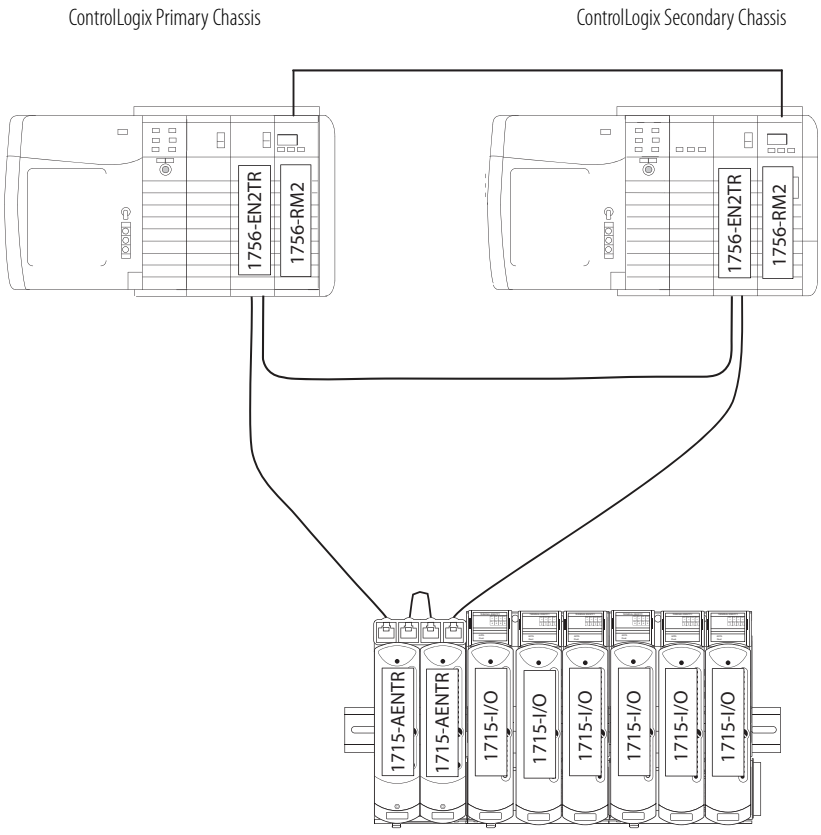
## Example Configuration—Redundant I/O System

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.




1715 Redundant I/O System

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

## ControlLogix-XT Controllers

The ControlLogix-XT controllers function in the same way as the traditional ControlLogix controllers, with an extended temperature range, and have the same features as the ControlLogix L6 and L7 controllers.

The ControlLogix-XT products include control and communication system components that are conformally coated to extend product life in harsh, corrosive environments:

- When used with FLEX I/O-XT products, the ControlLogix-XT system can withstand temperatures range from -20…70 °C (-4…158 °F).
- When used independently, the ControlLogix-XT system can withstand temperature ranges from -25…70 °C (-13…158 °F).

## Redundant ControlLogix Controllers

The ControlLogix controller supports controller redundancy. In a redundant controller system, you need these components:

- Two 1756 chassis each with the following the same:
  - Number of slots
  - Modules in the same slots
  - Redundancy firmware revisions in each module
  - Two additional ControlNet nodes(1) outside the redundant chassis pair.
- One 1756-RM2 or 1756-RM2XT module per chassis that supports the following:
  - One or two ControlLogix or ControlLogix-XT controllers of the same family
  - As many as seven ControlNet or EtherNet/IP communication modules in any combination
- One or two 1756-RMC*x* cables

For additional redundancy rules and restrictions, see publication 1756-UM535.

(1) For a ControlNet I/O drop, two more ControlNet nodes are required outside the redundancy chassis pair. Not applicable with Ethernet I/O control.