



July 31, 2018 Murata Manufacturing Co., Ltd SCSK Corporation

Murata Manufacturing and SCSK Announce Partnership in Smart Factory Automation Field Launch of m-FLIPTM Factory Productivity Improvement Solution

Murata Manufacturing Co., Ltd., and SCSK Corporation announced today that they plan to launch a new service that will combine Murata's m-FLIP^{TM*1} factory productivity improvement solution with SCSK's full lineup of IT services. The launch of this new service is scheduled for September 1, 2018. *1. Murata Factory Line Integration Platform

1. Background and Overview of Partnership

In addition to the traditional challenges of improving productivity and ensuring quality, fundamental aspects of manufacturing, factories are now being forced to address the growing issue of severe labor shortages, which are arising due to the aging of the population and the shrinking of the workforce. Accordingly, implementing reforms and improvements on the manufacturing floor are becoming pressing issues for factories. The use of IoT and data tracking technologies to improve productivity is garnering attention as a potential means of addressing this issue. However, applying these technologies to factories requires manufacturing expertise backed by extensive experience as well as cutting-edge IT.

In September 2017, Murata, which boasts manufacturing expertise and business systems, and SCSK, which provides a full lineup of IT services, concluded a basis partnership agreement to jointly develop a solutions business in the smart factory automation field. Initiatives based on this agreement commenced thereafter.

As one facet of this partnership, the companies have commercialized the m-FLIPTM factory productivity improvement solution with the aim of making Murata's facility operation tracking software, which has been at use within this company for more than a decade, available to other manufacturers. SCSK will commence sales of this solution as a partner in this venture. Through this

partnership, customers are offered one-stop access to productivity improvement solutions with introduction assistance and post-introduction data utilization support from Murata and sales and other integration services from SCSK.

Division of Responsibilities

SCSK is responsible for the sales, introduction, and provision of support related to the m-FLIPTM factory productivity improvement solution as well as the supply of integration services, such as coordination with surrounding systems.

Murata will provide introduction assistance, software, post-introduction data utilization support pertaining to the m-FLIPTM factory productivity improvement solution.

2. Overview of m-FLIPTM

The m-FLIPTM solution maximizes the operating ratios of manufacturing equipment by utilizing IoT technologies in conjunction with the improvement activity expertise of Murata. This solution is capable of tracking the reasons behind production equipment halts, including frequent, short stops without a clear cause and stops related to procedures, inspections, malfunctions, and breaks. It then subdivides these halts down to the level at which improvement can be pursued. To facilitate actual improvements, Murata provides consulting services based on its extensive background in improvement activities.

**Note "m-FLIPTM" is scheduled to be on sale only in Japan from September 1, 2018.
This release is an announcement for overseas Institutional investors

3. Launch Date

September 1, 2018

<u>4. Future Initiatives</u>

In the future, Murata and SCSK will offer m-FLIPTM as well as other solutions in the smart factory automation field in order to deliver support services rooted in the production floor that create results. Based on the software and hardware provided by Murata, SCSK will work to develop and supply services matched to customers needs through means such as coordinating these offerings with relevant solutions. Murata will develop and provide factory systems based on its own usage history.

About Murata Manufacturing Co., Ltd

Head Office:	10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto
Established:	December 23, 1950
Representative:	Chairman of the Board and President Tsuneo Murata
Capital:	69,444 million yen
Business Details:	Research, Production and Sales of Electronic Devices made from fine
	ceramics
Stock Code:	6981
URL:	http://www.murata.com

About SCSK Corporation

Head Office:	Toyosu Front, 3-2-20, Toyosu, Koto-ku, Tokyo
Established:	October 25, 1969
Representative:	Representative Director, President and Chief Operating Officer
	Tooru Tanihara
Capital:	21,152 million yen
Business Details:	Consulting, Systems Development, IT Infrastructure Implementation, IT
	Management, Business Process Outsourcing (BPO), IT Hardware and
	Software Sales
Stock Code:	9719
URL:	http://www.scsk.jp

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