

## Ordering Information

| Product name     | Specifications   |                  |   |                                | Current consumption (A) |      | Model                    | Standards     |
|------------------|--|------------------|---|--------------------------------|-------------------------|------|--------------------------|---------------|
|                  | I/O capacity/Mountable Units (Expansion Racks)         | Program capacity | Data memory capacity                                    | LD instruction execution speed | 5 V                     | 24 V |                          |               |
| CJ1H-R CPU Units | 2,560 points/40 Units max.<br>(3 Expansion Racks max.) | 250K steps       | 448K words<br>DM: 32K words<br>EM: 32K words x 13 banks | 0.016 μs                       | 0.99<br>(See note.)     | —    | CJ1H-CPU67H-R <b>NEW</b> | UC1, CE, N, L |
|                  |  | 120K steps       | 256K words<br>DM: 32K words<br>EM: 32K words x 7 banks  |                                | 0.99<br>(See note.)     | —    | CJ1H-CPU66H-R <b>NEW</b> |               |
|                  |  | 60K steps        | 128K words<br>DM: 32K words<br>EM: 32K words x 3 banks  |                                | 0.99<br>(See note.)     | —    | CJ1H-CPU65H-R <b>NEW</b> |               |
|                  |  | 30K steps        | 64K words<br>DM: 32K words<br>EM: 32K words x 1 bank    |                                | 0.99<br>(See note.)     | —    | CJ1H-CPU64H-R <b>NEW</b> |               |

**Note:** Current consumptions include current for a Programming Console. Add 0.15 A per Adapter when using NT-AL001 RS-232C/RS-232A Adapters. Add 0.04 A per Converter when using CJ1W-CIF11 RS-422A Converters.

### International Standards:

- The standards indicated in the "Standards" column are those current for UL, CSA, cULus, cUL, NK, and Lloyd standards and EC Directives as of the end of March 2007. The standards are abbreviated as follows: U: UL; U1: UL (Class 1 Division 2 Product for Hazardous Locations); C: CSA; UC: cULus; UC1: cULus (Class 1 Division 2 Product for Hazardous Locations); CU: cUL; N: NK; L: Lloyd; CE: EC Directives.
- Ask your OMRON representatives for the conditions under which the standards were met.

**New!**

**OMRON**

## Programmable Controllers SYSMAC CJ1

CJ1H CPU6□H R High-speed CPU Units

**New Flagship "R" CPU Units: Faster Than Ever**



### Warranty and Limitations of Liability

#### WARRANTY

OMRON's exclusive warranty is that the products are free from defects in materials and workmanship for a period of one year (or other period if specified) from date of sale by OMRON.

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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.

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

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Note: Specifications subject to change without notice.

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realizing

# These Amazingly Fast Controllers Take High-speed Control into the Microsecond Realm

## Nothing But Speed

Greater speed has been achieved for essentially all processes that affect the cycle time of the CJ1-H-R. The result is a cycle time below 1 ms, representing the fastest class of controller in the industry.

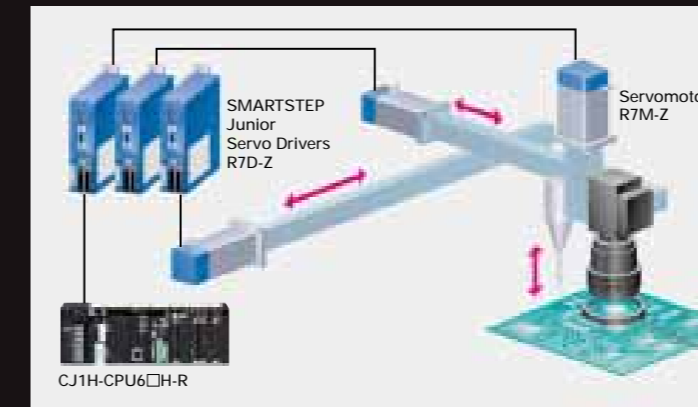
## Outstanding Control Performance

|                             |   |
|-----------------------------|---|
| Scan time                   | 870 $\mu$ s for 30K steps   |
| PC MIX                      | 17.7  |
| Basic instructions          | LD: 16 ns, OUT: 16 ns   |
| Floating-point instructions | Addition/subtraction: 0.24 $\mu$ s,<br>Multiplication: 0.24 $\mu$ s |
| Interrupt response          | 40 $\mu$ s  |

● Conditions 30K steps, 7:3 ratio between basic and special instructions, 128 inputs and 128 outputs

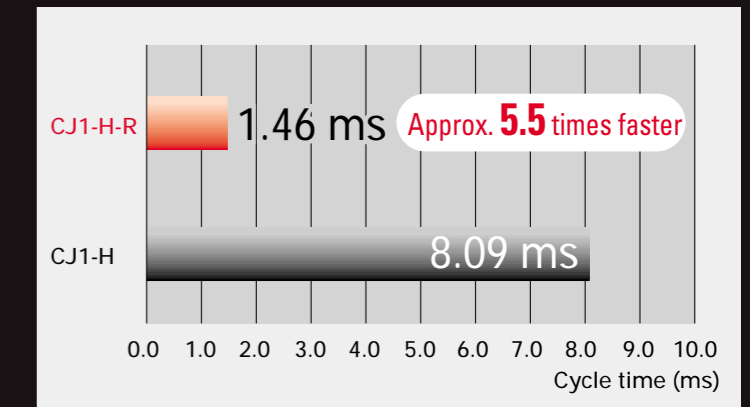
## True Speed Evident in Actual Application

Example: Drilling PCBs with High-speed, High-precision Positioning



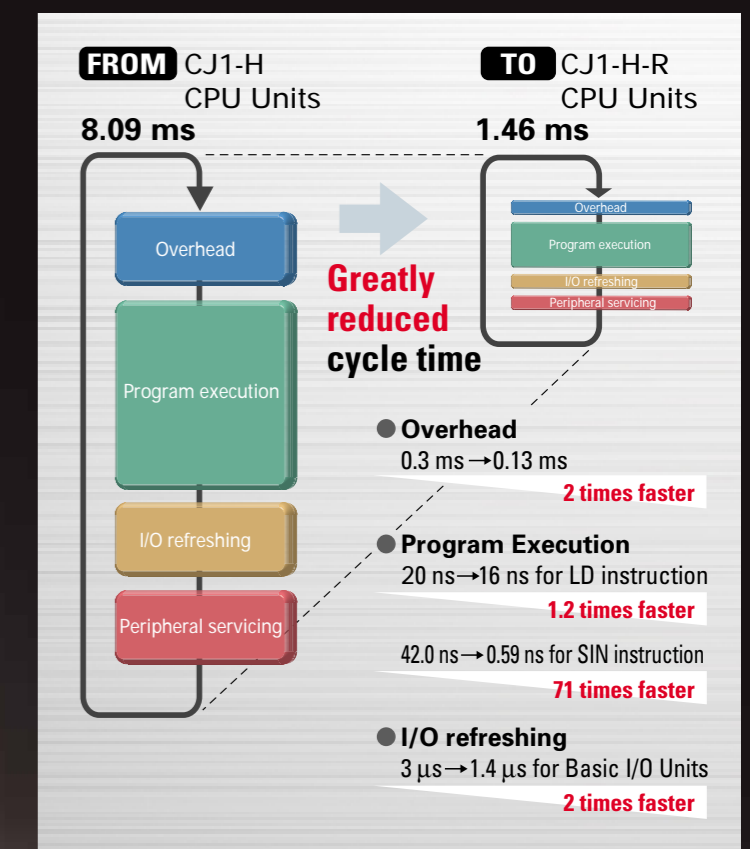
● Conditions 6:3:1 ratio of basic, special, and floating-point instructions, 30K steps with 128 inputs and 128 outputs, 2 Analog Input Units, and 2 Position Control Units (4 axes)

## ■ Cycle Time Comparison

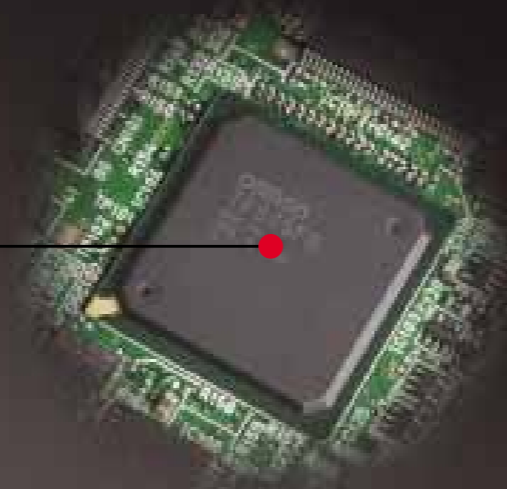


## Faster in Essentially Every Way

|  |  |
|--|--|
| <b>Fast! System Overhead</b>             | Overhead processing: 130 $\mu$ s<br>Interrupt response: 40 $\mu$ s               |
| <b>Fast! Basic Instructions</b>          | LD execution: 16 ns<br>OUT execution: 16 ns                                      |
| <b>Fast! Floating-point Calculations</b> | SIN execution: 0.59 $\mu$ s<br>Floating-point addition/subtraction: 0.24 $\mu$ s |
| <b>Fast! I/O Refreshing</b>              | 16-point Basic I/O Unit: 1.4 $\mu$ s<br>8-point Analog Input Unit: 50 $\mu$ s    |



The "R" CPU Units achieve the levels of precision and speed required by today's machines with the highest control performance in the industry.



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