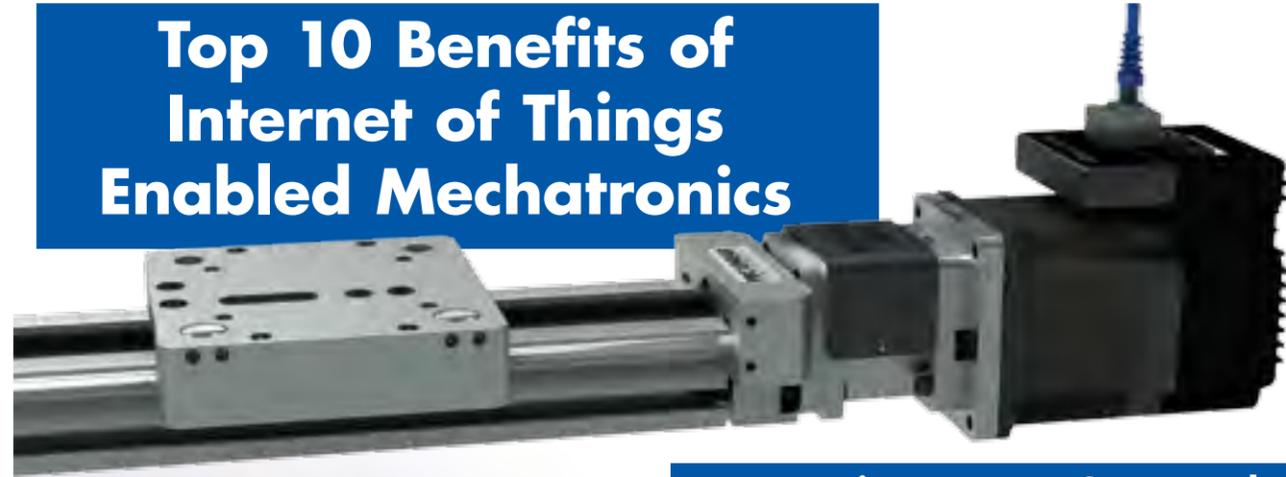


# Top 10 Benefits of Internet of Things Enabled Mechatronics



## Integrating Internet Connected Smart Robot Modules

The top 10 advantages machine builders and users gain when combining enhanced mechanical components with advances in smart motor technology and control strategies include:

### 1. Lower Cost & Enhanced Functionality

Less wiring and connectors, fewer components and sensors, less labor invested, reduced time spent in setup and maintenance, and maximized operational uptime all add up to a cost savings.

### 2. Less Space

The driver, controller, and amplifier are built into the smart motor, eliminating extra panel space.

### 3. Simplified Wiring

Fewer sensors and I/O connections result in fewer input/output connections and less complicated wiring schemes.

### 4. Reduced Troubleshooting

Fewer components, less wire connections, and increased performance greatly reduce the occurrence of errors.

### 5. Streamlined Commissioning

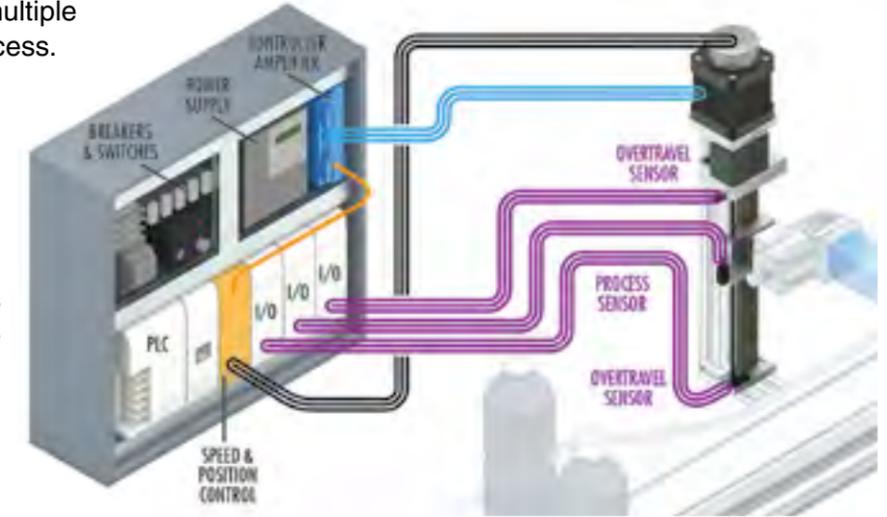
Preprogrammed homing routines and distributed control reduces installation times and allows report progress via internet connectivity. It also allows an operator to make in-process adjustments at an individual axis without affecting the PLC or entire production line.

### 6. Modular Integration

Standardized smart robot modules make integration into multiple axes or multiple machines a natural and easy process.

### 7. Automated Adjustment

Automated adjustments increase manufacturing flexibility and speed. In addition, adaptive control is possible with conditions monitored and adjustments made locally, in real time, and right at the actuator level, without having to route instructions through the PLC.



### 8. Maximized Uptime

Real time monitoring of temperatures, friction, motor torque, and other performance related data can be routed to a mobile device allowing the human decision maker to proactively handle issues related to maximizing machine uptime.

### 9. Preventative Maintenance

Established time frames for periodic maintenance based on cycles, number of pieces run, or other dynamic conditions can be monitored and reported to any IoT connected device, such as a work station, tablet, or mobile phone, allowing teams to proactively keep equipment running at peak efficiency.



### 10. Increased Output

IoT connected motion systems drive greater flexibility, less downtime, increased performance, and greater bottom line output for manufacturers, assembly lines, packaging equipment, and production equipment.

The integration of IoT processes and equipment is shortening the design phase with cross discipline communication, design development, and project management tools. Procurement and build cycles are shortened due to the need for fewer components along with the use of online configuration and purchasing tools. With IoT connected programming and real time analytics, ease of use, maintenance, and overall life are increased for the user. All of these things combine adding to the bottom line, creating more opportunity and increasing financial returns.

