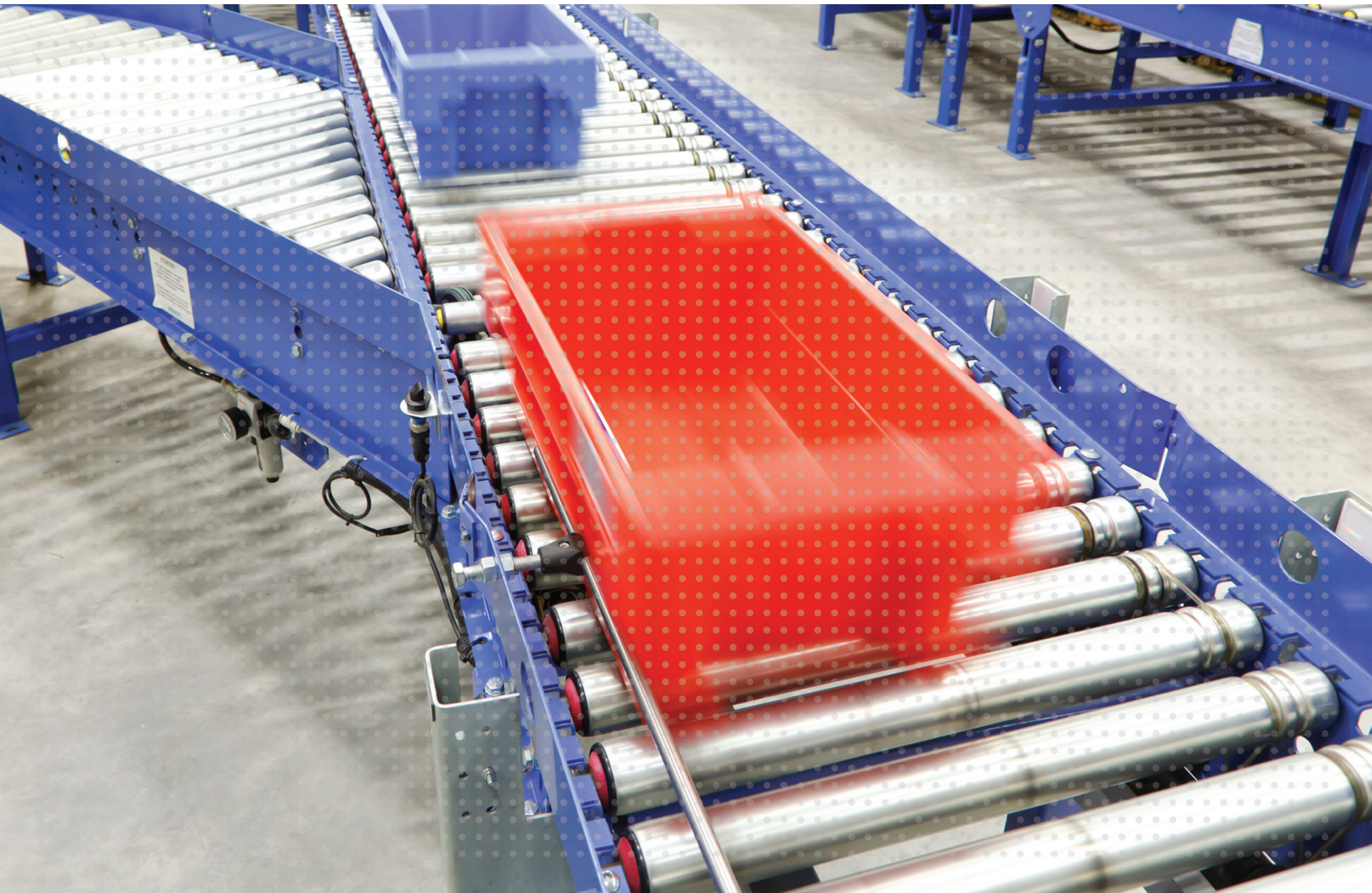


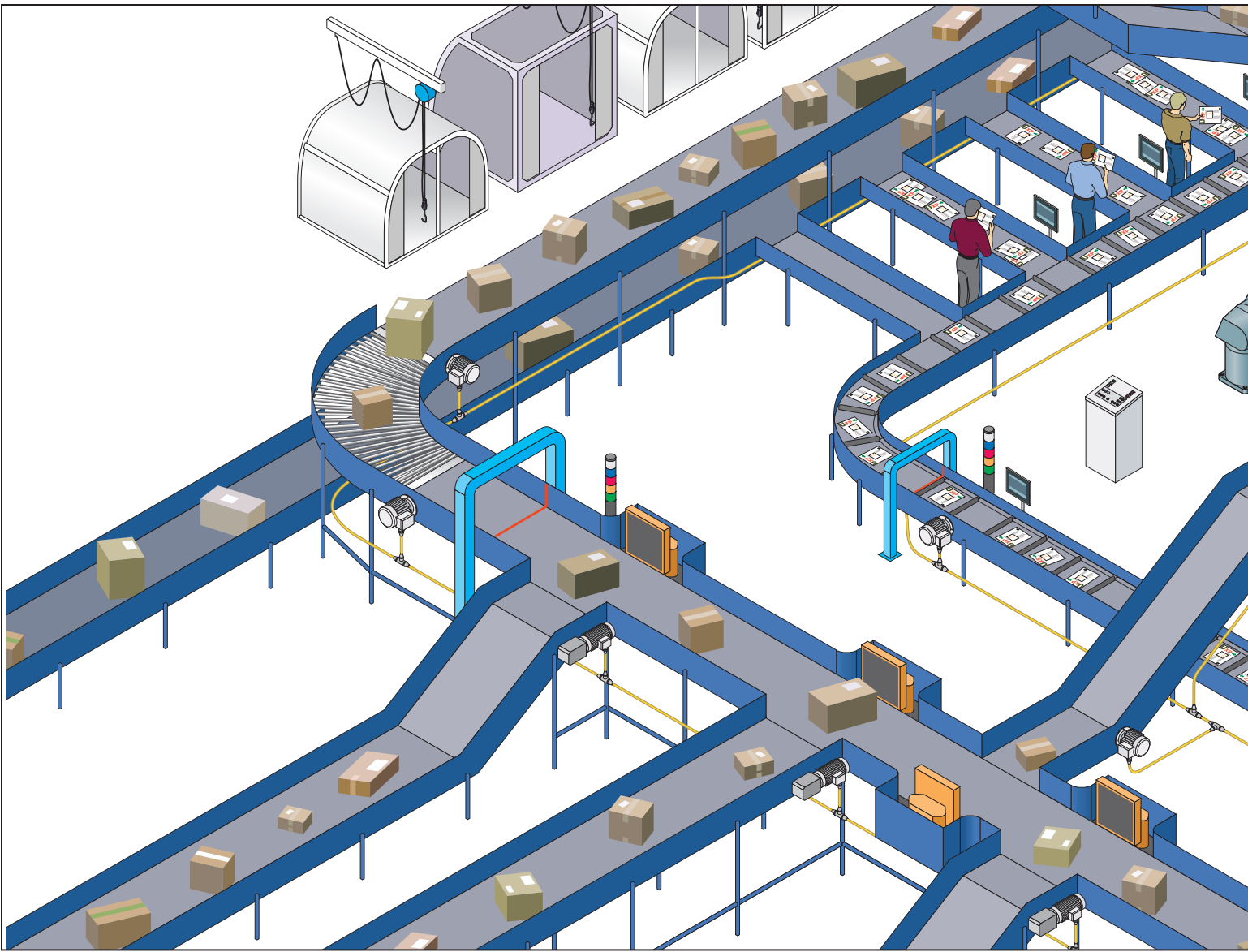
# MATERIAL HANDLING > AUTOMATION AND ELECTRICAL SOLUTIONS



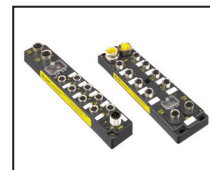


## **MOLEX PROVIDES SOLUTIONS ▶ FOR MATERIAL HANDLING INFRASTRUCTURES GLOBALLY**

**Brad<sup>®</sup> products have been the standard for harsh duty connectivity systems in the material handling industry since the invention of the Mini-Change<sup>®</sup> connector in the early 1970s. Used in Automation application types like warehouse, parcel & postal or baggage handling, our industrial communication and connectivity products have been time tested for toughness and durability in plants worldwide where material handling is a key part. Our team of highly-skilled experts is focused on designing and developing innovative product solutions for reliable communication, power distribution, and control aimed at reducing capital equipment costs and downtime and increasing worker safety.**



## PRODUCTS >



### Communication

- Network Interface Cards
- IP30 Ethernet Switches
- CIP Safety Software Kits
- SST™ Communication Modules

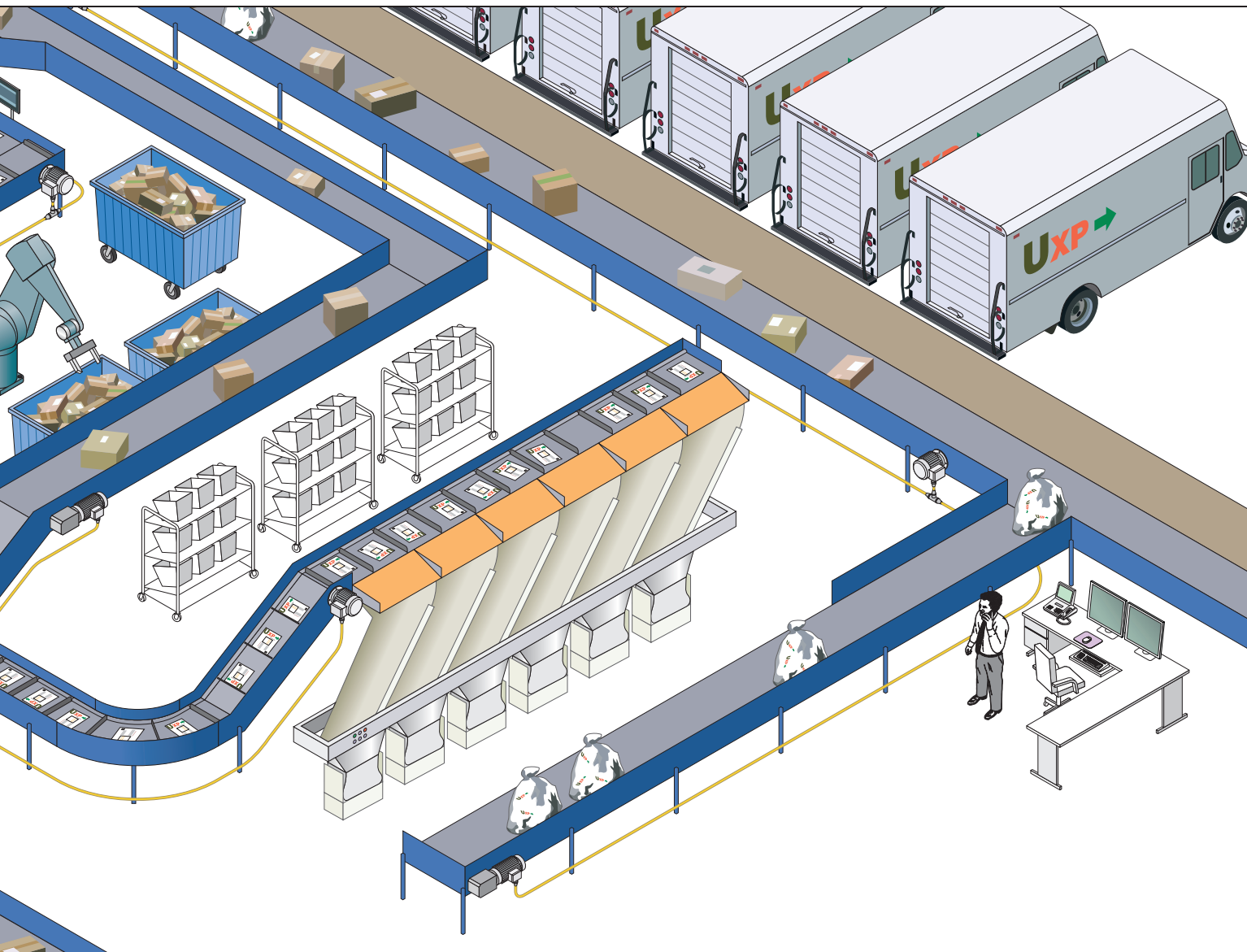
### I/O and Network

- Harsh I/O IP67 Modules
- IP67 Ethernet Switches
- Factory-made network cabling solutions for Ethernet, DeviceNet\*, PROFIBUS, and more

### Connectivity

- Brad® Micro-Chang
- Brad mPm® Din V
- Brad Nano-Chang
- MPIS Distribution

\* DeviceNet is a trademark of Open DeviceNet Vendor Association (ODVA)  
All trademarks listed herein are the property of their respective owners.



ange® (M12) Sensor Cordsets  
 Valve Connectors  
 re® (M8) Sensor Cordsets  
 Boxes

### Power and Distribution

- Brad® Power Products
- Brad Micro-Change® (M12) Power Products
- Molded cables, field attachable connectors, tees, MPIS and receptacles
- Brad Mini-Change® Products
- Heavy Duty Connectors for line builder and robotics applications

### Tool Support

- Aero-Motive® Balancers
- Aero-Motive Retractors
- Cord Grips and Strain Reliefs
- Cable Reels

# PRODUCT INFORMATION

## COMMUNICATION

### Network Interface Cards (NIC):

- SST™, applicom®, and Direct-Link™ NICs are intelligent communication solutions for SCADA, HMI, PC control, and IO applications
- Facilitates communication with most popular controls platforms (Rockwell, Siemens, Schneider, Omron)
- Available for Ethernet (PROFINET, EtherNet/IP, Modbus TCP, CC-Link IE), PROFIBUS, DeviceNet\*, CC-Link, CanOpen
- API includes OPC server, Windows DLL and Function library

### Software Windows Driver

- Direct-Link™ SW1000 provides a 100% Software Windows driver solution for SCADA or HMI application
- Use native standard Ethernet or Serial PC/Server interface

### Ethernet Switches:

- Managed and unmanaged Brad® Direct-Link® Ethernet switches provide reliable, robust performance across complex networks in a wide range of control and monitoring applications
- 5-, 8-, 16-, 18-port versions
- Available with Copper and fiber connectors

### Software Development Kits (SDK):

- Based on C-source code, it brings Ethernet protocols in an industrial device (PLC, PAC, instrumentation)
- Master or Slave technology with PROFINET and EtherNet/IP support
- Also valid with CIP Safety (IEC 61508, SIL3 standard), approved by TÜV

### SST Communication Modules:

- Encompass Partner products connect Rockwell Automation controllers (ControlLogix† and CompactLogix‡) with Ethernet Modbus TCP, Ethernet Simatic S7/S5, Modbus serial, PROFIBUS DP Master/Slave, and AS-interface
- Add-on Profiles (AOP) modules make configuration quick and easy

## I/O and NETWORK

### HarshIO IP67 Modules:

- Direct machine mount IO modules reduce cabinet space and wiring costs, simplify the architecture
- Fast and secure connections (push-pull) with Ultra-Lock® M12 connection
- 2 formats, 60mm and 30mm, IO connection with M8 and M12
- Network supports PROFINET, EtherNet/IP, Modbus TCP/IP, DeviceNet, PROFIBUS, and CANopen

### Ethernet Switches:

- IP67, 5- and 8-port unmanaged
- IP30, 5-, 8-, 16-, 18-port versions, with copper and fiber connectors

### Brad Networking Cables and

#### Accessories:

- Plug-and-play wiring systems ensure fast and easy integration, simplify production line maintenance and protect against down-time
- Ethernet RJ45 and M12 D-code to support PROFINET, EtherNet/IP, Ethernet, PROFIBUS, DeviceNet, CANopen and CC-Link
- Brad Micro-Change® (M12) Circular Hybrid Technology (CHT), Brad Micro-Change M12 Cat6A Gigabit X-code
- Field attachable connectors and factory molded solutions
- Standard threaded and quick-connect push-pull Ultra-Lock® (M12) versions available

## CONNECTIVITY

### Brad Micro-Change® (M12) Sensor Cordset:

- IP67 compliant
- PVC, PUR, TPE overmolded cordset

### Brad Nano-Change® (M8) Sensor Cordsets:

- Threaded and snap style coupling nuts available
- PVC, PUR, and TPE cable options

### Brad mpm® DIN Valve Connectors:

- Conforms to EN175301-803
- IP67 sealing properties
- Used with solenoid valves in all hydraulic and pneumatic applications

### MPIS Distribution Boxes:

- IP67 protection, Available with Brad Ultra-Lock (M12) and Brad Nano-Change (M8) IO connections
- Dust and oil resistant, and shock/vibration ratings make them suitable for most any material handling application, in order to simplify cabling and cost saving

## POWER and DISTRIBUTION

### Brad Mini-Change® (7/8") Products:

- The industry standard for rugged, sealed signal and low power (up to 9A)
- includes molded-cordsets and receptacles, straight or right,
- Field installed connectors and tees

### Brad M23 Signal and Power Connectors:

- M23 Signal Connector to accommodate a broad range of cable outer diameters, from 6- to 19-poles
- M23 Power connectors designed for power applications up to 28A

### Brad Power Products:

- Plug-and-play wiring alternative to hard wiring for power distribution in 3-phase motor control and control power applications
- Ensures fast and easy installation and start-up, reduces downtime
- 3- and 4-pole molded products up to 32.0A/600V
- NFPA-79 compliant, UL 2237/2238 listed Plug-and-play wiring alternative to hard wiring for control power applications up to 15A
- 3-, 4-, 5-pole products for 120V/AC and 24V/DC requirements

### Brad M12 Power:

- M12 form factor supporting up to 16.0A
- Helps to reduce space used and cost in control power distribution applications

### Molded cables, field attachable

#### connectors, tees, MPIS and receptacles:

- Low-cost PVC and high-performing TPE or PUR molded cables for motor power and control power
- Molded tees and MPIS boxes support linear and star topologies

## TOOL SUPPORT

### Aero-Motive® Balancers:

- Automatic drum lock to secure load if unit tension drops
- Corrosion and impact resistant drums coated to prevent premature failure to cable and cable drum
- High-tensile-strength cast-aluminum housing providing high-durability in abusive environments

### Aero-Motive Retractors:

- Retracts tool to original installed position to prevent tool from harmful falls
- Easy-to-use tension adjustment control
- Provides ideal ergonomics within work zone to minimize operator fatigue and reduces repetitive motion injuries

### Strain Relief and Support Grips:

- Strain-relief grips provide relief for cords or flexible conduit on plugs, connectors and enclosures or portable equipment
- Stainless Steel mesh support grips are designed to withstand the most abusive plant environments

### Cable Reels:

- Holds up to 5.4m (50') of standard-duty cord for flexibility for higher ceiling heights or longer distant use
- Adjustable spring tension which modifies tension depending on weight of accessory
- Built-in ratchet locks to allow user to position cord at desired location

\* DeviceNet is a trademark of Open DeviceNet Vendor Association (ODVA)

† ControlLogix is a registered trademark of Rockwell Automation

‡ CompactLogix is a registered trademark of Rockwell Automation

Get customized insights at: [www.molex.com/industry/industrial.html](http://www.molex.com/industry/industrial.html)