The “Just Fit” PLCs

More Powerful Micro PLCs

Advanced Micro PLCs
SYSMAC CPM2A Programmable Controllers

Expansion I/O Unit
Analog I/O Unit

Downsize Control Panels with the CPM2C

Ultra-slim Micro PLCs
SYSMAC CPM2C Programmable Controllers

New Units Added to Series
Advanced Functions and High Performance in a Very Small Package.
Improved Capabilities and Higher Added Value for the Food Packaging Industry, Distribution Industry, and Compact Equipment Manufacturers

The CPM2A and CPM2C Provide a Wide Variety of Functions for More Advanced Systems.
- High-speed counters easily measure high-speed workpieces.
- Synchronized pulse control provides easy timing adjustments.
- High-speed processing with a high-speed scan and high-speed interrupts.
- An OMRON Programmable Terminal is easily connected to provide visual confirmation of machine operation.
- Pulse outputs handle a variety of basic positioning applications.
- Achieve distributed control and analog control.

Surprisingly Low Prices
- The CPM2C adds value to equipment by providing advanced functions and high performance at very reasonable prices.

Compact Design - Fits into Just About Any Space
- Machinery downsizing is aided by the reduced PLC space requirements in the control panel or machine.

Need advanced capabilities in a compact PLC?
Advanced Micro PLCs

CPM2A
Programmable Controllers

Surprisingly Low Prices

Need a thin PLC to conserve space?
Ultra-slim Micro PLCs

CPM2C
Programmable Controllers

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The CPM2A and CPM2C are equipped with advanced functions such as synchronized control and high-speed processing (quick-response inputs, interrupts, a 1-ms timer, and improved scanning speed), allowing faster line speeds as well as multi-product/small-lot production.

**Synchronized Control**

Synchronized pulse control multiplies the frequency of a pulse input by a preset scaling factor and generates a synchronized pulse output at that frequency. The scaling factor can be changed from the ladder program, so packaging can continue while adjusting the feed rate of packaging film or the position of labels.

![Synchronized Control Diagram](image)

**High-speed Processing**

High-speed processing includes the 50-μs quick-response inputs, improved scan time (up to 500 program steps in 1 ms), and interrupts. Improved processing can increase productivity; for example, the timing between detection of a label mark and detection of the product can be adjusted.

**Detection of Label Marks on High-speed Label Sheets**

![Detection Diagram](image)

**High-speed Counters**

The CPM2A and CPM2C support one-axis high-speed counters (20-kHz single-phase or 5-kHz two-phase) and four-axis high-speed counters (2-kHz single-phase only). The length of workpieces such as cardboard or string can be measured at high speed.

- Measure cardboard length.
- Measure string length.

**Analog Control**

Analog control is possible using the Analog I/O Unit.

- Input from pressure sensors.
- Output to inverters.
- Interfaces with a wide range of devices.
Distributed control with the CompoBus/S and DeviceNet will reduce startup time and increase line speed.

Faster and More Flexible Conveyor Operation

The CPM2A allows line additions, faster operation, and reduced system startup time. For efficient distributed line control, the CPM2A provides the following Units:
- CompoBus/S I/O Link Unit (8 input and 8 output links)
- DeviceNet I/O Link Unit (32 input and 32 output links)

And the CPM2C provides the following Units:
- CompoBus/S I/O Link Unit (8 input and 8 output links)
- DeviceNet Programmable Slave (512 input and 512 output links)

With distributed control, the production line can be converted to modular systems for reduced startup time and higher line speeds.
Supports Programmable Terminal Connections

The CPM2A and CPM2C provide a built-in RS-232C port to easily connect a Programmable Terminal for visual confirmation of operating conditions and debugging. A Programming Console can also be connected to program and monitor the CPM2A/CPM2C.

Monitoring and Controlling Temperature

Mount a Temperature Sensor Unit to monitor and control temperatures using PID instruction operands and ON/OFF output signals sent with the PWM instruction. Use in combination with a PT for simple temperature monitoring and setting.

Position Control Functions

Adjust the Servomotor's feed rate. Supports a one-axis pulse output (10 kHz) with trapezoidal acceleration and deceleration and two-axis simple pulse output.

- Material output (fixed quantity output)
- Adds a fixed quantity of the product.

Built-in Clock

The internal clock and LONG TIMER instruction (with an SV of up to 99,990 seconds (27 hours, 46 minutes, and 30 seconds)) provide more effective data management.

Connections to Components

Data transfer between components and the CPM2C is easily achieved with the CPM2C-CIF21 Simple Communications Unit and a few initial settings.

Small Reflow Furnaces or Food Packaging Machines

- Operations, including temperature settings, line speed, and inverter settings, can be easily made from a Programming Terminal (PT).
- Setting and temperatures can be controlled.

Other Industries

Built-in Applications in Industries Other Than FA

Example: Small Shrink-wrap Machine

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Raw Waste Processing Equipment

(Processing Garbage from Meal Centers)

Example: Raw Waste Processing Equipment

---

Other Industries

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Built-in Applications in Industries Other Than FA

Example: Small Shrink-wrap Machine

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Raw Waste Processing Equipment

(Processing Garbage from Meal Centers)
Easily Upgrade Machinery and Efficiency

A variety of models are available to satisfy customer requirements for efficient machinery and production lines. There are twelve models of CPU Unit with various combinations of power supplies (AC or DC), outputs (relay or transistor), and I/O points (20, 30, 40, or 60). Choose the model that matches your application. Expansion I/O Units are easy to connect to increase the number of I/O points.
**Model Numbers**

<table>
<thead>
<tr>
<th>Name</th>
<th>Model number</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU Units with Relay Outputs</strong> (Built-in RS-232C port)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPM2A-20CDR-A</td>
<td>20 I/O points, AC power supply</td>
<td></td>
</tr>
<tr>
<td>CPM2A-20CDT-D</td>
<td>20 I/O points, DC power supply</td>
<td></td>
</tr>
<tr>
<td>CPM2A-20CDR-A</td>
<td>30 I/O points, AC power supply</td>
<td></td>
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<tr>
<td>CPM2A-30CDR-A</td>
<td>30 I/O points, AC power supply</td>
<td></td>
</tr>
<tr>
<td>CPM2A-40CDR-A</td>
<td>40 I/O points, AC power supply</td>
<td></td>
</tr>
<tr>
<td>CPM2A-60CDR-A</td>
<td>60 I/O points, AC power supply</td>
<td></td>
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<tr>
<td><strong>CPU Units with Transistor Outputs</strong> (Built-in RS-232C port)</td>
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<td></td>
</tr>
<tr>
<td>CPM2A-20CDT-D</td>
<td>20 I/O points (sinking outputs), DC power supply</td>
<td></td>
</tr>
<tr>
<td>CPM2A-20CDT1-D</td>
<td>20 I/O points (sourcing outputs), DC power supply</td>
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<tr>
<td>CPM2A-30CDT-D</td>
<td>30 I/O points (sinking outputs), DC power supply</td>
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<tr>
<td>CPM2A-30CDT1-D</td>
<td>30 I/O points (sourcing outputs), DC power supply</td>
<td></td>
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<tr>
<td>CPM2A-40CDT-D</td>
<td>40 I/O points (sinking outputs), DC power supply</td>
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<tr>
<td>CPM2A-40CDT1-D</td>
<td>40 I/O points (sourcing outputs), DC power supply</td>
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<tr>
<td>CPM2A-60CDT-D</td>
<td>60 I/O points (sinking outputs), DC power supply</td>
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</tr>
<tr>
<td>CPM2A-60CDT1-D</td>
<td>60 I/O points (sourcing outputs), DC power supply</td>
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</tr>
</tbody>
</table>

**Removable Terminal Blocks for Easy Maintenance**

Removable terminal blocks* simplify PLC wiring. (*CPU Unit only)
Expansion I/O Units

- **CPM1A-8ED**
  8 input points
  DC inputs
  Transistor outputs (sinking)

- **CPM1A-8ER**
  8 output points
  Relay outputs

- **CPM1A-8ET**
  8 output points
  8 output points
  Transistor outputs (sinking)

- **CPM1A-20EDR1**
  12 DC inputs
  8 relay outputs

- **CPM1A-20EDT**
  12 DC inputs
  8 transistor outputs (sinking)

- **CPM1A-20EDT1**
  12 DC inputs
  8 transistor outputs (sourcing)

- **CPM1A-40EDR**
  24 DC inputs
  16 relay outputs

- **CPM1A-40EDT**
  24 DC inputs
  16 transistor outputs (sinking)

- **CPM1A-40EDT1**
  24 DC inputs
  16 transistor outputs (sourcing)

DeviceNet I/O Link Unit

- **CPM1A-DRT21**
  32 inputs, 32 outputs

CompoBus/S I/O Link Unit

- **CPM1A-SRT21**
  8 inputs, 8 output

Analog I/O Unit

- **CPM1A-MAD11**
  2 analog inputs (resolution: 6,000)
  1 analog output (resolution: 6,000)

- **CPM1A-AD041**
  4 analog inputs (resolution: 6,000)
  4 analog outputs (resolution: 6,000)

Temperature Sensor Units

- **CPM1A-TS001**
  2 thermocouple inputs

- **CPM1A-TS002**
  2 platinum resistance thermometer inputs

- **CPM1A-TS101**
  2 platinum resistance thermometer inputs

- **CPM1A-TS102**
  4 platinum resistance thermometer inputs

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<td>Expansion I/O Units</td>
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<tr>
<td>CPM1A-8ED</td>
<td>8 DC inputs</td>
<td></td>
</tr>
<tr>
<td>CPM1A-8ER</td>
<td>8 relay outputs</td>
<td></td>
</tr>
<tr>
<td>CPM1A-8ET</td>
<td>8 transistor outputs (sinking)</td>
<td></td>
</tr>
<tr>
<td>CPM1A-8ET1</td>
<td>8 transistor outputs (sourcing)</td>
<td></td>
</tr>
<tr>
<td>CPM1A-20EDR1</td>
<td>12 DC inputs, 8 relay outputs</td>
<td></td>
</tr>
<tr>
<td>CPM1A-20EDT</td>
<td>12 DC inputs, 8 transistor outputs (sinking)</td>
<td></td>
</tr>
<tr>
<td>CPM1A-20EDT1</td>
<td>12 DC inputs, 8 transistor outputs (sourcing)</td>
<td></td>
</tr>
<tr>
<td>CPM1A-40EDR</td>
<td>24 DC inputs, 16 relay outputs</td>
<td></td>
</tr>
<tr>
<td>CPM1A-40EDT</td>
<td>24 DC inputs, 16 transistor outputs (sinking)</td>
<td></td>
</tr>
<tr>
<td>CPM1A-40EDT1</td>
<td>24 DC inputs, 16 transistor outputs (sourcing)</td>
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<tr>
<td>DeviceNet I/O Link Unit</td>
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<tr>
<td>CPM1A-DRT21</td>
<td>32 inputs, 32 outputs</td>
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<tr>
<td>CompoBus/S I/O Link Unit</td>
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<tr>
<td>CPM1A-SRT21</td>
<td>8 inputs, 8 output</td>
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<tr>
<td>Analog I/O Unit</td>
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<td></td>
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<tr>
<td>CPM1A-MAD11</td>
<td>2 analog inputs (resolution: 6,000)</td>
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</tr>
<tr>
<td>CPM1A-MAD01</td>
<td>2 analog inputs (resolution: 256)</td>
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</tr>
<tr>
<td>CPM1A-AD041</td>
<td>4 analog inputs (resolution: 6,000)</td>
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<tr>
<td>CPM1A-TS001</td>
<td>2 thermocouple inputs</td>
<td></td>
</tr>
<tr>
<td>CPM1A-TS002</td>
<td>4 thermocouple inputs</td>
<td></td>
</tr>
<tr>
<td>CPM1A-TS101</td>
<td>2 platinum resistance thermometer inputs</td>
<td></td>
</tr>
<tr>
<td>CPM1A-TS102</td>
<td>4 platinum resistance thermometer inputs</td>
<td></td>
</tr>
</tbody>
</table>
Despite its ultra-slim design, a CPM2C system can provide up to 192 I/O points!

A wide variety of models are available to provide very effective machine control in a surprisingly compact PLC. CPU Units feature DC power supply and a wide range of model variations: Relay/transistor outputs, terminal blocks/connectors, clock functions, etc. I/O capacity can be selected according to the need of the application. And select from Expansion I/O Units with 8, 10, 16, 20, 24, or 32 I/O points to build a PLC with an I/O capacity of up to 192 points.
CPU Units with 10 I/O Points
- CPU Units with Relay Outputs
  [I/O terminal block] CPM2C-10C(1)DR-D
  6 DC inputs
  4 outputs
- CPU Unit with Transistor Outputs
  [Fujitsu-compatible connector] CPM2C-10C(1)DT(1)C-D
  [MIL connector] CPM2C-10C(1)DT(1)M-D
  6 DC inputs
  4 outputs
CPU Units with 20 I/O Points
- CPU Unit with Relay Outputs
  [I/O terminal block] CPM2C-20C(1)DR-D
- CPU Unit with Transistor Outputs
  [Fujitsu-compatible connector] CPM2C-20C(1)DT(1)C-D
  [MIL connector] CPM2C-20C(1)DT(1)M-D
  12 DC inputs
  8 outputs
CPU Units with 32 I/O Points
- CPU Unit with Transistor Outputs
  (sinking/sourcing) [Fujitsu-compatible connector] CPM2C-32CDT(1)C-D
  [MIL connector] CPM2C-32CDT(1)M-D
  16 DC inputs
  16 outputs
Programmable Slave and CPU Unit with CompoBus/S Master
- Programmable Slave
- CPU Unit with Transistor Outputs
  (sinking/sourcing) [Fujitsu-compatible connector] CPM2C-S10C-DRT
- CPU Unit with CompoBus/S Master
- CPU Unit with Transistor Outputs
  (sinking/sourcing) [Fujitsu-compatible connector] CPM2C-S10C-D
- CPU Unit with Relay Outputs
  [I/O terminal block] CPM2C-20C(1)DR-D
  12 DC inputs
  8 outputs
CPU Unit with CompoBus/S Master
- CPU Unit with Transistor Outputs
  (sinking/sourcing) [Fujitsu-compatible connector] CPM2C-S10C-D
  [MIL connector] CPM2C-S10C-M
  6 DC inputs
  4 outputs

Power Supply Unit
- AC Power Supply Unit CPM2C-PA201
  Input: 100 to 240 VAC
  Output: 24 VDC/600 mA

Simple Communications Unit
- Simple Communications Unit CPM2C-CIF21
  Connect to RS-485 components RS-232C

Adapter Units
- Peripheral/RS-232C Adapter Unit CPM2C-CIF01-V1
- RS-422/RS-232C Adapter Unit CPM2C-CIF11

Expansion I/O Units
- Relay Output I/O Unit
  [I/O terminal block] CPM2C-10EDR
  6 DC inputs
  4 outputs
- Relay Output I/O Unit
  [I/O terminal block] CPM2C-20EDR
  12 DC inputs
  8 outputs
- Transistor Output I/O Unit
  (sinking/sourcing) [Fujitsu-compatible connector] CPM2C-24EDT(1)C
- Transistor Output I/O Unit
  (sinking/sourcing) [MIL connector] CPM2C-24EDT(1)M
  16 DC inputs
  8 outputs

Expansion Output Units
- Relay Output I/O Unit
  [I/O terminal block] CPM2C-8ER
  8 relay outputs
- Transistor Output I/O Unit
  (sinking/sourcing) [Fujitsu-compatible connector] CPM2C-8ET(1)C
  [MIL connector] CPM2C-8ET(1)M
  8 outputs
- Transistor Output I/O Unit
  (sinking/sourcing) [Fujitsu-compatible connector] CPM2C-16ET(1)C
  [MIL connector] CPM2C-16ET(1)M
  16 outputs
Analog I/O Unit
- Analog I/O Unit
  CPM2C-MAD11
  2 analog inputs (resolution: 6,000)
  1 analog output

Temperature Sensor Units
- Temperature Sensor Unit
  CPM2C-TS001
  2 thermocouple inputs

Temperature Sensor Unit
CPM2C-TS101
2 platinum resistance thermometer inputs

CompoBus/S I/O Link Unit
- CompoBus/S I/O Link Unit
  CPM2C-SRT21
  8 input points
  8 output points

Standard Models
<table>
<thead>
<tr>
<th>Unit</th>
<th>Model number</th>
<th>Specifications</th>
<th>Clock</th>
</tr>
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<tbody>
<tr>
<td>CPU Units with 10 I/O points</td>
<td>CPM2C-10C(1)DR-D</td>
<td>6 inputs (24-VDC), 4 relay outputs</td>
<td>Yes No</td>
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<td></td>
<td>I/O connector</td>
<td>CPM2C-10C(1)DT(1)D</td>
<td>6 DC inputs, 4 transistor outputs (sinking/sourcing)</td>
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<td>CPU Units with 20 I/O points</td>
<td>CPM2C-20C(1)DR-D</td>
<td>12 inputs (24-VDC), 8 relay outputs</td>
<td>Yes No</td>
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<td></td>
<td>I/O connector</td>
<td>CPM2C-20C(1)DT(1)D</td>
<td>12 DC inputs, 8 transistor outputs (sinking/sourcing)</td>
</tr>
<tr>
<td>CPU Units with 32 I/O points</td>
<td>I/O connector</td>
<td>CPM2C-32C(1)D</td>
<td>16 DC inputs, 16 transistor outputs (sinking/sourcing)</td>
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<tr>
<td>Programmable Slave (connector)</td>
<td>CPM2C-S1(1)D</td>
<td>With CompoBus/S Master</td>
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<tr>
<td></td>
<td>CPM2C-S1(1)D</td>
<td>With DeviceNet Slave</td>
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</tr>
<tr>
<td></td>
<td>I/O connector</td>
<td>CPM2C-S1(1)D</td>
<td>6 inputs (24-VDC), 4 transistor outputs (sinking/sourcing)</td>
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<tr>
<td>CPU Unit with CompoBus/S Master</td>
<td>CPM2C-S1(1)D</td>
<td>With CompoBus/S Master</td>
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<td>I/O connector</td>
<td>CPM2C-S1(1)D</td>
<td>6 inputs (24-VDC), 4 transistor outputs (sinking/sourcing)</td>
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<td>Expansion I/O Units</td>
<td>I/O connector</td>
<td>CPM2C-10EDR</td>
<td>6 inputs (24-VDC), 4 relay outputs</td>
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<td></td>
<td>I/O connector</td>
<td>CPM2C-20EDR</td>
<td>12 inputs (24-VDC), 8 relay outputs</td>
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<tr>
<td></td>
<td>I/O connector</td>
<td>CPM2C-24EDT(1)D</td>
<td>16 inputs (24-VDC), 8 transistor outputs (sinking/sourcing)</td>
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<td>I/O connector</td>
<td>CPM2C-32EDT(1)D</td>
<td>16 inputs (24-VDC), 16 transistor outputs (sinking/sourcing)</td>
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<td>Expansion Input Units</td>
<td>I/O connector</td>
<td>CPM2C-8ED</td>
<td>8 inputs (24-VDC)</td>
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<td>I/O connector</td>
<td>CPM2C-16ED</td>
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<td>8 relay outputs</td>
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<td>I/O connector</td>
<td>CPM2C-8ET(1)</td>
<td>8 transistor outputs (sinking/sourcing)</td>
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<td>I/O connector</td>
<td>CPM2C-16ET(1)</td>
<td>16 transistor outputs (sinking/sourcing)</td>
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<td>Analog I/O Unit</td>
<td>CPM2C-MAD11</td>
<td>2 analog inputs (resolution: 6,000)</td>
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<tr>
<td></td>
<td>1 analog output (resolution: 6,000)</td>
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<tr>
<td>Temperature Sensor Units</td>
<td>CPM2C-TS001</td>
<td>2 thermocouple inputs</td>
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<td>CPM2C-TS101</td>
<td>2 platinum resistance thermometer inputs</td>
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<tr>
<td>CompoBus/S I/O Link Unit</td>
<td>CPM2C-SRT21</td>
<td>8 input points</td>
<td></td>
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<td></td>
<td>8 output points</td>
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<td>AC Power Supply Unit</td>
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<td>Input: 100 to 240 VAC</td>
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<td></td>
<td>Output: 24 VDC/600 mA</td>
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<tr>
<td>Simple Communications Unit</td>
<td>CPM2C-CIF21</td>
<td>Connects to RS-485 components</td>
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<tr>
<td></td>
<td>CPM2C-CIF01-V1</td>
<td>RS-232C</td>
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<tr>
<td>Peripheral/RS232C Adapter Unit</td>
<td>CPM2C-CIF11</td>
<td>Level conversion for peripheral port</td>
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<tr>
<td>RS-422/RS-232C Adapter Unit</td>
<td>CPM2C-CIF11</td>
<td>Level conversion for peripheral port</td>
<td></td>
</tr>
</tbody>
</table>
Serial Devices Connect Easily to the Built-in RS-232C Port

The built-in RS-232C port simplifies connections to serial devices and enables faster startup and program debugging from Programming Devices.

PT Connection
Compatible with the OMRON Programmable Terminal's Programming Console functions. Maintenance is simplified with the on-screen programming operations.

Host Link

One-to-one Link

No-protocol Communications
Standard serial devices, such as bar code readers, can be connected with no-protocol communications.
Complete Communications with Host Computers, Other PLCs, and Programmable Terminals

Simultaneous RS-232C and Programming Console Connections

By using the CPM2C-CIF01-V1 Peripheral/RS-232C Adapter Unit or the CPM2C-CN111 Connecting Cable, a Programming Device can be used while the CPU Unit is connected to another device via RS-232C.

Host Link

I/O memory and operating mode data can be transferred between a host computer and the CPM2C via a Host Link.

PT Connection

An OMRON Programmable Terminal can be connected with direct access.

One-to-one Link

A 1:1 PLC Link connection can be established with another CPM2C, or a CQM1(H), CPM1, CPM1A, CPM2A, SRM1(-V2), C200HS, or C200HX/HG/HE PLC.

No-protocol Communications

Standard serial devices, such as bar code readers, can be connected with no-protocol communications.

Standard serial devices, such as bar code readers, can be connected with no-protocol communications.
Further improvements to prog

Programming is possible with the Programming Devices used with other PLCs, such as personal computers or Programming Consoles, and the operations can be performed in the same environment. Version 1.2 or higher of the CX-Programmer supports the CPM2A and CPM2C.

Windows-based Support Software Available

Reduce costs by creating and editing programs with the CX-Programmer, Windows-based software that features a wide variety of monitor display and debugging functions. Existing Windows applications can also be used in this significantly improved programming environment.

Simplify Programming with the Windows-based CX-Programmer.

The CX-Programmer supports the development of multiple programs with a wide variety of monitoring and debugging functions.

- Ease of operation.
- A wide variety of display and monitoring functions.
- Effective debugging functions.
- Remote programming and monitoring.
- Maintenance functions.
- Use of existing Windows applications.

Precautions

Using the SYSMAC Support Software (SSS)
Set the PLC model to "CQM1." The SYNC (SYNCHRONIZED PULSE CONTROL), TIML (LONG TIMER), and TMHH (ONE-MS TIMER) instructions can be used by transferring expansion instructions from the CPM2A/CPM2C to the SSS. For details, refer to the CPM2A Operation Manual (W352) or the CPM2C Operation Manual (W356). All the instructions can be used with the Programming Console.

WS02-CXPC1-EJ-V3□ Offers the Same Functionality at a Low Cost Designed Solely for CPM1A, CPM2□, and SRM1 Micro PLCs

CS1W-CIF31 USB/Serial Conversion Cable
Programming Console Connection Examples

The Programming Console connects to the peripheral port of the CPU Unit.

CQM1-PRO01-E Programming Console

C200H-PRO27-E Programming Console

Support Software Connection Example

Connecting to the CPM2A’s Peripheral Port

SYSMAC Support Software (SSS) for MS-DOS or SYSMAC-CX-P (version 1.2 onwards) for Windows can be used. Whichever is used, the computer connects to the CPU Unit or the CPM2C-CIF01-V1 Peripheral/RS-232C Adapter Unit through a Connecting Cable.

Examples of Programming Console/Support Software Connection Using CPM2C-CN111 Connecting Cable
And Now a Slave with the Composite Functionality Required for Distributed Blocks

The Programmable Slave enables handling a block of sensors, actuators, and other devices as a single DeviceNet slave. Powerful support for distributed control is further strengthened by the ability to standardize programming in units and reduce the programming load on the master. I/O and operation checks can also be performed by unit to eliminate the need to assemble the entire system before starting system debugging.

Programmable Slave CPM2C-S100C/110C-DRT

The Programmable Slave provides DeviceNet and PLC functionality along with expandability to handle a wide range of applications.

Features

- Advanced Support
  - EDS files and configurators can be used to provide consistent setting methods. Files can be saved and read to make setting up the system even easier.
  - All devices provide information in EDS files to enable smooth setting of device parameters and easy maintenance.

- Standardization of Programs and Operations in a Multivendor Environment
  - Multivendor product lineups are also available for valves, robots, load cells, and many other devices.

- Versatile Communications Methods
  - Use remote I/O or message service to control Slave data from the master. Message communications easily handle data, such as log data, that does not need to be sent continuously.
  - Connect bar code readers or PTs and process data at the Slave to reduce the load on the master.

- Open Multivendor Network: DeviceNet
  - A DeviceNet network runs under the PLC to enable more intelligent control of production lines and equipment.

- Simple, Flexible Wiring
  - Distributed control of up to 63 slaves in multidrop, T-branch, branch line, or star connections.
  - Max. trunk length: 500 m, Max. branch length: 6 m, Max. total branch length: 129 m
  - Standard communications cables and connectors for each installation.

- Expansion Units
  - One Unit handles a distributed block. High-density capability eliminates the need for communications, reducing costs.

- CompoBus/S
  - Reduce wiring for remote locations (e.g., signal lights, pushbuttons), expansion terminal blocks, and solenoid valves. Connect with VCTF cable or easy-to-branch flat cable.

- RS-232C
  - Connect to bar code readers or PTs and process data at the Slave to reduce the load on the master.
  - No-protocol communications
  - NT Links
  - Host Links

- Multi-word I/O links and a message service enable controlling Slave data from the master. Message communications easily handle data, such as log data, that does not need to be sent continuously.

- 1,024-pt I/O link
- Explicit messages
- DeviceNet-CompoBus/S gateway

- 2-ms cycle time for 500 programming steps
- High-speed counters
- Pulse outputs
- Interrupt inputs
- 256 timers/counters
- Clock/calendar

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- DeviceNet and PLC functionality along with expandability to handle a wide range of applications.

- Standard communications cables and connectors for each installation.
CompoBus/S Master Increases Efficiency and Expandability in Small-scale Control Systems

CMP2C-S100C/-S110C CPU Units with CompoBus/S Master

Super Compact to Fit Onsite
The CompoBus/S Master and 10 I/O points all come in a package only 40 x 90 x 65 mm large (WxHxD), yet provides the versatile expandability required to meet onsite needs.

A Lineup of Expansion I/O Units to Reduce Costs
Up to three Expansion I/O Units can be combined with I/O terminals connected via CompoBus/S to reduce wiring both inside and outside the control panel. Reduced panel size is accompanied by lower costs for cables, terminal blocks, and wiring work.

Easier Designing, Modifications, and Expansions
CompoBus/S Remote I/O Terminals can be used as terminal blocks to increase I/O speed and reduce wiring. Expandability can be designed into the system to facilitate later modifications or expansions.

Built-in Clock/Calendar for Easier Machine Management
Collected data and error logs can be time-stamped, or weekly timers can be set up as required by the application.

The CompoBus/S High-speed ON/OFF Bus
Build a high-speed remote I/O system under the PLC to reduce wiring for in-machine sensors and actuators.

Use the High-speed or the New Long-distance Communications Mode.
- High-speed Mode: 100-m communications distance at 750 kbits/s (using 2-conductor VCTF cable)
- Long-distance Mode: 500-m communications distance at 93.75 kbits/s (using 2-conductor VCTF cable)

High-speed Remote I/O Communications: 1 ms Max.
- The High-speed Communications Mode achieves a communications cycle of 1 ms maximum for 32 slaves with 128 input and 128 output points, and 0.5 ms maximum for 16 slaves with 64 input and 64 output points.

Complete Lineup of Slaves
- Connect contact I/O, contact I/O modules, or sensor inputs (photoelectric or proximity). Analog inputs and analog outputs are also supported.

Long-distance Mode for Flexible Branching with Special Flat Cable or 4-conductor VCTF Cable
- Completely flexible branching can be achieved for a total wiring length of up to 200 m.

Special Cables to Reduce Wiring
- Connect with special flat cable or VCTF cable.
Read and Understand this Catalog

Please read and understand this catalog before purchasing the product. Please consult your OMRON representative if you have any questions or comments.

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Take all necessary steps to determine the suitability of the product for the systems, machines, and equipment with which it will be used.
Know and observe all prohibitions of use applicable to this product.
NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

PROGRAMMABLE PRODUCTS
OMRON shall not be responsible for the user's programming of a programmable product, or any consequence thereof.

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Note: Do not use this document to operate the Unit.