Example Configuration—Redundant I/O System

The 1715 redundant I/O system lets a ControlLogix controller communicate to a remote, redundant I/O chassis over an EtherNet/IP network. The 1715 redundant I/O system provides fault tolerance and redundancy for critical processes by using a redundant adapter pair and redundant I/O module pairs.

The redundant I/O system must be connected to a ControlLogix system via an EtherNet/IP network. All connections are established via the Ethernet network by using the topologies that are supported by the 1756-EN2TR communication bridge.

For detailed specifications, see the 1715 Redundant I/O System Specifications Technical Data, publication 1715-TD001.
ControlLogix Integrated Motion

The Logix architecture supports motion control components that work in a wide variety of machine architectures:

- Integrated Motion on the EtherNet/IP network supports a connection to Ethernet drives.
- The Kinetix integrated-motion solution uses a SERCOS or EtherNet/IP interface to perform multi-axis, synchronized motion.
- Logix integrated motion supports the analog family of servo modules for controlling drives/actuators.
- Networked motion provides connection via the DeviceNet network to one axis drive to perform point-to-point indexing.

For detailed specifications on motion interface modules, see the 1756 ControlLogix Integrated Motion Specifications Technical Data, publication 1756-TD004.

For more information, see these publications:
- Motion Analyzer CD to size your motion application and to make final component selection
  Download the software from http://www.ab.com/motion/software/analyzer.html
- Kinetix Motion Control Selection Guide, publication GMC-SG001, to verify drive, motor, and accessory specifications

### Integrated Motion on an EtherNet/IP Network

<table>
<thead>
<tr>
<th>Product</th>
<th>Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive that supports EtherNet/IP connections</td>
<td>Unlimited velocity, torque, and VHz configured drives:</td>
</tr>
<tr>
<td></td>
<td>• Kinetix 6500 drives</td>
</tr>
<tr>
<td></td>
<td>• Kinetix 5500 drives</td>
</tr>
<tr>
<td></td>
<td>• Kinetix 350 drives</td>
</tr>
<tr>
<td></td>
<td>• PowerFlex 755 drives</td>
</tr>
<tr>
<td>ControlLogix controller</td>
<td>As many as 100 drives per controller</td>
</tr>
<tr>
<td>ControlLogix EtherNet/IP communication module</td>
<td>• 1...8 position loop axes configured with the 1756-EN2T or 1756-EN2TR modules</td>
</tr>
<tr>
<td></td>
<td>• 1...128 position loop axes configured with the 1756-EN3TR module</td>
</tr>
</tbody>
</table>
ControlLogix Communication Modules

Separate communication modules are available for different networks. Install multiple communication modules into the ControlLogix backplane to bridge or route control and information data between different networks. You can route a message through a maximum of four chassis (eight communication hops). You do not need a ControlLogix controller in the chassis.

For detailed specifications, see the 1756 ControlLogix Network Specifications Technical Data, publication 1756-TD003.

EtherNet/IP Communication Modules

EtherNet/IP (Ethernet Industrial Protocol) is an open industrial-networking standard that supports real time I/O messaging and message exchange. The EtherNet/IP network uses off-the-shelf Ethernet communication chips and physical media.
## 1756 System Software

<table>
<thead>
<tr>
<th>If you have</th>
<th>You need</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>1756 ControlLogix controller</td>
<td>Studio 5000 Logix Designer application</td>
<td>9324 series (1)</td>
</tr>
</tbody>
</table>

### 1756 SERCOS or analog motion module
- 1756-CN2, 1756-CN2R
- 1756-CN2RX
- 1756-CN8, 1756-CNBR
- ControlNet communication module

- RSNetWorx™ for ControlNet software

- 9324 series (1) or
- 9357-CNETL3 (RSNetWorx for ControlNet)

### 1756-DNB
- DeviceNet communication module

- RSNetWorx for DeviceNet software

- 9324 series (1) or
- 9357-DNETL3 (RSNetWorx for DeviceNet)

### 1756-EN2F, 1756-EN2T
- 1756-EN2TR, 1756-EN3TR
- 1756-ENBT, 1756-EWEB
- EtherNet/IP communication module

- RSLogix software
- or
- BOOTP/DHCP server utility to set IP addresses
- Optional RSNetWorx for EtherNet/IP software

- 9324 series (1)
- Optional 9357-ENETL3 (RSNetWorx for EtherNet/IP)

### 1756-DHRIO, 1756-DHRIOXT
- Communication module

- RSLogix software

- 9324 series (1)

### 1757-FFLD2, 1757-FFLD4
- 1757-FFLD2C, 1757-FFLD4C
- Foundation Fieldbus linking device

- RSFieldbus configuration software

- 9308 series

### Communication card in a workstation

- RSLogix software

- 9324 series (1)

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(1) All 9324 packages include RSLogix Classic Light.