

Logix Controllers Comparison

Characteristic	1756 ControlLogix® 1756-L71, 1756-L72, 1756-L73, 1756-L73XT, 1756-L74, 1756-L75 1756 GuardLogix® 1756-L71S, 1756-L72S, 1756-L73S	CompactLogix™ 1769-L30ER, 1769-L30ER-NSE, 1769-L30ERM, 1769-L33ER, 1769-L33ERM, 1769-L36ERM	CompactLogix 1769-L24ER-BB1B, 1769-L24ER-QBFC1B, 1769-L27ERM-QBFC1B	CompactLogix 1769-L16ER-BB1B, 1769-L18ER-BB1B, 1769-L18ERM-BB1B
Controller tasks:	<ul style="list-style-type: none"> 32; 100 programs/task 	<ul style="list-style-type: none"> 32; 100 programs/task 	<ul style="list-style-type: none"> 32; 100 programs/task 	<ul style="list-style-type: none"> 32; 100 programs/task
Event tasks	Consumed tag, EVENT instruction triggers, Module Input Data changes, and motion events	Consumed tag, EVENT instruction triggers and motion events	Consumed tag, EVENT instruction triggers and motion events	Consumed tag, EVENT instruction triggers and motion events
User memory	<ul style="list-style-type: none"> 1756-L71: 2 MB 1756-L72: 4 MB 1756-L73: 8 MB 1756-L73XT: 8 MB 1756-L74: 16 MB 1756-L75: 32 MB 1756-L71S: 2 MB + 1 MB safety 1756-L72S: 4 MB + 2 MB safety 1756-L73S: 8 MB + 4 MB safety 	<ul style="list-style-type: none"> 1769-L30ER, 1769-L30ER-NSE, 1769-L30ERM: 1MB 1769-L33ER, 1769-L33ERM: 2 MB 1769-L36ERM: 3 MB 	<ul style="list-style-type: none"> 1769-L24ER: 750 KB 1769-L27ERM: 1 MB 	<ul style="list-style-type: none"> 1769-L16ER: 384 KB 1769-L18ER, 1769-L18ERM: 512 KB
Memory card	Secure Digital	Secure Digital	Secure Digital	Secure Digital
Built-in ports	1 port USB Client	<ul style="list-style-type: none"> Dual-port EtherNet/IP 1 port USB Client 	<ul style="list-style-type: none"> Dual-port EtherNet/IP 1 port USB Client 	<ul style="list-style-type: none"> Dual-port EtherNet/IP 1 port USB Client
Communication options	<ul style="list-style-type: none"> EtherNet/IP ControlNet DeviceNet Data Highway Plus Remote I/O SynchLink USB Client 	<ul style="list-style-type: none"> EtherNet/IP <ul style="list-style-type: none"> Embedded switch Single IP address DeviceNet USB Client 	<ul style="list-style-type: none"> EtherNet/IP <ul style="list-style-type: none"> Embedded switch Single IP address DeviceNet USB Client 	<ul style="list-style-type: none"> EtherNet/IP <ul style="list-style-type: none"> Embedded switch Single IP address USB Client
Controller connections	500	256	256	256
Network connections	Per network module: <ul style="list-style-type: none"> 40 ControlNet (CNB) 100 ControlNet (CN2/A) 128 ControlNet (CN2/B) 128 EtherNet/IP; 64 TCP (ENBT) 256 EtherNet/IP; 128 TCP (EN2x) 256 Ethernet (ENxT(R)) 	<ul style="list-style-type: none"> 1769-L30ER, 1769-L30ER-NSE, 1769-L30ERM: 16 EtherNet/IP; 120 TCP 1769-L33ER, 1769-L33ERM: 32 EtherNet/IP; 120 TCP 1769-L36ERM: 48 EtherNet/IP; 120 TCP 	<ul style="list-style-type: none"> 1769-L24ER-QB1B: 8 EtherNet/IP; 120 TCP 1769-24ER-BFC1B: 8 EtherNet/IP; 120 TCP 1769-L27ERM-QBFC1B: 16 EtherNet/IP; 120 TCP 	<ul style="list-style-type: none"> 1769-L16ER-BB1B: 4 EtherNet/IP; 120 TCP 1769-L18ER-BB1B: 8 EtherNet/IP; 120 TCP 1769-L18ERM-BB1B: 8 EtherNet/IP; 120 TCP
Controller redundancy	Full support	Backup via DeviceNet	Backup via DeviceNet	None
Simple motion	<ul style="list-style-type: none"> Stepper Servo via DeviceNet Analog or networked AC drive 	<ul style="list-style-type: none"> Servo via DeviceNet Analog or Networked AC drive 	<ul style="list-style-type: none"> Servo via DeviceNet Analog or Networked AC drive 	Analog or Networked AC drive
Integrated motion	<ul style="list-style-type: none"> EtherNet/IP SERCOS interface Analog options: <ul style="list-style-type: none"> Encoder input LDT input SSI input 	EtherNet/IP: 1769-L30ERM, 1769-L33ERM, 1769-L36ERM	EtherNet/IP: 1769-L27-ERM-QBFC1B	EtherNet/IP: 1769-L18ERM-BB1B
Programming languages	<ul style="list-style-type: none"> Relay ladder Structured text Function block Sequential function chart Safety task: relay ladder, safety application instructions 	<ul style="list-style-type: none"> Relay ladder Structured text Function block Sequential function chart 	<ul style="list-style-type: none"> Relay ladder Structured text Function block Sequential function chart 	<ul style="list-style-type: none"> Relay ladder Structured text Function block Sequential function chart

ControlNet Communication Modules

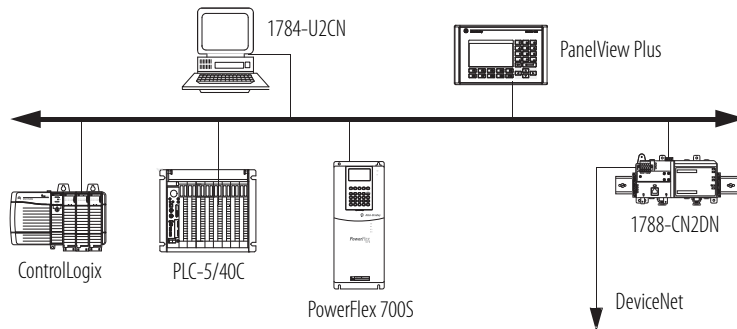
The ControlNet network combines the functionality of an I/O network and a peer-to-peer network, providing high-speed performance. The ControlNet network provides deterministic, repeatable transfers of critical control data.

Cat. No.	Description	Communication Rate	Logix Connections	Number of Nodes
1756-CN2/B	ControlNet bridge, standard media	5 Mbps	128 ⁽¹⁾	99
1756-CN2R/B	ControlNet bridge, redundant media	5 Mbps	128 ⁽¹⁾	99
1756-CNB	ControlNet bridge, standard media	5 Mbps	64 ⁽²⁾	99
1756-CNBR	ControlNet bridge, redundant media	5 Mbps	64 ⁽²⁾	99
1756-CN2RXT	ControlLogix-XT, extended temperature ControlNet bridge, redundant media	5 Mbps	128 ⁽¹⁾	99

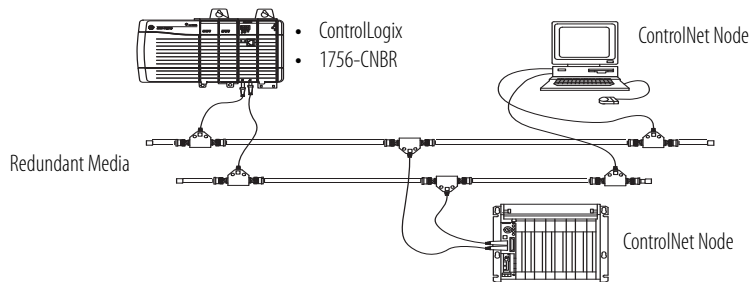
(1) 128 connections are available for standard use. An extra three connections are reserved for redundant control.

(2) Recommend using only 40 . . . 48 Logix connections for I/O.

Example Configuration—ControlNet Network



Example Configuration—Redundant ControlNet Media



For information on ControlNet media, see the ControlNet Media System Components List, publication [AG-PA002](#).

1756 System Software

If you have	You need	Order
1756 ControlLogix controller	Studio 5000 Logix Designer application	9324 series ⁽¹⁾
1756 SERCOS or analog motion module		
1756-CN2, 1756-CN2R 1756-CN2RXT 1756-CNB, 1756-CNBR ControlNet communication module	RSNetWorx™ for ControlNet software	9324 series ⁽¹⁾ (RSNetWorx option) or 9357-CNETL3 (RSNetWorx for ControlNet)
1756-DNB DeviceNet communication module	RSNetWorx for DeviceNet software	9324 series ⁽¹⁾ (RSNetWorx option) or 9357-DNETL3 (RSNetWorx for DeviceNet)
1756-EN2F, 1756-EN2T 1756-EN2TX 1756-EN2TR, 1756-EN3TR 1756-ENBT, 1756-EWEB EtherNet/IP communication module (set the IP address)	RSLink 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-DHRIQ, 1756-DHRIQXT communication module 1756-DH485 communication module	RSLink software	9324 series ⁽¹⁾
1757-FFLD2, 1757-FFLD4 1757-FFLDC2, 1757-FFLDC4 Foundation Fieldbus linking device	RSFieldbus configuration software	9308 series
Communication card in a workstation	RSLink software	9324 series ⁽¹⁾

(1) All 9324 packages include RSLink Classic Light.