reached \$772.3 million in 2006, and is expected to grow to \$1,157.6 million by 2011 according to VDC, a technology market research firm. The global market for distributed computing environments requiring remote access of USB peripherals using KVM extenders is steadily growing.

For more than 25 years, customers worldwide have relied on Adder's technology solutions to control computers locally, remotely and globally. Adder Technology is a leading European developer of KVM (Keyboard, Video, Mouse) switching and extender technology. Adder's advanced range of KVM switches, video and audio extenders enable the control of local, remote and global IT systems. Based in the United Kingdom, the company has offices in the United States, Germany, the Netherlands and Singapore.

Adder's products are renowned for their technical excellence, reliable performance and robust design and manufacture.

Specializing in advanced computer access and control products and solutions for business users, Adder has established a strong position in the KVM market demonstrated by its steady yearly growth and its impressive track record for bringing successful and profitable products to market.

Adder's video and audio extension technologies distribute video and audio signals ideal for digital signage and media streaming applications such as in-store TV and public information systems. Adder's customers span the retail, financial, industrial, medical, broadcast, air traffic control, digital signage, military, and server management markets. The company also provides printer sharing products, cables, accessories and power control units.



AdderLink X-Series USB KVM Extender



### CHALLENGES

- Integrating reliable full speed USB extension capabilities into existing video and audio extension technology

### SOLUTION

- Embedded cost-effective ExtremeUSB® technology over Cat 5 at up to 328 feet (100 meters)

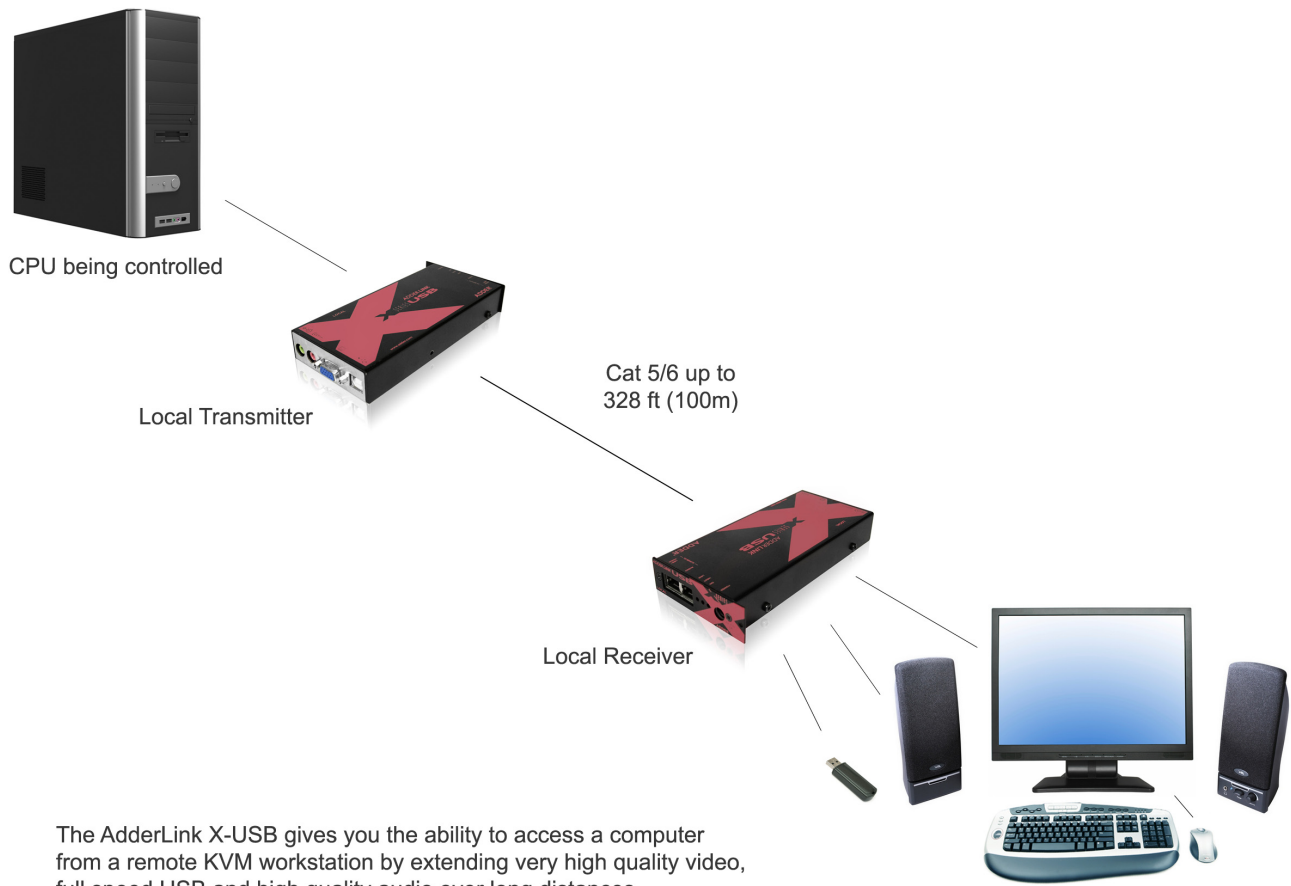
*"Icron is renowned as the leading provider of USB extension solutions. By combining Adder's KVM expertise with their ExtremeUSB® technology, we were able to develop a uniquely flexible KVM Extender at a highly competitive price."*

Adrian Dickens, Managing Director at Adder

### The Challenge

KVM technology provides easy access and control to any connected CPU. However, extending the reach of audio and video applications with demanding environmental conditions and control factors proved challenging. Adder's customers needed high quality audio and video along with complete USB peripheral connectivity without any video or USB degradation over long distances of Cat 5 cable. To meet the customer requirement, Adder looked to Icron's ExtremeUSB technology to integrate with their existing audio/video extension technology and manage the complex timing requirements of USB to provide a long reach connection beyond the 16 feet (5 meter) cable limitation of USB. All of this would have to be transparent from the end user and maintain full speed (12 Mbps) uninterrupted true USB connectivity. In addition, some customers needed a rack mounting solution to fit their specific environmental needs so a small form factor was required.

### KVM Extension Application over Cat 5



The AdderLink X-USB gives you the ability to access a computer from a remote KVM workstation by extending very high quality video, full speed USB and high quality audio over long distances.

## The Solution

In today's highly complex and competitive IT market, business partnerships and best of breed technology integration are key success factors in delivering unique, high performance products. Adder has long championed this collaborative process hence partnering with Icron to develop a superior KVM extension solution.

Adder embedded Icron's patented ExtremeUSB® technology into their AdderLink X-USB KVM extender enabling all USB 1.1 devices to be extended over 328 feet (100 meters) of Cat 5 cable. Icron's USB 1.1 ExtremeUSB solution extends true full speed USB over a single twisted pair, leaving the other three pairs of a standard Cat 5 cable free to transport other media such as RGB video and audio. In Adder's X-USB KVM solution a single Cat 5 cable carries high definition audio and video media with video signals at resolutions up to 1600 x 1200 and advanced finely adjustable cable equalization ensures a sharp picture quality. Full speed USB provides a seamless integration of RGB video and analog audio over long distances. The AdderLink X-USB has been designed to provide industry-leading video clarity, compatibility and high rack densities. Both transmitter and receiver units can be used stand-alone and up to 16 units can be mounted into a 2U rack-mountable chassis.

"Icron's USB extension development boards and engineering support allowed us to quickly evaluate and integrate our two technologies, significantly reducing our R&D costs and time to market," stated Adrian Dickens, Managing Director of Adder. "The Adderlink X-USB series offers extensive functionality and flexibility to our customers by allowing long distance control of their USB peripherals with outstanding picture quality in varied multimedia and video applications," added Dickens.

Adder's products reduce the complexity, vulnerability and cost of IT environments by providing robust access to and direct control of local computing systems. The company's KVM extenders allow the keyboard, monitor (or touch screen), mouse, and other USB devices to be located remotely from the computer, enabling the remote control of systems where factors such as security, noise, dirt and heat can severely affect reliable computing operations. This makes the X-USB series of KVM extenders an excellent solution for accessing computers centralized in one secure, environmentally controlled location such as those located in data centers, financial institutions or manufacturing environments.

## The Result

Icron's ExtremeUSB technology breaks through the 5m USB cable limit and enables all USB peripheral devices to function as if they were directly connected to the host PC, without the need of any additional software drivers, over long reach wired media. By integrating ExtremeUSB technology into Adder's KVM extension systems, users can easily extend full speed USB, RGB video and analog audio over long reach Cat 5 cable. By providing a robust full speed USB connection that supports all USB devices, such as thumb drives, and web cams, not just keyboards and mice, the Adder X-USB KVM extender offers significant competitive advantages and convenience for the user.

The AdderLink X-USB KVM extender's quality and flexibility has provided the ideal solution for customers in a wide variety of end markets. For instance, a retailer was able to provide the latest advice and information to its consumers by extending

interactive signage from a secure, air-conditioned server area in the back office to touch screens and keyboard/mouse functionality in the shop.

In another application, a museum chose to install widely dispersed interactive kiosks and displays located throughout the building. A total of forty PCs were installed throughout the museum, and some of them were located up to 100 meters from the PC actually running the presentation. Without wanting to compromise video quality, sound clarity or aesthetics, the PCs were located in a centrally secured and climate controlled computer room. The response time of the interactive kiosks was lightning fast with minimal compromise to quality. Similar kiosk applications are widely used at trade shows and professional conferences.

From the point of view of Adder's customers, the challenges of workstation control, display, extension and aesthetic requirements can easily be achieved by implementing AdderLink's X-USB KVM extender. The partnership between Adder and Icron continues to enable unique product development by meeting diverse KVM extension application needs.

### About Icron

Icron Technologies is a visionary leader in high performance USB bridging and extension solutions for commercial and industrial markets worldwide. Icron's USB extension and bridging products are deployed in a wide range of applications including: digital home connectivity, industrial automation, medical imaging, aerospace, and KVM extension. Icron's patented ExtremeUSB® technology extends the range of USB 1.1 / 2.0 over Cat 5, Wireless, Fiber, Powerline, Coax and Phone lines, at distances of up to 40 km. ExtremeUSB technology is available in a variety of formats including technology licenses, OEM modules, developer kits, as well as branded and private-label products.

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](http://www.icron.com).

**For more information, please contact Icron Technologies.**

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