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CompactLogix™ 5370 L1 Programmable Automation Controllers



Agenda

1. Hardware Overview

2. Features and Benefits

3. Applications

4. Anatomy

5. Positioning

6. Documentation

CompactLogix 5370 L1 Programmable Automation Controllers (PACs)



Expanding on the scalability of the Logix family of controllers, the CompactLogix 5370 L1 PACs offer a wider variety of options from which to choose and provide best-fit alternatives for your specific application requirements.

This offering, together with Kinetix® 350, provides a strong motion solution with performance and cost competitiveness for customers who require high performance in a compact and affordable package and significantly lowers the cost to deploy integrated motion in a variety of machine applications, all on one common network – EtherNet/IP.

Hardware Overview

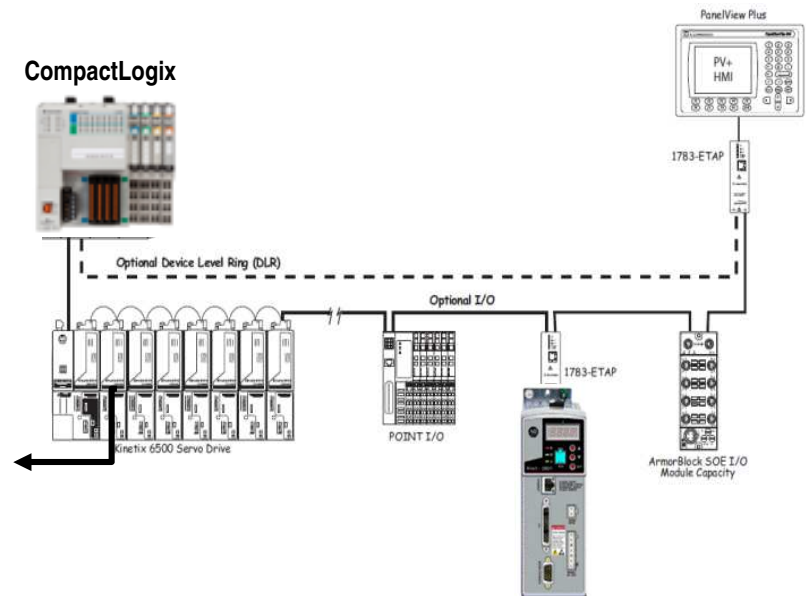
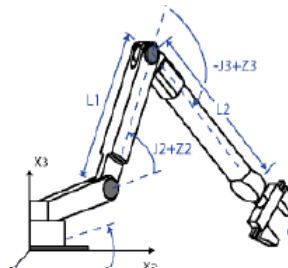
New faster CPU

- >2x performance improvement for standard applications over current CompactLogix controller
- >2.5x performance improvement for motion applications over current CompactLogix controller

Integrated Motion support – CIP Motion



- Up to 2 axis supported on unmodified Ethernet network
- 2-3axis/ms with 2-2.5x faster application program execution
- Kinematics support (Same as ControlLogix®)
- Kinetix 350 Single Axis Servo Drive
 - Safe Torque Off
 - 240V single phase, 240/460V three phase
 - 400w – 3Kw



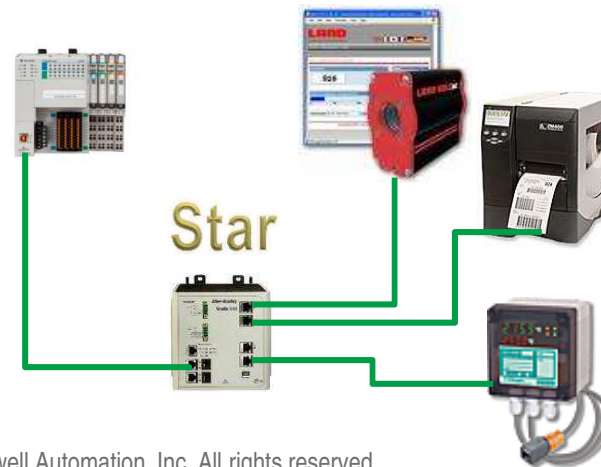
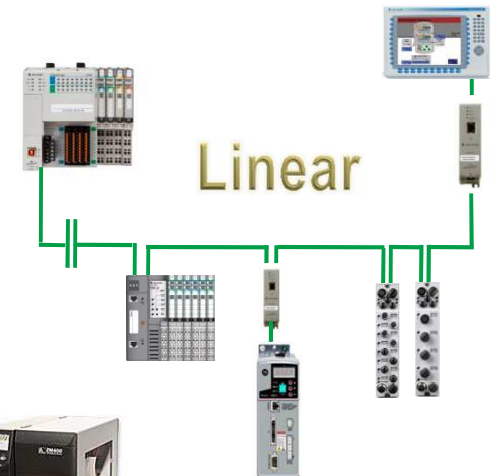
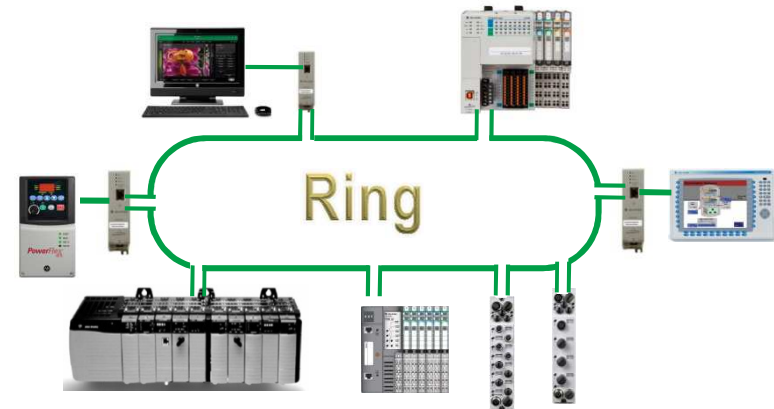
High performance, scalable motion solution at a lower acquisition cost for value-driven applications

Hardware Overview (cont.)

Dual Ethernet Port



- 10/100 Mbps
- Ethernet switch that supports Device Level Ring (DLR)
 - Allows user to connect the Ethernet network in a ring topology
 - Resiliency from loss of one network connection allows to replace devices/drives one at a time without stopping production – similar to star topology
 - Ring supervisor capability (same as ETAP or 1756-EN2TR)
 - Reduces the number of Ethernet switches in the system which reduces cost
- CIP Motion capability (ERM models only)
 - Supports all motion instructions including kinematics
- Open socket capabilities
 - Up to 32 sockets available
 - Supported in the embedded Ethernet ports
 - Supports packets size of up to 500bytes
 - Send using existing MSG command



Hardware Overview (cont.)

9-Pin D-shell serial port replaced with USB Type B port

- USB 2.0 communicating at full-speed (12mb/s)
- Device port (temporary connection only)
- Improved performance for flashing firmware, uploads and downloads, on-line edits, and bridging to the backplane
- Device only, Not a host
 - No ASCII communications via USB
 - For ASCII applications use CompactLogix 5370 L2 or L3 / 1769-ASCII or 1769-SM2
 - No connection to visualization or other USB devices
- Connect to PC using a standard USB Type B cable
- Used for
 - Flashing firmware
 - Upload/Downloads
 - Bridging to the backplane
 - Online edits and mode changes



Enhanced SDRAM memory

- Provides faster and more robust reads and writes


Performance improvement for firmware flashing

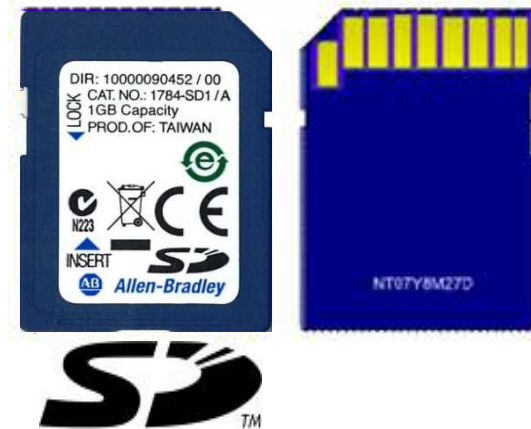
- existing 1769 PACs to v20 via Serial port \geq 15 mins
- CompactLogix 5370 L1 PACs via USB port \sim 4.5 min



Hardware Overview (cont.)

Removable Secure Digital (SD) memory card

- Industrially rated and certified Secure Digital card 
 - 1784-SD1 (1GB)
 - 1784-SD2 (2GB)
- Faster reads and writes compared to Compact Flash
- Rated for use in SIL 2 applications
- New capabilities in the CompactLogix 5370 L1 controllers
 - Application/Project storage
 - Firmware Supervisor
 - Runtime tag data read/write
- 1GB SD card ships with every CompactLogix 5370 L1 PAC



Battery-less Energy Storage Solution

- Eliminates maintenance, transportation and environmental issues associated with lithium batteries
- Embedded in every new CompactLogix 5370 L1 controller



Product Features

	1769-L16ER-BB1B	1769-L18ER-BB1B	1769-L18ERM-BB1B
User memory	384 KB	512 KB	512 KB
Controller tasks	32	32	32
Programs per task	100	100	100
Integrated Motion	3401L AMCI stepper	3401L AMCI Stepper	2 axis CIP motion
Package Size	100mm wide x 130mm high x 105mm deep		
Certifications	cULH (Class I Division 2), KCC UL (UL 508), ULH (Class I & II, Division 2 and Class III, Divisions 1 & 2) ATEX, CE, C-Tick Marine and GOST certifications anticipated in 2012		
Local Expansion Modules (1734 I/O)	6	8	8
Local Expansion I/O points (includes embedded I/O)	72	96	96
Built-in Communication Ports	USB and EtherNet/IP (2 ports supporting DLR)		
Flash Memory Card	Industrially rated and certified Secure Digital (SD) memory card (1 and 2 GB options); all controllers shipped with 1 GB card		

Product Features (cont.)

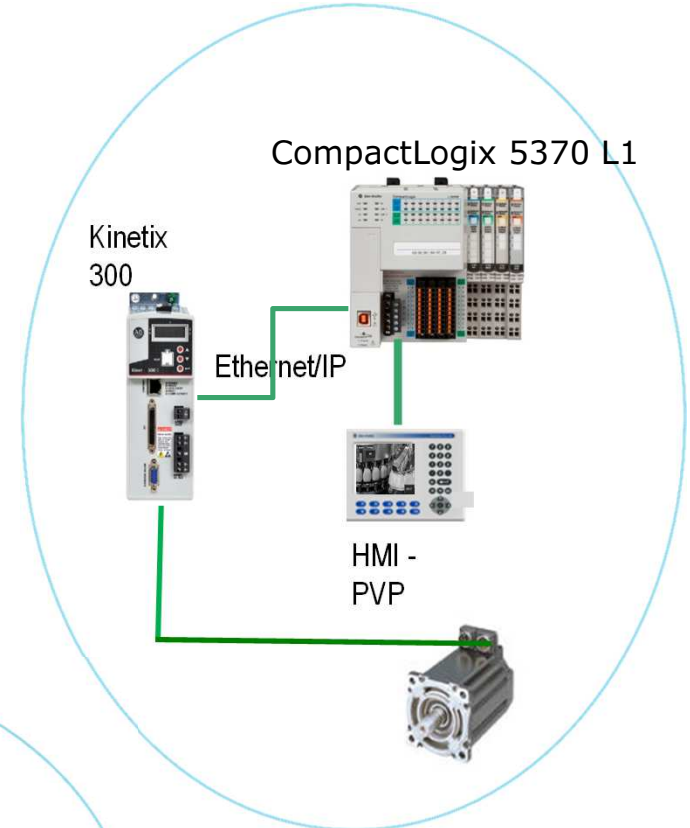
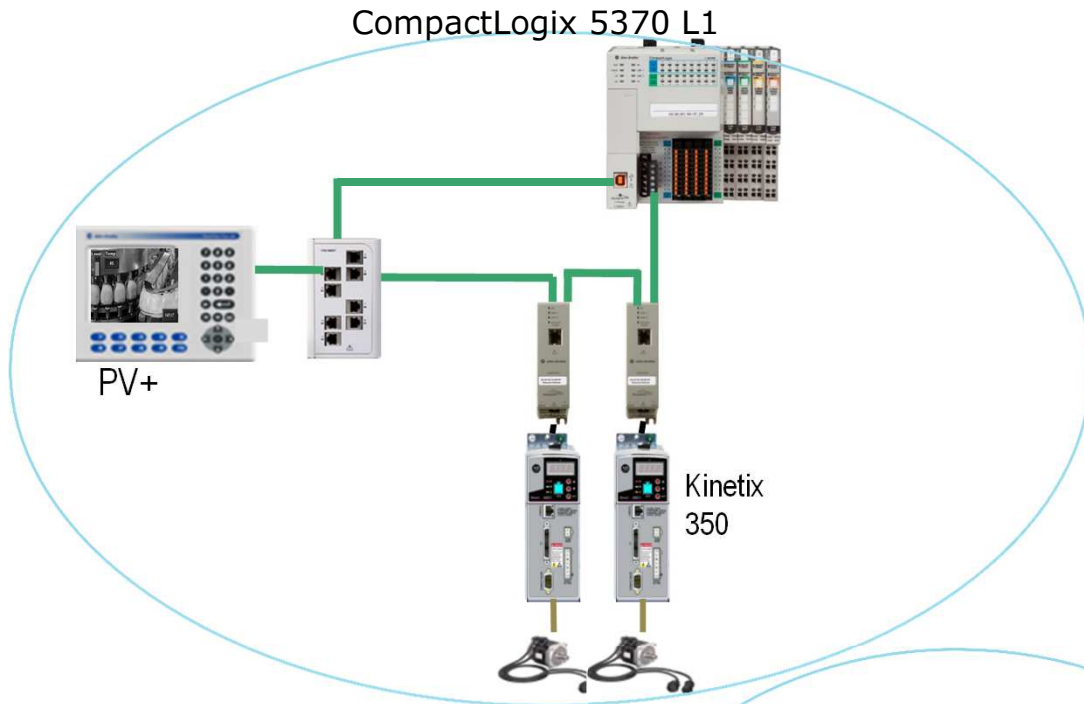
	1769-L16ER-BB1B	1769-L18ER-BB1B	1769-L18ERM-BB1B
Controller/TCP connections	256 / 120	256 / 120	256 / 120
Ethernet I/O IP nodes	4	8	8
Total number of axes (CIP)	100	100	100
Servo Drives (position loop CIP)	--	--	2
Virtual axes	100	100	100
Feedback only, torque, velocity (max CIP motion drives)	--	--	8
Axes/ms	--	--	2
Kinematics support	--	--	yes
Software / Firmware	RSLogix 5000 V20 and RSLinx Classic V2.59 Firmware v20.11.70 or later		

Example Applications

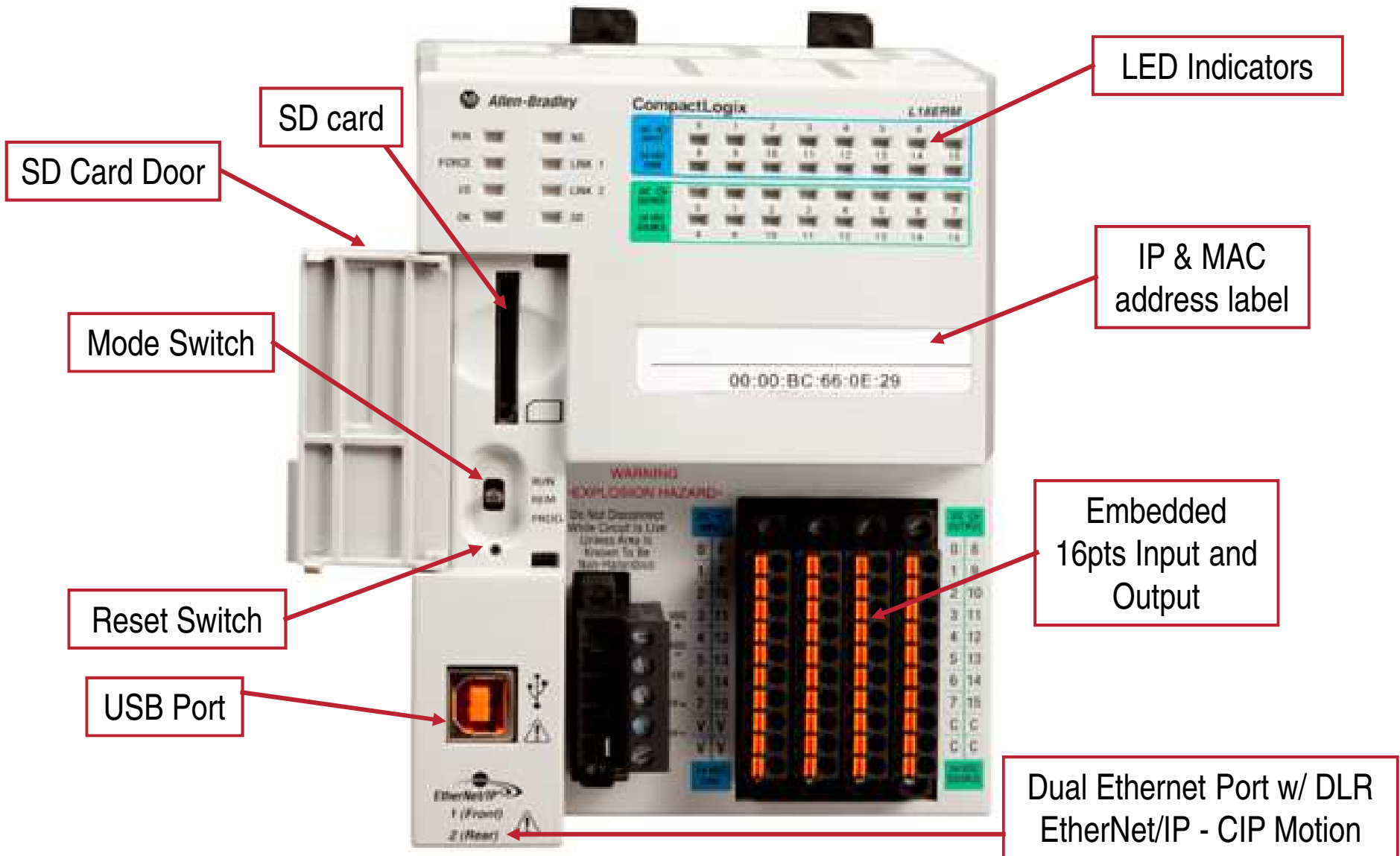
- Transfer systems
- Feeders
- Simple case packers and erectors
- Electronic camming
- Rotary knife
- Winders, Rewinders, Slitters
- Smart belts
- Packaging
 - Vertical form fill and seal equipment
 - Horizontal form fill and seal equipment



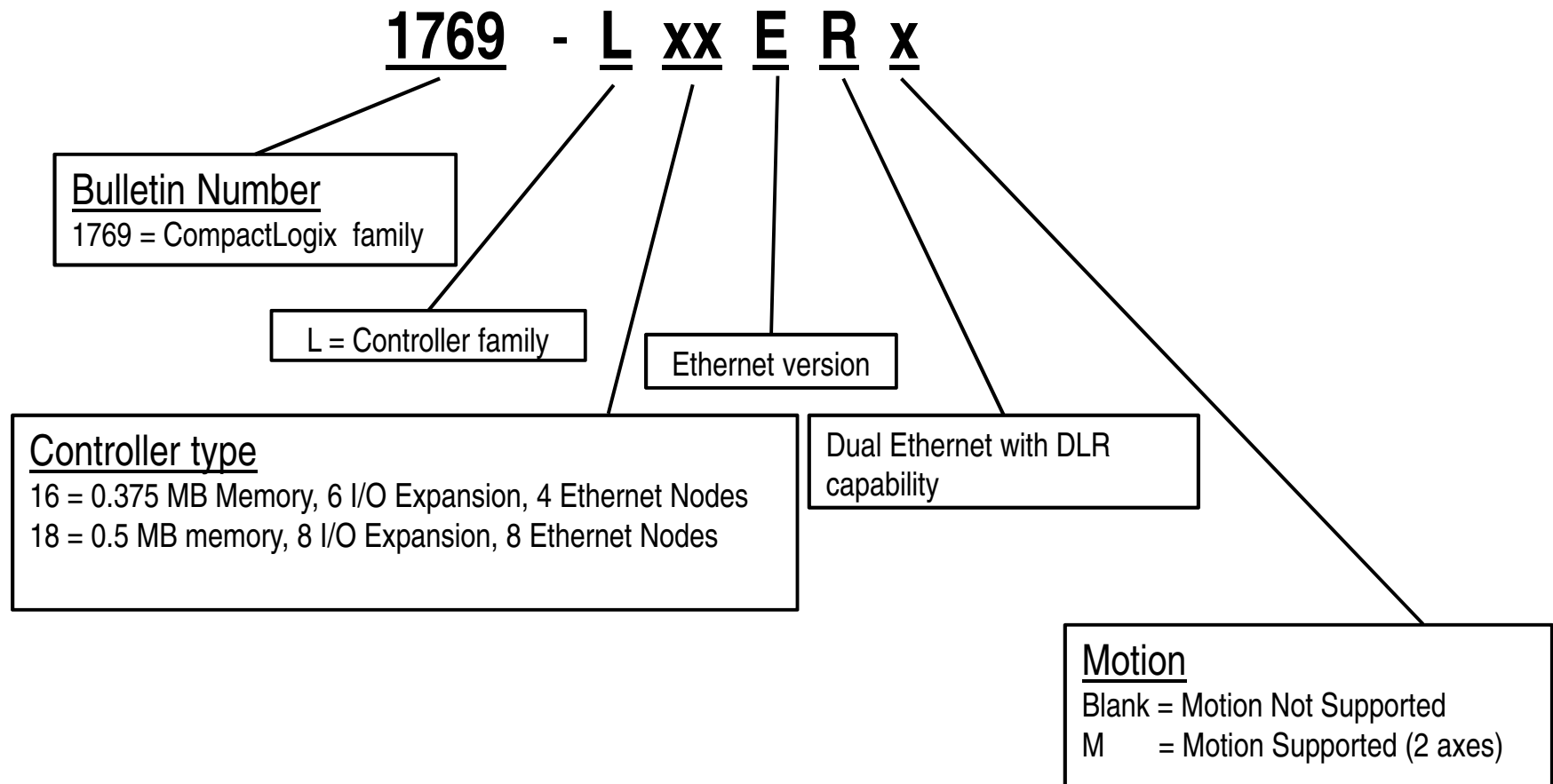
Typical Configuration for Simple, Small to Mid-size Applications



Anatomy



Understanding Catalog Nomenclature



Note: * Applicable for L30ER only

Positioning

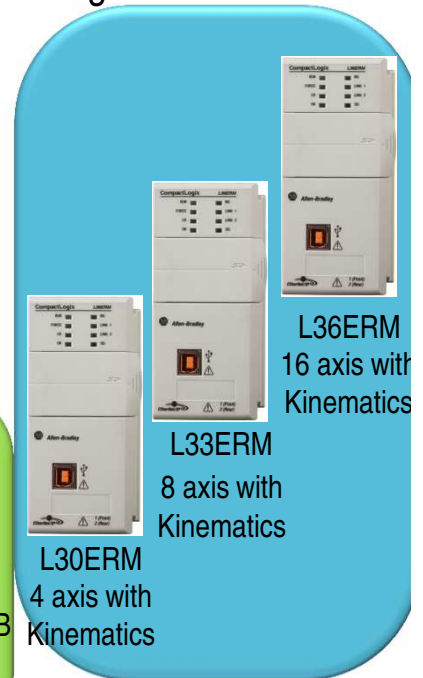
Controllers without Integrated Motion

Controllers with Integrated Motion

General Purpose Machine Controller

Small Machine Controller

Small Stand-Alone & Ancillary Equipment Controller



Note: NSE – No Storage Energy (No RTC SuperCap)

Documentation*

Publication Title	Publication Number
CompactLogix 5370 L1 Programmable Automation Controllers Product Profile	1769-PP012
What's New: RSLogix 5000 V20 Design and Configuration Software Product Profile	9324-PP006
CompactLogix Controllers, Revision 20 Firmware Release Notes	1769-RN020
CompactLogix Controllers (1769-L1) Packing Contents	1769-PC006
CompactLogix System User Manual	1769-UM021B
CompactLogix Selection Guide	1769-SG001
CompactLogix Technical Data	1769-TD005D
CompactLogix Controllers Quick Start	IASIMP-QS024A
CIP Motion Configuration and Startup User Manual	MOTION-UM003
Logix5000 Motion Controllers Instructions Reference Manual	MOTION-RM002
Logix 5000 Controllers Execution Time and Memory Use Reference Manual	1756-RM087
Connect POINT I/O Modules over a DeviceNet Network Quick Start	IASIMP-QS026
Connect POINT I/O Modules over an EtherNet/IP Network Quick Start	IASIMP-QS027
Connect a PowerFlex 40 Drive over a DeviceNet Network Quick Start	IASIMP-QS028
Connect a PowerFlex 40 Drive over an EtherNet/IP Network Quick Start	IASIMP-QS029
Connect a PowerFlex 70 Drive over a DeviceNet Network Quick Start	IASIMP-QS030
Connect a PowerFlex 70 Drive over a EtherNet/IP Network Quick Start	IASIMP-QS031
Connect a Kinetix 350 Multi-axis Servo Drive System over an EtherNet/IP Network Quick Start	IASIMP-QS032
Connect a PanelView Plus Terminal over an EtherNet/IP Network Quick Start	IASIMP-QS033

*Available at product release.

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