# **CompactLogix 5370 L1 Programmable Automation Controllers**



1769-L16ER-BB1B, 1769-L18ER-BB1B, 1769-L18ERM-BB1B, 1769-L19ER-BB1B

### **Features and Benefits**

The CompactLogix 5370 L1 controllers combine the power of the Logix architecture with the flexibility of POINT I/O<sup>™</sup> modules in a compact, affordable package.

Machine builders and end users can take advantage of the benefits of an Integrated Architecture system with the following features in a lower cost system:

- Ideal for small, to mid-size applications that require low axis motion and I/O point counts
- Offers support for Integrated Motion over EtherNet/IP for maximized scalability
- Provides support for Device Level Ring (DLR) network topologies to help increase network resiliency
- Removes the need for lithium batteries with built-in energy storage
- Includes up to a 2-GB Secure Digital (SD) card for fast program save and restore
- Offers a smaller form factor for maximized cabinet space
- Supports up to 2 axes Kinematics for simple articulated robotics
- Open socket capability allows support for Modbus TCP as well as devices such as printers, barcode readers and servers

CompactLogix 5370 L1 PACs offer up to 1 MB of user memory for increased storage capabilities



Expanding on the scalability of the Logix family of controllers, the CompactLogix<sup>™</sup> 5370 L1 Programmable Automation Controllers (PACs) are designed to meet the growing need for a higher performance controller in a compact, affordable package. Offering reduced panel space, the L1 controllers truly enable you to build a high performance, more cost-effective system.

As part of the Integrated Architecture® system, the CompactLogix 5370 L1 controllers use the same programming software, network protocol and information capabilities as all Logix controllers, providing a common development environment for all control disciplines. Consistent tools and features allow users to lower engineering investment costs, ease diagnostics and troubleshooting and speed up time to market.

#### Integrated Motion on EtherNet/IP

The CompactLogix 5370 L1 controllers meet the needs of customers looking for performance and cost competitive motion solutions that:

- Support up to 2 axes of integrated motion
- Offer a scalable motion solution with the Kinetix<sup>®</sup> 350

#### **Network Capabilities**

Dual Ethernet ports and an integrated Ethernet switch allow support for Device Level Ring (DLR) topologies, which simplifies the integration of components in your control system. DLR connectivity helps to increase network resiliency and allows individual device replacements without compromising production. A daisy chain configuration helps reduce the number of required Ethernet switches in the control system, which can help produce a cost-effective system solution.





## CompactLogix 5370 L1 Controller Product Specifications

|   | 1769-L16ER -BB1B  | 769-L16ER -BB1B 1769-L18ER-BB1B 1769-L18ERM-BB1B                           |                                      | 1769-L19ER-BB1B |  |  |  |
|---|---|--|--------------------------------------|-----------------|--|--|--|
| User memory <sup>1</sup>  | 0.375 MB  | 0.5 MB   | 0.5 MB                               | 1 MB            |  |  |  |
| Controller tasks  | 32  | 32   | 32                                   | 32              |  |  |  |
| Programs per task   | 100   | 100  | 100                                  | 100             |  |  |  |
| Integrated Motion   | _   | _  | 2 axis CIP motion position loop axis | _               |  |  |  |
| 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,<br>Divisions 1 & 2) / ATEX, CE, C-Tick, GOST-R, Marine |  |                                      |                 |  |  |  |
| Local Expansion I/O Points <sup>2</sup>                         | 80  | 96   | 96                                   | 96              |  |  |  |
| Local Expansion Modules   | 6   | 8  | 8                                    | 8               |  |  |  |
| Embedded I/O  | 16 digital inputs, 16 digital outputs   |  |                                      |                 |  |  |  |
| Servo Drives (Position Loop CIP)                                | -   | _  | 2                                    | -               |  |  |  |
| Flash Memory Card   | Industrially rated and certified Secure Digital (SD) memory card (1 and 2 GB options);<br>all controllers shipped with 1 GB card                  |  |                                      |                 |  |  |  |
| Ethernet I/O IP nodes   | 4   | 8  | 8                                    | 8               |  |  |  |
| Virtual axes  | 100   | 100  | 100                                  | 100             |  |  |  |
| Feedback only, torque, velocity,<br>Vhz (max CIP motion drives) | _   | _  | 8                                    | _               |  |  |  |
| Axes/ms   | -   | -  | 2                                    | -               |  |  |  |
| Kinematics support  | -   | -  | yes                                  | -               |  |  |  |
| Software / Firmware   | RSLogix 5000® v20   | Studio 5000 v28 and<br>RSLinx v2.59 or later.<br>Firmware v28.xxx or later |                                      |                 |  |  |  |

<sup>1</sup> Check controller memory estimator to ensure there is enough memory to execute the controller program for your application.

<sup>2</sup> Based on six 8 point digital modules (48 pts.) and embedded 32 points (16 digital inputs, 16 digital outputs)

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# CompactLogix<sup>™</sup> 5370 L2 Programmable Automation Controllers

1769L24ER-QB1B, -L24ER-QBFC1B, -L27ERM-QBFC1B

### **Features and Benefits**

The CompactLogix 5370 L2 controllers deliver scalable, affordable control in a space-saving form factor. From small stand-alone equipment to higher performance applications, these controllers are ideal for assembly machines, hoisting systems, process skids, indexing tables, and packaging.

Machine builders and end users can take advantage of the cost-saving features of these controllers:

- Support for Integrated Motion on EtherNet/IP
- Support for Device Level Ring (DLR)
  network topologies
- Built-in energy storage eliminates the need for lithium batteries
- Support reuse of existing 1769 I/O
- Removable 1GB secure digital (SD) card improves data integrity
- Memory options up to 1MB
- Higher resolution analog capability supports thermocouple and RTD inputs
- Support for Kinematics eliminates the need for additional robot controllers and software
- Open socket capability allows support for Modbus TCP as well as devices such as printers, barcode readers and servers

Build a better machine with with CompactLogix 5370 L2 Programmable Automation Controllers.



Expanding on the scalability of the Logix family of controllers, the CompactLogix 5370 L2 programmable automation controllers (PAC) are designed to meet the growing need for a higher performance controller in a compact and affordable package. Offering a 40% reduction in required panel space and the same capabilities as the CompactLogix 5370 L3, the L2 controllers truly enable you to build a high performance, more cost-effective machine.

As part of the Integrated Architecture system, the CompactLogix 5370 L2 controllers use the same programming software, network protocol, and information capabilities as all Logix controllers, providing a common development environment for all control disciplines.

#### Integrated Motion on EtherNet/IP

The CompactLogix 5370 L2 controllers provides a strong motion solution for customers looking for performance and cost competitiveness.

- Supports up to 4 axes of integrated motion
- Together with the Kinetix 350, offers cost-effective, scalable motion solution

#### **Network Capabilities**

With dual Ethernet ports and an integrated Ethernet switch, these controllers now support Device Level Ring (DLR) network topologies, simplifying integration of components in your control system and reducing system cost:

- Provides resiliency from loss of one network connection
- Allows replacement of devices one at a time without stopping production
- · Reduces the number of Ethernet switches in the control system





## CompactLogix 5370 L2 Controller Product Specifications

|   | 1769-L24ER-QB1B  | 1769-L24ER-QBFC1B   | 1769-L27ERM-QBFC1B |  |  |  |
|---|--|---|--------------------|--|--|--|
| User memory   | 750 KB   | 750 KB  | 1 MB               |  |  |  |
| Controller tasks  | 32   | 32  | 32 32              |  |  |  |
| Programs per task   | 100  | 100 100   |                    |  |  |  |
| Integrated Motion   |  | 4 axis CIP motion position loop axis  |                    |  |  |  |
| Package Size  | 115mm wide x 118mm<br>high x 105mm deep  | 140mm wide x 118mm 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, GOST-R, Marine |   |                    |  |  |  |
| Local Expansion Modules   | 4  | 4   | 4                  |  |  |  |
| Embedded I/O  | 16 digital inputs<br>16 digital outputs  | 16 digital inputs / 16 digital outputs, 4 universal analog input, 2 analog output, 4 channels HSC |                    |  |  |  |
| Local Expansion I/O Points                                      | 128  | 128   | 128                |  |  |  |
| <b>Communication Module Additions</b>                           | DeviceNet with 1769-SDN or 3rd party   |   |                    |  |  |  |
| Flash Memory Card   | Industrially rated and certified Secure Digital (SD) memory card (1 and 2 GB options); all controllers shipped with 1 GB card                  |   |                    |  |  |  |
| Servo Drives (Position Loop CIP)                                |  |   | 4                  |  |  |  |
| Ethernet I/O IP nodes   | 8  | 8   | 16                 |  |  |  |
| Virtual axes  | 100  | 100   | 100                |  |  |  |
| Feedback only, torque, velocity, Vhz<br>(max CIP motion drives) |  |   | 16                 |  |  |  |
| Axes/ms   |  |   | 2                  |  |  |  |
| Kinematics support  |  |   | yes                |  |  |  |
| Software / Firmware   | RSLogix 5000 V20 and RSLinx Classic V2.59 Firmware v20.1x or later   |   |                    |  |  |  |

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# CompactLogix<sup>™</sup> 5370 L3 Programmable Automation Controllers



1769-L30ER, -L30ERM, -L30ER-NSE, -L33ER, -L33ERM, L36ERM, -L37ERM, -L38ERM

### **Features and Benefits**

The CompactLogix 5370 L3 controllers deliver scalable, affordable control ideal for applications from small standalone equipment to high performance indexing tables, process skids, case packers and erectors, and packaging.

Machine builders and end users can take advantage of the cost-saving features of these controllers:

- Support for Integrated Motion
  on EtherNet/IP
- Support for Device Level Ring (DLR) network topologies
- Built-in energy storage eliminates the need for lithium batteries
- Support reuse of existing 1769 I/O
- Removable 1GB secure digital (SD) card improves data integrity
- Flexible memory options up to 3MB
- Added features for hazardous
  environments (NSE version)
- Support for Kinematics eliminates the need for additional robot controllers and software
- Open socket capability allows support for Modbus TCP as well as devices such as printers, barcode readers and servers

Reduce cost and time to market with CompactLogix 5370 L3 Programmable Automation Controllers.



Expanding on the scalability of the Logix family of controllers, the CompactLogix 5370 L3 programmable automation controllers (PAC) are designed to meet the growing need for a higher performance controller in a compact and affordable package.

As part of the Integrated Architecture system, the CompactLogix 5370 L3 controllers use the same programming software, network protocol, and information capabilities as all Logix controllers, providing a common development environment for all control disciplines.

#### Integrated Motion on EtherNet/IP

The CompactLogix 5370 L3 controller provides a strong motion solution for customers looking for performance and cost competitiveness.

- Supports up to 16 axes of integrated motion
- Together with the Kinetix 350, offers cost-effective, scalable motion solution

#### **Network Capabilities**

With dual Ethernet ports and an integrated Ethernet switch, these controllers now support Device Level Ring (DLR) network topologies, simplifying integration of components in your control system and reducing system cost:

- Provides resiliency from loss of one network connection
- Allows replacement of devices one at a time without stopping production
- Reduces the number of Ethernet switches in the control system

#### **Features for Hazardous Environments**

The No Stored Energy (NSE) version of the CompactLogix 5370 L3 offers additional features for hazardous environments found in industries such as mining and oil and gas.

- · Allows safe transport of controller in and out of mining areas
- Powered down controller has less than 200uJ of residual energy stored in each component
- No consequences of arc or spark to cause an explosion in gaseous environment



## CompactLogix 5370 L3 Controller Product Specifications

|   | 1769-L30ER   | 1769-L30ERM                                   | 1769-L30ER-<br>NSE | 1769-L33ER  | 1769-L33ERM                                   | 1769-L36ERM                              | 1769-L37ERM   | 1769-L38ERM  |  |  |
|---|--|---|--------------------|-------------|---|--|---|--------------|--|--|
| User Memory   | 1 MB   | 1 MB  | 1 MB               | 2 MB        | 2 MB  | 3 MB                                     | 4 MB  | 5 MB         |  |  |
| Controller Tasks  | 32   | 32  | 32                 | 32          | 32  | 32                                       | 32  | 32           |  |  |
| Programs per Task   | 100  | 100   | 100                | 100         | 100   | 100                                      | 100   | 100          |  |  |
| Integrated Motion   |  | 4 axis CIP<br>motion<br>position loop<br>axis |                    |             | 8 axis CIP<br>motion<br>position loop<br>axis | 16 axis CIP motion<br>position loop axis |   |              |  |  |
| Package Size  | 55mm wide x 118mm 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) /<br>ATEX, CE, C-Tick, GOST-R and Marine |   |                    |             |   |  |   |              |  |  |
| Local Expansion<br>Modules  | 8  | 8   | 8                  | 16          | 16  | 30                                       | 30  | 30           |  |  |
| Local Expansion I/O<br>Points (Max)                                   | 256  | 256   | 256                | 512         | 512   | 960                                      | 960   | 960          |  |  |
| Communication<br>Module Additions                                     | DeviceNet with 1769-SDN or 3rd party   |   |                    |             |   |  |   |              |  |  |
| Flash Memory Card   | Industrially rated and certified Secure Digital (SD) memory card (1 and 2 GB options); all controllers shipped with 1 GB card                        |   |                    |             |   |  |   |              |  |  |
| Servo Drives<br>(Position Loop CIP)                                   |  | 4   |                    |             | 8   | 16                                       | 16  | 16           |  |  |
| Ethernet I/O IP Nodes   | 16   | 16  | 16                 | 32          | 32  | 48                                       | 48  | 48           |  |  |
| Virtual Axes  | 100  | 100   | 100                | 100         | 100   | 100                                      | 100   | 100          |  |  |
| Feedback only,<br>Torque, Velocity,<br>Vhz (max CIP Motion<br>Drives) |  | 16  |                    |             | 32  | 48                                       | 48  | 48           |  |  |
| Axes/ms   |  | 2   |                    |             | 2   | 2  | 2   | 2            |  |  |
| Kinematics Support  |  | yes   |                    |             | yes   | yes                                      | yes   | yes          |  |  |
| Software / Firmware   | RSLogix 5000 V20 and RSLinx Classic V2.59 Firmware v20.1x or later   |   |                    |             |   |  | RSLogix 5000 V31 and RSLinx<br>Classic V4.0 Firmware v31.x or later |              |  |  |
| Conformally Coated<br>Product Available                               | 1769-L30ERK  | 1769-L30ERMK                                  | no                 | 1769-L33ERK | 1769-L33ERMK                                  | no                                       | 1769-L37ERMK  | 1769-L38ERMK |  |  |



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