



# **Install Peace of Mind!**

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# Fire Signal



- TWICE THE VOLUME AS MOST BOXES
- SAVE LABOR...INCREASE PROFITS
- ELIMINATES TROUBLESHOOTING TIME AND COST
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- AVAILABLE IN ZINC OR RED

# Telecommunications





- INTEGRAL CABLE MANAGEMENT
- SAVE LABOR...INCREASE PROFITS
- FACILITATES MIN. BEND RADIUS REQUIREMENTS
- SUPPORTS CURRENT AND EVOLVING SYSTEMS
- SUPPORTS PoE PLUS
- SPECIFIED BY ENGINEERING FIRMS, HOSPITALS, UNIVERSITIES & GOVERNMENT AGENCIES



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See our line of telecom & fire signal boxes at: www.RANDL-INC.com

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Step 1: Remove Damaged Conduit



Step 2: Cut Split Duct Conduit to Fit



Step 3: Snap in



Step 4: Attach



Step 5: Finish Job in Record Time

# REPAIR CONDUITIN A SNAP!

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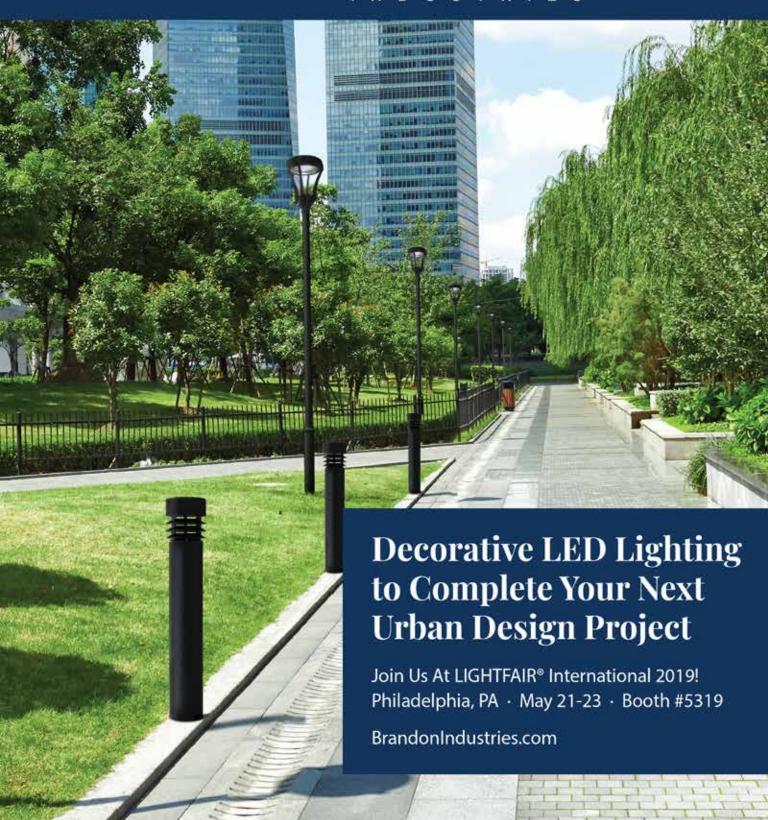
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INDUSTRIES





New sensor input module provides flexibility and higher channel density to reduce cost of test

AstroNova® Test and Measurement expands its line-up of input modules with the release of the IBIV-8 module for Daxus® DXS-100 and SmartCorder® DDX-100 data acquisition systems. With internal bridge completion, shunt calibration, and support for the most common bridge resistance values, the IBIV-8 is ideally suited for bridge-based sensors and strain measurements. The IBIV-8 also offers unparalleled flexibility allowing users to perform a variety of measurements in a single module.

Offering eight input channels, the IBIV-8 reduces the cost per channel by as much as 38% versus existing modules and competitive offerings. Available with 10-pin Lemo or D-Sub connectors, the IBIV-8 simplifies wiring, and built-in hardware-based counter and timer functions eliminate the need for additional hardware.

### Product features include:

- Simultaneous sampling at up to 100 kS/s/ch
- 5 measurement ranges (+/- 10 V, +/- 2 V, +/- 200 mV, +/- 50 mV, and +/- 20 mV)
- Full 24-bit resolution across selected measurement range
- High accuracy (+/- 0.03% for 10V, 2V and 200 mV attenuator settings)
- Supports 120, 350, 500, and 1000W bridge resistances
- Software selectable Internal ¼ and ½ bridge completion (120 and 350W) and shunt calibration
- 10-pin Lemo or D-Sub connector options
- Built-in counter and timer functions

All AstroNova Test and Measurement products are designed and manufactured in the USA and supported by a global team of engineers.

To learn more about the IBIV-8 module and the Daxus & DDX data acquisition system capabilities, visit: <a href="https://tm.astronovainc.com/products/data-acquisition-systems/">https://tm.astronovainc.com/products/data-acquisition-systems/</a>

# Making perfect connections has never been simpler. In fact, now it's a

# NEW SNAP Connectors from

Greaves. A revolutionary compression connector concept that gets the job done with just a few turns of a standard wrench!

- Time-saving, easy installation
- Superior pull-out strength and conductivity
- No bulky and costly tools and dies







# Klein Tools® Combines Two Products for Easy to Use Testing Kit at Great Value

Klein Tools (www.kleintools.com), for professionals since 1857, introduces a new Electrical Tester Kit, combining two essential tools for electricians, the NCVT-5A Dual Range Non-Contact Voltage Tester with Laser Pointer and the RT210 GFCI Receptacle Tester, at a great price point.

Electrical Tester Kit with Dual-Range NCVT and GFCI Receptacle Tester (Cat. No. NCVT5KIT) NCVT-5A

Dual-range non-contact tester detects AC voltage from 12 to 1000V (70 to 1000V and 12 to 1000V ranges)

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**Kelvin Options** 3000K 4000K 5000K And more to come











Longevity + Output 50,000 Hours / 4,200 Lumens

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Shape + Size of Traditional HID Lamps

# Cost + Power Usage

Half the Cost and Energy Use of Typical HID Lamps

# Heat

**Coolest Operating Temperatures** Suitable for Enclosed Luminaries

# Support

5-Year Warranty

Incandescent Equivalent Wattage	300
CFL Equivalent Wattage	85
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Volts	120-277
Brightness Lumens	4200
Average Rated Hours	50,000
Beam Spread	3302
CRI	>80





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- Bright, integrated laser pointer for identifying objects of interest on the jobsite
- Delivers simultaneous visual and audible voltage indicators when AC voltage is detected
- Lightweight, compact tool with pocket clip for easy storage and quick access
- Built to withstand a 9.9 foot (3m) drop
- CAT IV 1000V safety rating RT210
- Detects the most common wiring problems in standard and GFCI receptacles
- Works on GFCI outlets and confirms operation of the ground fault protective device
- Built to withstand a 6.6 foot (2m) drop

"In putting this kit together, we wanted to give trade professionals two essential tools at a great value," said Sabrina Kalsi, product manager at Klein Tools. "The NCVT-5A is a dual-range non-contact voltage tester with integrated laser pointer. The dual-range tester features a bright Class 3a laser that enables the user to highlight objects on the jobsite at far distances making it perfect for working on sites from small residential developments to large-scale commercial endeavors. Paired with the RT210 receptacle tester, this is the perfect kit for electricians, facilities and maintenance professionals, and construction workers."

For more information, visit www.kleintools.com/ new-products or search for #NewKleins on social media.

# About Klein Tools

Since 1857 Klein Tools, a family-owned and operated company, has been designing, developing and manufacturing premium-quality, professional-grade hand tools. The majority of Klein tools are manufactured in plants throughout the United States and are the No. 1 choice among professional electricians and other tradespeople. For more information, visit www. kleintools.com. Klein is a registered trademark of Klein Tools, Inc.

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# BitFlow Shipping its First CoaXPress 2.0 Frame Grabber

New Claxon-CXP4 doubles transmission speeds of previous CoaXPress standard, Offers full feature set of CoaXPress 2.0 specification

For over two decades, BitFlow has been known for pushing the limits of what a frame grabber could do in machine vision systems. Today, BitFlow pushed those limits even further by shipping its new Claxon-CXP4, a quad CoaXPress-12 PCIe Gen 3 frame grabber that accelerates video transmission speed to 12.5 Gb/s -- or twice as fast as the current CXP 1.1 standard. Now in full production, the new frame grabber will be shipping this month and available through BitFlow's international distributor network.

"While the Claxon is not the first CXP 2.0 frame grabber on the market, it is certainly one of most stable and feature-rich, since our engineering team built the full CXP 2.0 specification into it rather than pick and choose what capabilities the customer was permitted to use," said Donal Waide, Director of Sales, BitFlow, Inc. "A machine system designer can only experience the full potential of CXP 2.0 performance by having access to all its capabilities, which they do with the new Claxon. It guarantees BitFlow customers will be thoroughly ready for the increased data demands the latest generation of high-resolution, high-speed cameras in complex high-speed industrial, military and medical applications."

Despite doubling its speed, BitFlow engineers kept the overall architecture of the Claxon-CXP4 identical to the company's previous generation Cyton CXP-6 frame grabber, allowing users to easily swap-out slower CXP 1.1 cameras with more powerful CXP-12 or CXP-10 cameras without major software changes or system downtime. It accommodates capture from up to four CXP-12 or CXP-10 cameras simultaneously, plus has high speed inputs and outputs to support an array of sensors and motion encoders. With four cables and four CXP-12 cameras, the maximum data transfer rate is 5 GB/S, the highest data acquisition rate in the industry today, even at cable lengths up to 40 meters.

By harnessing the speed of CXP 2.0, the Claxon-CXP4 accelerates uplink to 41.6 Mbps, a benefit that enables a host to send triggers to a camera at rates of 600 kHz in single trigger mode or almost 300 kHz in dual trigger mode, all without requiring a dedicated high-speed uplink cable. Performance is also improved by the frame grabber's use of Micro BNC connectors which are more robust and run at higher speeds than traditional DIN 1.0/2.3 connectors. A heartbeat packet has also been added which supports time synchronization of multiple cameras, along with the ability to host event packets so that asynchronous messages can be sent from the camera.

Adding the Claxon-CXP4 to an application is simplified by the BitFlow SDK supporting 32-bit and 64-bit operating systems, or by downloading free drivers from the company's website for 3rd party machine vision packages. Applications can be developed using C/C++/.NET and the company's sophisticated buffer management APIs. The software included with the Claxon-CXP4 is compatible with all other BitFlow frame grabbers, making the pivot from Camera Link to CXP fast and trouble-free.

For more information, please call 781-932-2900 or visit www.bitflow.com.

### About BitFlow

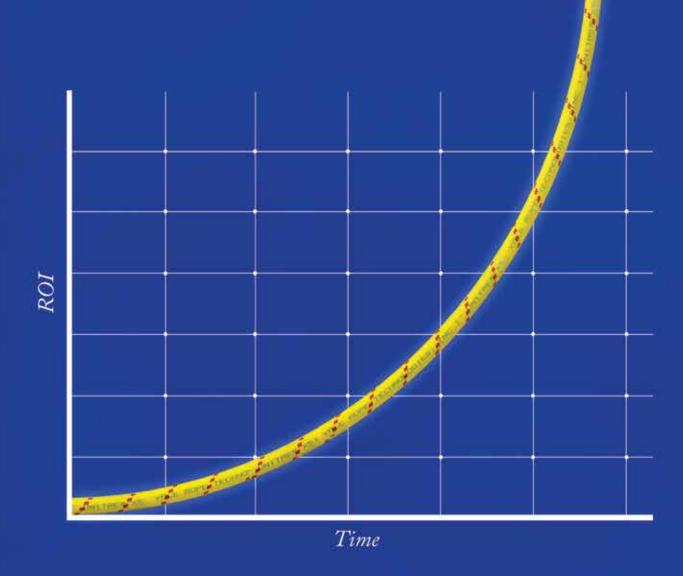
BitFlow has been developing reliable, high-performance Frame Grabbers for use in imaging applications since 1993. BitFlow is the leader in Camera Link frame grabbers, building the fastest frame grabbers in the world, with the highest camera/frame grabber densities, triggering performance, and price. With thousands of boards installed throughout the world, into hundreds of imaging applications, BitFlow is dedicated to using this knowledge and experience to provide customers with the best possible image acquisition and application development solutions. BitFlow, located in Woburn, MA, has distributors and resellers located all over the world including Asia, the Americas, and Europe. Visit our website at http://www.bitflow.com.



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