

AC Servo System 1S Series

# Multi-axis setup and tuning

Achieve machine performance in a short amount of time by Multi-axis setup and tuning.



## Multi-drive window

Configure and monitor multiple axis in one view

OMRON originality #1



## Parameter copy transmission

Easy & fast parameter transfer among axis in the machine (up to 256 axis)

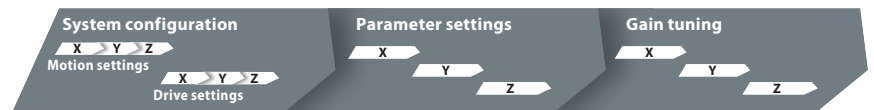
OMRON originality #1



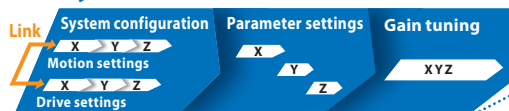
## Multi-axis tuning wizard

Comprehensive gain tuning

### Before



### 1S+ Sysmac Studio Ver.1.18



\*1. Based on Omron investigation in January 2017.

\*2. Performance comparison with previous Sysmac Studio version based on Omron investigation in January 2017.

40%  
time  
reduction\*2

### Automation Software Sysmac Studio Ver.1.18

Upgrades in April, 2017

Sysmac Studio is the software that provides an integrated environment for setting, programming, debugging and maintenance.

NJ/NX/NY\*3 Controller

EtherCAT®

Released in July, 2016

1S Servomotor  
R88M-1□



Released in July, 2016  
Upgrades in April, 2017

1S Servo Drive with  
Built-in EtherCAT  
Communications  
R88D-15N□-ECT

**SYSMAC**  
always in control

\*3. Industrial PC Platform NY-series IPC Machine Controller only.

\*4. 1S Servo Drive won the iF Design Award 2017. The iF Product design Award, presented by Hannover-based International Forum Design GmbH, is one of the world's most prestigious design awards.



**Multi-drive window**

### Multiple drives set-up and monitoring

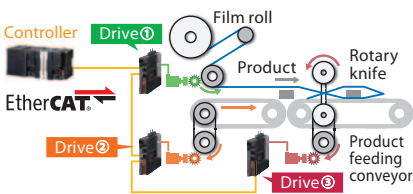
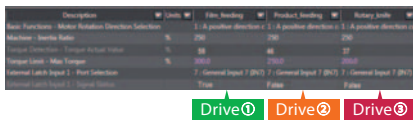
**Issue:**

Each drive in the machine is configured and monitored with separated configuration windows. Many operations are required to adjust and monitor parameters.

**Solution:**

Sysmac Studio multi-drive parameter and monitor window provides a single view for drives set-up.

■ Screen view of "Multi-drive window"



■ Application



Wrapping machine

Note: Please use Sysmac Studio Ver.1.18 or higher. The latest version of Sysmac Studio is available via auto update.



**Parameter copy transmission**

### Quick parameter copy and transfer

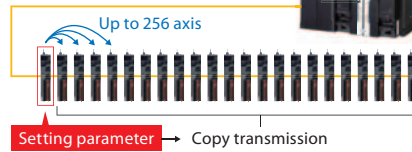
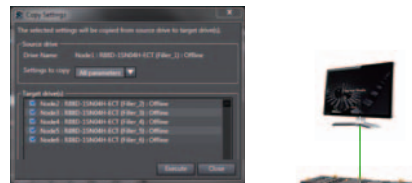
**Issue:**

For machine with a large number of axis, user need to modify parameters manually for each drive. A long time is required.

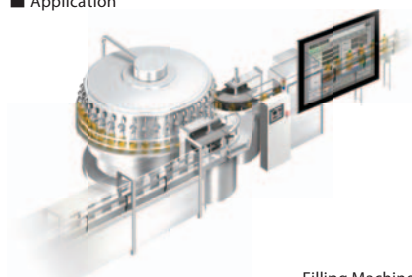
**Solution:**

After configuring 1 drive in the machine, all other similar drives can be configured by applying same parameters in few seconds with Sysmac Studio.

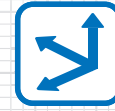
■ Screen view of "Parameter copy transmission"



■ Application



Filling Machine



**Multi-axis tuning wizard**

### Easy gain tuning for XYZ table\*

**Issue:**

User need to adjust axis one by one. It requires much effort and analysis to obtain the best system performance.

**Solution:**

With multi-axis tuning wizard of Sysmac Studio, drives can be tuned simultaneously in a short amount of time. System performance is achieved by non-expert users.

■ Screen view of "Multi-axis tuning wizard"

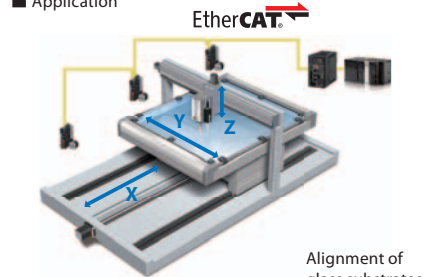
**Step1**  
Setup and criteria

**Step2**  
Auto tune process

**Step3**  
Data trace and result

\*Multi-axis tuning can adjust up to 4 drives simultaneously.

■ Application



Alignment of glass substrates

Refer to the 1S Series CATALOG (Cat. No. I821) for details.

Sysmac is a trademark or registered trademark of OMRON Corporation in Japan and other countries for OMRON factory automation products. EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany. Other company names and product names in this document are the trademarks or registered trademarks of their respective companies. The product photographs and figures that are used in this catalog may vary somewhat from the actual products. Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation

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

**OMRON Corporation Industrial Automation Company**  
Kyoto, JAPAN

Contact: [www.ia.omron.com](http://www.ia.omron.com)

**Regional Headquarters**

**OMRON EUROPE B.V.**  
Wegalaan 67-69, 2132 JD Hoofddorp  
The Netherlands  
Tel: (31)2356-81-300/Fax: (31)2356-81-388

**OMRON ASIA PACIFIC PTE. LTD.**  
No. 438A Alexandra Road # 05-05/08 (Lobby 2),  
Alexandra Technopark,  
Singapore 119967  
Tel: (65) 6835-3011/Fax: (65) 6835-2711

**OMRON ELECTRONICS LLC**  
2895 Greenspoint Parkway, Suite 200  
Hoffman Estates, IL 60169 U.S.A.  
Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

**OMRON (CHINA) CO., LTD.**  
Room 2211, Bank of China Tower,  
200 Yin Cheng Zhong Road,  
PuDong New Area, Shanghai, 200120, China  
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

**Authorized Distributor:**

© OMRON Corporation 2017 All Rights Reserved.  
In the interest of product improvement,  
specifications are subject to change without notice.

Cat. No. I826-E1-01

0317(0317)