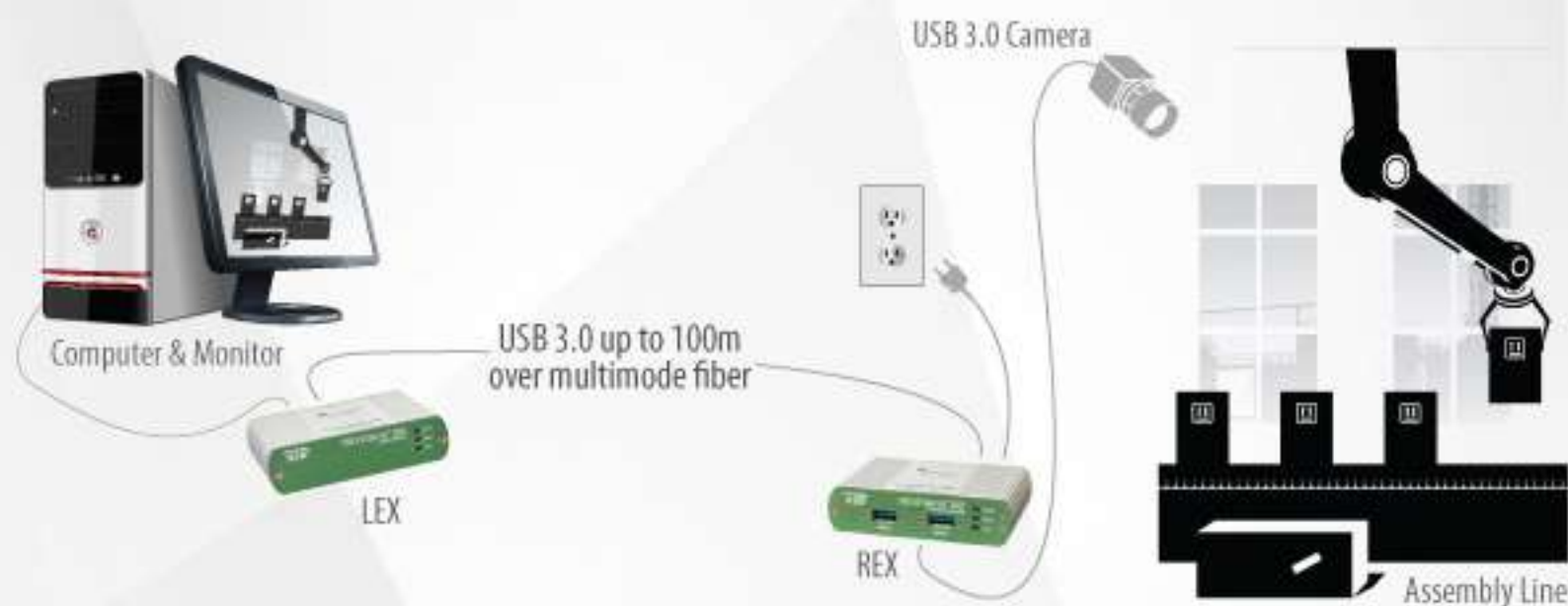# USB Extension Solutions for Machine Vision Camera Applications

Machine Vision cameras help manufacturers reduce defects, increase production yields, and gain efficiencies on their production lines. USB3 Vision cameras are starting to gain popularity as they offer a desirable blend of simplicity, affordability, and high throughput compared to other Machine Vision camera technologies. The downside is USB 3.0's distance limitation of just three meters, however this can easily be overcome with Icron Technologies' USB 3.0 Spectra™ extender solutions.

USB 3.0 Camera

Computer & Monitor

USB 3.0 up to 100m over multimode fiber

LEX

REX

Assembly Line

Why use Icron

Machine Vision cameras are used right at the point of action such as on the assembly line of an automobile plant. However, it is not always feasible to have the computer host right in the same location. In fact, it is estimated that approximately 20% of USB3 Vision camera applications using USB3 Vision Machine Vision cameras require host extension beyond USB 3.0's three meter distance specification. Icron's USB 3.0 Spectra ™ 3022 extender incorporating the ExtremeUSB® suite of features, allows for two USB3 Vision cameras to be extended up to 100 meters over multimode fiber without losing any performance while withstanding the demands of a commercial environment by featuring metal housing, Class B certification, and locking connectors. If additional cameras are required, a USB 3.0 hub can be used.

Includes the ExtremeUSB® suite of features:

EXTREME USB®

- Transparent USB extension
- True plug and play; no software drivers required
- Works with all major operating systems: Windows®, macOS™, Linux® and Chrome OS™

Increase Efficiencies

USB3 Vision camera solutions outperform GigE and FireWire cameras in throughput transmission while costing less than Camera Link cameras. Adding Icron's USB 3.0 Spectra extenders for when a three meter distance is not enough, increases the opportunity to take advantage of USB3 Vision solution efficiencies.

Examples of Machine Vision Applications using USB Extension

- Assembly line manufacturing
- Sorting and packaging
- Quality assurance
- Safety inspection
- Material tracking
- Intelligent traffic systems
- Facial recognition