■ Main Specifications of CJ1M CPU Units

	Standard CPU Units			CPU Units with Pulse I/O		
Model	*NEW* CJ1M-CPU11	CJ1M-CPU12	CJ1M-CPU13	*NEW* CJ1M-CPU21	CJ1M-CPU22	CJ1M-CPU23
I/O points	160 points	320 points	640 points	160 points	320 points	640 points
Expansion Rack	Not supported.		One Rack	Not supported.		One Rack
Maximum number of connectable Units	10 Units		20 Units (CPU Rack: 10 Units, Expansion Rack: 10 Units)	10 Units		20 Units (CPU Rack: 10 Units, Expansion Rack: 10 Units)
Program capacity	5 Ksteps	10 Ksteps	20 Ksteps	5 Ksteps	10 Ksteps	20 Ksteps
Data memory capacity	32 Kwords (DM only, no EM)					
LD instruction execution time	100 ns					
MOV instruction execution time	0.3 μs					
Overhead time	0.7 ms	0.5 ms		0. 7ms	0.5 ms	
Pulse start time	—			63 μs (without acceleration/deceleration)	46 μs (without acceleration/deceleration)	
				100 μs (with acceleration/deceleration)	70 μs (with acceleration/deceleration)	
Built-in ports	One peripheral port RS-232C port					
Mountable options	Memory Card (Compact Flash)					
Number of subroutines and jumps	256	1024		256	1024	
Number of scheduled interrupts	1	2		1	2	
Built-in inputs	—			10intputs •4 interrupt inputs (quick-response inputs) •2 high-speed counter inputs (50-kHz phase-differential or 100-kHz single-phase inputs)		
Built-in outputs	—			6 outputs •2 pulse outputs, 100 kHz •1 PWM output	6 outputs •2 pulse outputs, 100 kHz •2 PWM outputs	

This catalog mainly provides information that is necessary for selecting suitable models, and does not contain precautions for correct use. Always read the precautions and other required information provided in product operation manuals before using the product.

- The application examples provided in this catalog are for reference only. Check functions and safety of the equipment before use.
- Never use the products for any application requiring special safety requirements, such as nuclear energy control systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, or other 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 products are properly rated and installed for the intended use within the overall equipment or system.

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

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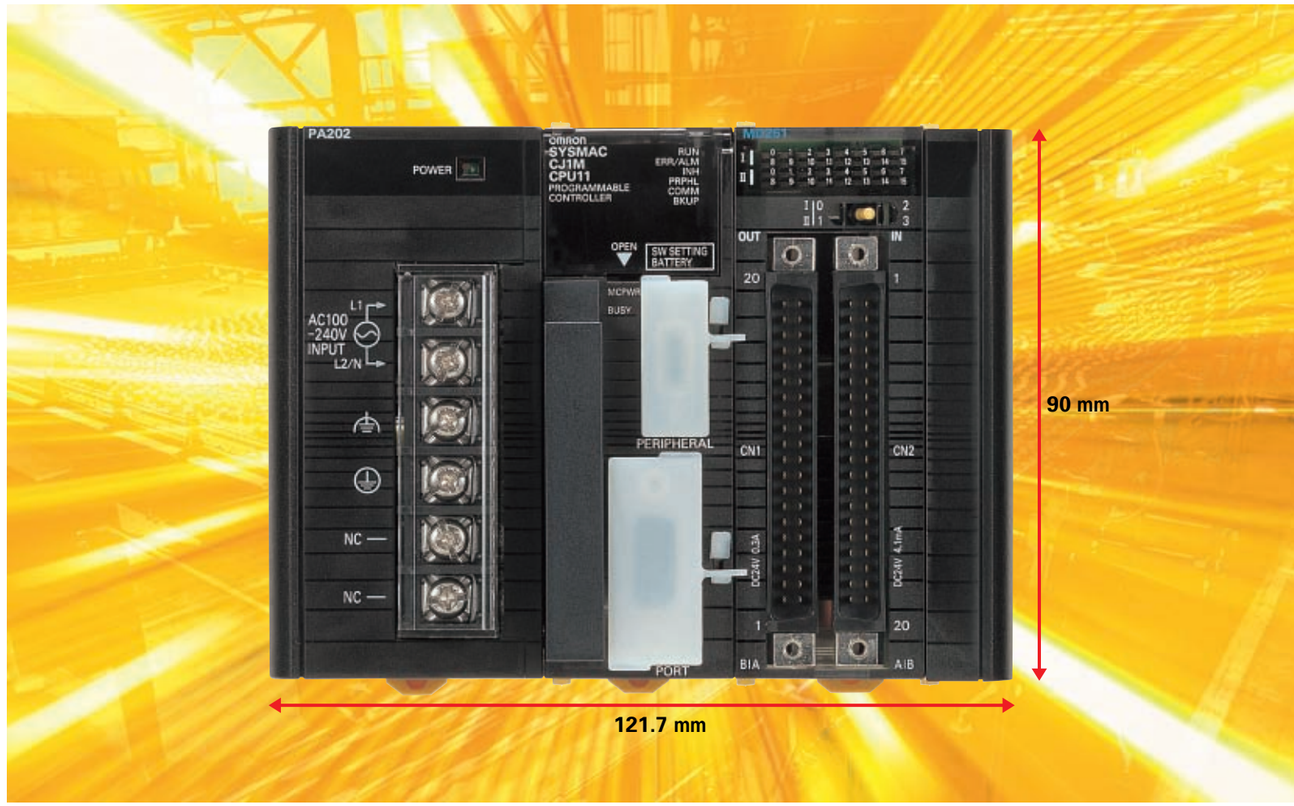
New!
New Product News

OMRON

Programmable Controllers
SYSMAC CJ1M
Low-end Models

Lineup of Low-end Models with 160 I/O Points and 5-Kstep Capacity
CJ1M-CPU11/21 Added to Series
Providing Greater Added Value for Small-scale Machines



A PLC with a 64-point Mixed I/O Unit is shown above (121.7 x 90.0 x 65.0 mm, W x H x D) (Refer to the next page for configuration details.)

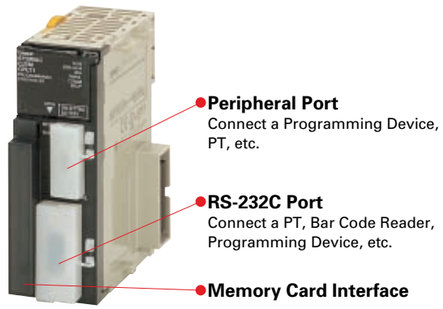
This ECO label is indicated on products that meet the environmental standards established by OMRON.

Innovation in the Solution Age
OMRON INDUSTRIAL AUTOMATION

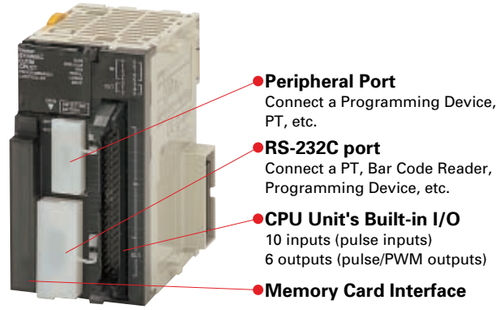
CJ1M CPU Units: Small yet Powerful, and Now in More Cost-efficient Models

Lineup of Low-end CPU Units with Basic Functions Plus High Added Value

Program capacity of 5 Ksteps and up to 160 I/O points: For small-scale machine control yet including all the basic functions of the CJ Series.
Standard features include a Memory Card interface and RS-232C port for serial communications.
CPU Units with Pulse I/O have built-in high-speed counter inputs and pulse outputs for greater added value for machines.



Standard CPU Unit
CJ1M-CPU11
160 I/O points, program capacity: 5 Ksteps

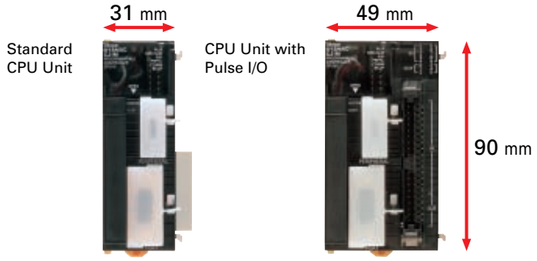


CPU Unit with Pulse I/O
CJ1M-CPU21
160 I/O points, program capacity: 5 Ksteps, 16 built-in I/O points

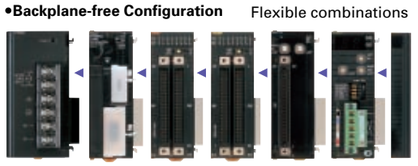
CJ1M-CPU11/21 Features

Save Space

Compact, with No Backplane



•Backplane-free Configuration Flexible combinations



Saves space with no backplane

Improve Machine Speed

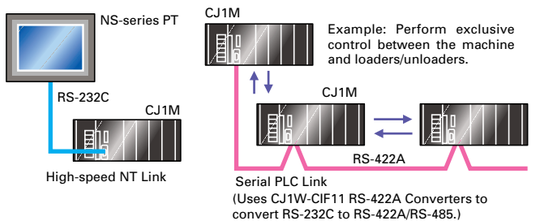
Reduced tact time, improved productivity.

Execute LD instructions at 100 ns and MOV instructions at 0.3 μs for higher machine speed.

The front page shows the following products:
CJ1W-PA202 Power Supply Unit
CJ1M-CPU11 CPU Unit
CJ1W-MD261 64-point Mixed I/O Unit

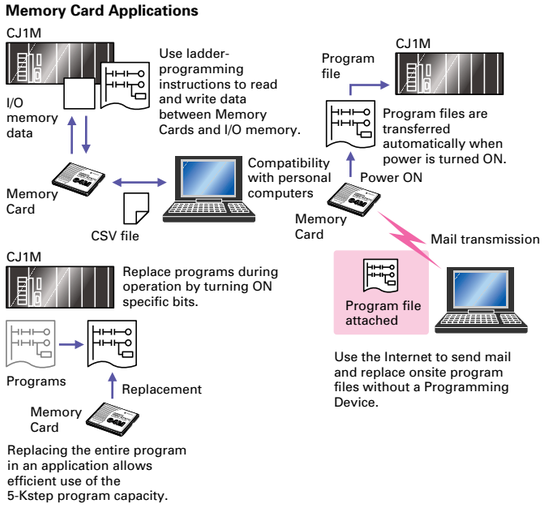
Broad Range of Communications with RS-232C Port without Special Programming

Linking to a PT or between CJ1M CPU Units is supported as a standard feature.



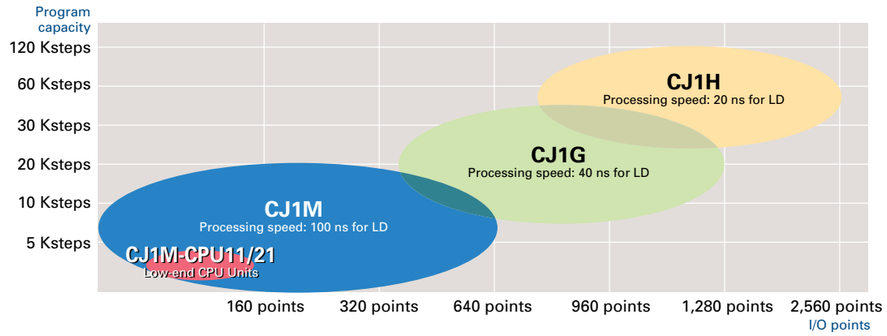
Flexible Data Handling with Memory Cards

Memory Card Applications



Choose the optimum Units to suit the application.

Select the optimum PLC from a complete lineup of low- to high-end CJ-series CPU Units to match your machine application needs.

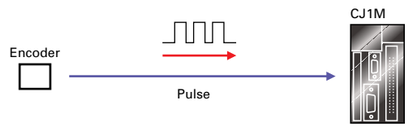


The CJ1M-CPU11/21 are supported by CX-Programmer version 3.3.

Features of the CJ1M-CPU21 CPU Unit with Pulse I/O

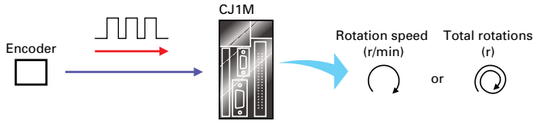
Encoder Inputs for Two Axes

100-kHz single phase, or 50-kHz phase-differential pulse inputs



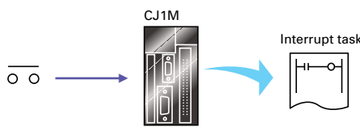
Measure Rotation Data NEW

Convert from high-speed counter input pulses to rotation speeds (or total rotations) (new PRV2 instruction).



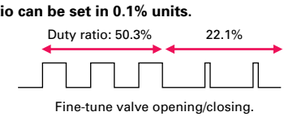
Four Interrupt or Quick-response Inputs

Quick-response inputs do not require a special Interrupt Input Unit.



High-precision Pulse with Variable Duty Factor (PWM) Output NEW

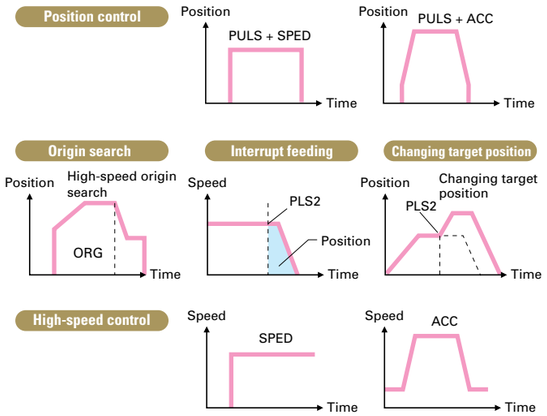
The duty ratio can be set in 0.1% units.



Fine-tune valve opening/closing.

High-speed Pulse Outputs for Two Axes

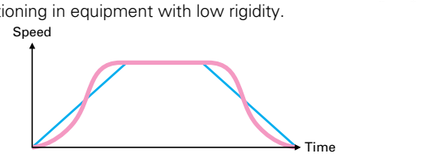
Wide variety of pulse output functions, such as 100-kHz isokinetic or trapezoidal acceleration/deceleration for speed control, origin searches, trapezoidal positioning with acceleration/deceleration, interrupt feeding, and changing the target position during positioning.



Acceleration/Deceleration with Shock Suppression NEW

S-curve Acceleration/Deceleration

S-curve acceleration/deceleration decreases vibration during high-speed positioning in equipment with low rigidity.



NEW Functions indicated as new are supported by CX-Programmer version 4.0 (available soon) or later. (Compatible with CPU Unit Ver.2.0)