![Icron - A Maxim Integrated Brand]

Broadcast Services International
Delivering High-Quality Broadcast Productions with Icron's ExtremeUSB® Technology Over Local Area Network

The Icron Ranger 2304GE-LAN helps companies like BSI to control and deliver seamless, high-quality broadcast productions.

Based in Burlington, Ontario, Canada, Broadcast Services International (BSI) has been a leader in sports production planning for more than 30 years. When the company began in 1987, it specialized in full-service sports production, technical design, consulting, and engineering. The team has an impressive list of accomplishments, including more than three decades of Olympic Games experience and 19 Emmy Awards for excellence in sports broadcasting. Over the years, BSI has expanded its portfolio beyond sports, managing the television production for concerts, theater performances, and more.

Challenge	Solution	Benefits
Needed fast, reliable, versatile, and easy-to-use USB extension over LAN to control and deliver seamless, high-quality broadcast productions	USB 2.0 Ranger 2304GE-LAN 4-port Gigabit Ethernet LAN extender	Easy to install and use USB extenders that cover long distances over a LAN

"The operator of the equipment connected to the ExtremeUSB extenders enjoyed the ability to do a simple adjustment quickly, which before would have been a monumental task, and get on to the real work at hand."

Ralph Grohmann, Broadcast Engineer, BSI

Challenges

To deliver seamless, high-quality broadcast productions, the BSI team relies on fast, reliable, and versatile USB and video extension technologies. A key requirement is ensuring the ability to locally reconfigure video and audio production equipment via a laptop, as this capability saves time and effort in a busy production schedule. Ease of use and recovery are also important criteria, as is the ability to quickly connect to a network for control and configuration. Finally, support for extending the range of USB over long distances is essential for certain types of productions, such as sporting events.

For a recent theater production, the BSI team, using Windows® 7 and 10 Professional host systems, needed to extend USB control to a set of high-end analog-to-digital/digital-to-analog AD/DA MADI converters over a Local Area Network (LAN). The AD/DA MADI converters were placed in locations that could not be accessed easily and the BSI team needed a way to manage them from a control room.

Solutions and Benefits

After a good experience using ExtremeUSB technology from Icron, a Maxim Integrated brand, the BSI team decided to use Icron's USB 2.0 Ranger® 2304GE-LAN 4-port Gigabit Ethernet LAN extender for a theater production. "While doing a distance test, connecting the Icron ExtremeUSB technology to network switches with 1.8km of fiber optic cable between them, our equipment would continuously reconnect to each other before I finished connecting the fiber optic cables together. The ExtremeUSB technology is completely transparent in regards to the equipment connected to it," said Ralph Grohmann, broadcast engineer at BSI. "At one point, we were controlling ten USB devices without any problems."

The Icron extension solutions cover long distances over a range of transmission media and are equipped to operate in a variety of environments. Without the need for software drivers, the solutions provide a true plug-and-play option. "The operator of the equipment connected to the ExtremeUSB extenders enjoyed the ability to perform a simple adjustment quickly, a previously monumental task, and get on to the real work at hand," said Grohmann.

Looking ahead, BSI sees other opportunities where ExtremeUSB extenders could play a role. "With events where distance is a concern, Icron's ExtremeUSB is going to help with control, especially since each remote extender has multiple USB ports."