



# Bastian

SOLUTIONS

CONTROLS CAPABILITIES

Bastian Solutions is a full-service controls organization specializing in machine and material handling automation, networked control systems, data collections, and enterprise system integration to the plant floor. Bastian Solutions is an independent system integrator dedicated to helping our customers increase their productivity through proven automation, information systems, and sound operating procedures. Our abundance of industry experience and execution will get your controls system operational fast, allowing you the benefit of improved operations ahead of your competition.

## What is a Control System?

A controls system is defined as a system used to maintain a desired output based on the status of available input. To Bastian Solutions, a controls system refers to the process of integrating and automating a wide variety of technologies to meet our customers' specific business objectives such as:

- Conveyors
- Sortation
- AS/RS
- Robots
- Print & Apply
- Vision
- RFID
- AGV's
- Scanners
- Dimensioners
- Pallet Dispensers

As a pioneer in a market that is led by expansion and innovation, we know that all technologies must work together seamlessly and efficiently in order for your operations to achieve maximum productivity. Partner with Bastian Solutions today and let our experience be your resource. Bastian Solutions provides an array of expertise in controls systems. In typical industrial applications, controls systems will range in size and function. Examples of such controls systems include:

- Standalone machines (stretch wrapper, case sealer, etc.)
- Process controls (discrete, batch, continuous & hybrid)
- Centralized system controls (small, single-panel systems)
- Distributed system controls (mid-sized systems, multiple-panel systems)

## Why Bastian Solutions?

Our abundance of industry experience and execution will get your controls system operational fast, allowing you the benefit of improved operations ahead of your competition. Our clients come to us with confidence knowing that they will receive leading-edge quality and implementation that go beyond the confines of traditional engineering solutions. From new to existing equipment and from small conveying systems to fully automated industrial machines, let the expertise and capability of our engineers give you full control of your system.

## Industries Served

- Material Handling and Sortation Technologies
- Food and Beverage
- Apparel, Retail and General Commodities
- Specialty Goods Handling (Chemicals, Pharmaceuticals, Parcel Services, etc.)
- Robotics Automation
- Security
- Heat Treat and Manufacturing Processes
- Automotive and Aerospace



AEROSPACE



AUTOMOTIVE



FOOD & BEVERAGE



PHARMACEUTICAL



RETAIL & APPAREL



ROBOTICS ANIMATION



WAREHOUSE MANUFACTURING & DISTRIBUTION

# CONTROLS SYSTEM DESIGN PROCESS

We believe that it is very important for our customers to know the process in which we develop their solutions. By establishing and encouraging communication with our customers throughout the entire system design and implementation process, we are confident that our customer's wants and needs will be addressed and valued with the utmost care.

## Functional Specification Documents (FSD's)

The first step in our controls system design process is to define the scope of the project for the customer; that includes:

- System functions (material handling, manufacturing, etc.)
- Explicit features (application specific)
- Routing and sortation of products (decision points)
- Operator interfaces (HMI, PanelView, etc.)

After Bastian Solutions determines all the necessary project information, a Functional Specification Document (FSD) is created, including all project specifications, to be signed off by the customer and Bastian Solutions. This document ensures that customers' needs are met and that Bastian Solutions has the necessary information to set a project schedule and allocate resources.

## Controls Engineering

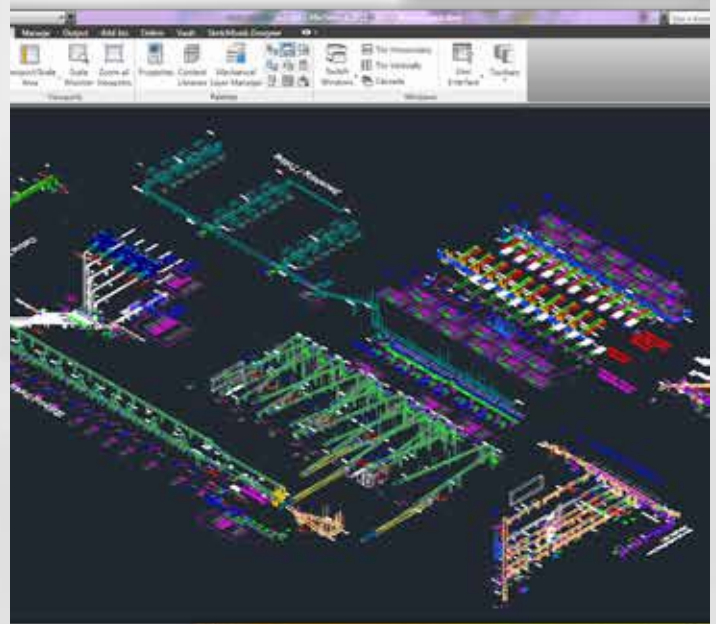
Bastian Solutions prides itself on the standardization of its core coding, branding, project structure and implementation, as well as HMI design. This standardization not only builds trust between the client and Bastian Solutions, it also makes the system easier to support following its implementation. Here is our workflow in developing your system:

### 1. Hardware Design

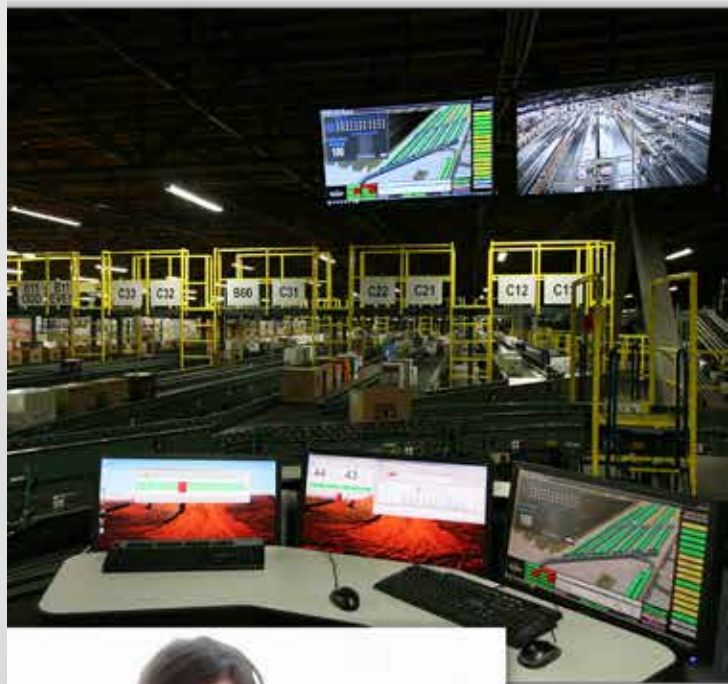
Bastian Solutions begins its controls engineering process by designing the electrical layout of your system and panels utilizing a variety of industrial drawing tools (i.e. AutoCAD, ePlan, etc.). Based on the customer's specifications, our controls engineers will determine the most efficient electrical configuration and design necessary to achieve maximum productivity from your system.

### 2. Software Design

Our Controls Engineers understand that each project is different. With our broad range of controls software experience, Bastian Solutions then determines a software design solution that meets your project specifications (i.e. RSLogix, Siemens Step-7, etc.).



# CONTROLS SYSTEM DESIGN PROCESS



## Controls Engineering (Continued)

### 3. Panel Build

After your system design drawings have been verified and finalized by our Controls Engineers, our in-house **UL & ULC Certified** panel shop technicians will build and test the necessary Motor Control and Field Panels essential to running your system.

### 4. PLC Programming

Bastian Solutions has a vast amount of experience in the programming of its controls and HMI systems. With this in mind, that experience has established quick and efficient development of PLC and HMI programs because of proven modules custom to each specific application. Programming is completed prior to going on-site so that our Controls Engineers can begin troubleshooting your system immediately.

### 5. WCS Configuration

Do you need to route, sort, or consolidate products? Are there strict restrictions in verifying (weight, size, etc.) and assuring the integrity of these products? With the help of Bastian Solutions' EXACTA WCS Software, we can easily ensure that your inventory will always be at the right place at the right time; during receiving, shipping and everywhere in between.

## Commission the System

Onsite troubleshooting and employee training will occur until the system is fully implemented. Upon the completion of Acceptance Testing and reaching customer specific beneficial use, Bastian Solutions then hands over system operations to the customer. Bastian Solutions prides itself on the level of support we can provide throughout the entire process of system commissioning: before, during, and after the completion of your project.

## Post Go-Live Support

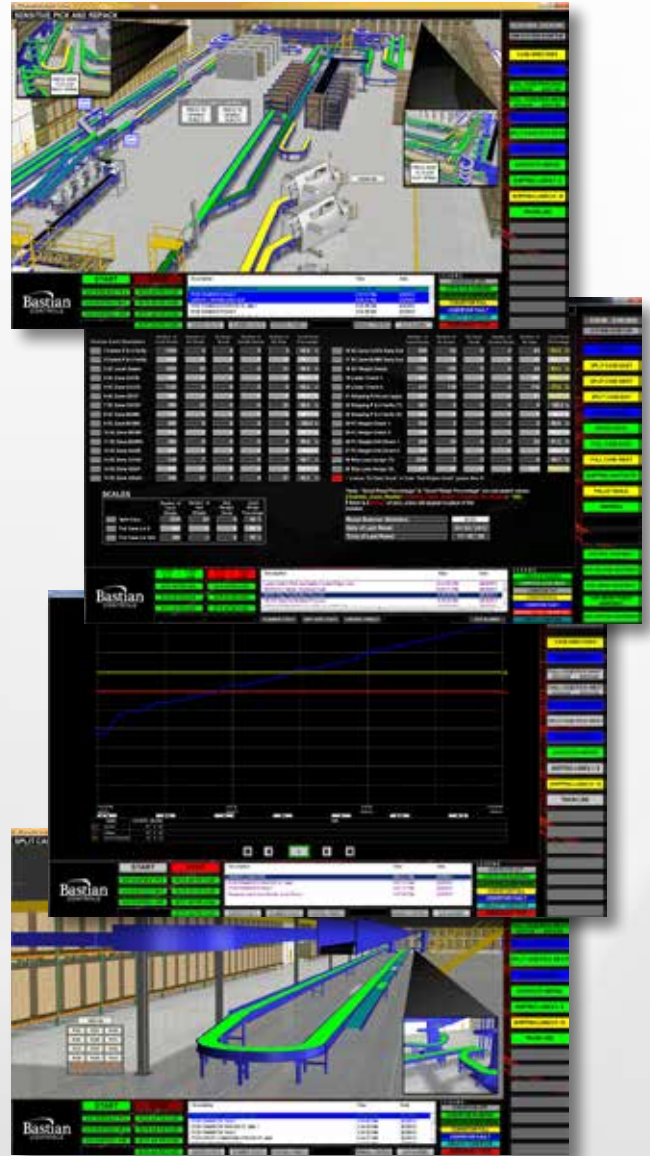
Every customer receives 24/7 Support for one (1) year following the commissioning of their system. Bastian Solutions' quick-support dispatch is dedicated to getting your system functional and efficient as quickly as possible; if any problems should arise. Once system support expires, we offer a number of support packages to keep your system running to its best capability.

# WORLD CLASS HUMAN MACHINE INTERFACE (HMI)

Looking for a simple way to control and monitor your entire controls system process from a single location? If so, the Bastian Solutions world class HMI may be a good fit for you and your company. Our HMI, or Human-Machine Interface, allows your operator to seamlessly interact with and control your system simply by using a typical mouse and keyboard or touchscreen. In this complex world of industrial and material handling controls systems, our HMI gives each customer the added advantage of:

- Reduced down time (real-time system status and alarm updates)
- More effective troubleshooting (via HD DVR integration)
- Enhanced and precise data capture (customer specific shipping/sortation statistics)
- Improved energy efficiency (optional system power monitoring)
- Real life system perspective (lifelike 3D renderings)
- Simple and effective training (user-friendly interface)
- Remote & mobile system viewing (via TeamViewer software package)
- Automatic and manual system controls
- Warehouse controls system integration
- Scanner Statistics

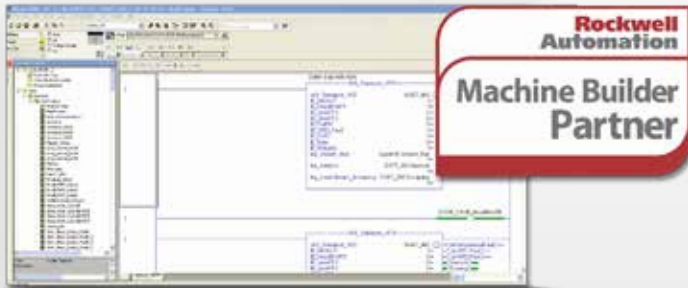
Generally included in our medium to large controls systems, Bastian Solutions has successfully developed and installed over 200 HMIs for customers all around the world. Our Controls Engineers have industry leading experience in various HMI software platforms (FactoryTalk View, Wonderware, etc.) giving our customers the added benefit of choosing what is best for their HMI application. Bastian Solutions is proud to have one of the most detailed, user-friendly and ground-breaking HMIs on the market.



# CONTROLS CAPABILITIES

## Partnership with Rockwell Automation

As a Rockwell Automation Machine Builder Partner, Bastian Solutions has access to the most up-to-date and leading controls and automation technologies available. This partnership ensures that our customers will receive the most competitive pricing and in-depth product training and support needed to keep them ahead of their competition.



## Green Initiatives

Bastian Solutions offers a variety of power saving tools for their control systems. These options allow customers to keep costs and emissions down, while keeping their bottom line up. These energy efficient tools include:

- Hardware sleep mode (controls logic)
- Low voltage conveyor options
- Automated sorter-loop speed controls
- Real-time energy monitoring
- Capturing regenerative energy



## Software Integration

Bastian Solutions offers its own Exacta WCS software as a suitable warehouse control system, giving the customer flexibility to choose based on their specific needs. However, if a different Warehouse Controls System already exists, Bastian Solutions has the capability of interfacing and integrating with existing WCS programs.



## Remote Viewing

Keeping track of your systems productivity and efficiency is now easier than ever. With our recent partnership with TeamViewer, Bastian Solutions' customers now have access to mobile and remote viewing of their system's HMI from a smartphone or tablet. This feature is useful, not only for the operators who are away from the system (off-site), but also for operators who address alarms triggered while away from the Master Control Station (on-site).



## DVR & Camera Integration

Customers now have visual access to their entire system with the integration of FULL-HD (1080P) cameras and DVR capabilities into their Master Control Station (HMI). This beneficial option helps the operator keep your system up and running as well as identify the high risk areas of your system with the ability to live view and record your system at all times.



SOME OF OUR CLIENTS:



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