



MECHATROLINK News "MMA-FLASH" brings the latest MECHATROLINK information.

Feature Article *An Interview with the Executive Vice President of Prima Electro S.p.A.*

Key Enabling Technology to Build a Tightly Coupled Solution between CNC Control and Motion Control Devices

We deliver the latest news and information to MMA member companies and MECHATROLINK users in our feature articles. For this issue, we asked Federico De Sario, Executive Vice President of Prima Electro S.p.A., to talk about how Prima came to the decision to adopt MECHATROLINK and what he expects from the MMA.

Q1. You have a wide field of application in Italy. Could you tell me why you choose MECHATROLINK for your products in spite of the fact that there are some kinds of network?

— OSAI is 100% owned by Prima Industrie and recognized market leader brand in wood-working, glass-working and stone-working. These market segments have historically strongly adopted YASKAWA servo-drives and servomotors, making MECHATROLINK the "de facto" standard in these segments. OSAI decided, more than ten years ago, to have the MECHATROLINK fieldbus in its standard offering.

It is a strength of our product that strong support of MECHATROLINK was provided as a high-speed motion network while networking of the device control advances rapidly in a market. With the recent introduction of MECHATROLINK III, we have today the possibility to propose a high throughput digital link as powerful as all other Ethernet based field-busses.

New Solution to Improve the Competitiveness of CNC

Q2. Your company develops many MECHATROLINK products and sells it, how is the present status?

— The adoption of OPENcontrol is gaining a momentum and strong references. For example, an Italian company adopted our OPEN-30, the CNC of the new OSAI OPENcontrol family dedicated to 3D applications, integrated MECHATROLINK drives and motors, for specializing in the new production of

high-tech machining centers for the wood industry. Due to the reliability of the MECHATROLINK solution, Prima Electro also decided to adopt it also in other market segments, as metal sheet working. Prima Power, which is part of the group, cooperates with Japanese machine tool maker, world leader in the metal sheet machinery and laser systems in the panel bending segment by jointly developing a new generation of electric panel bending machines, which is based on OSAI OPENcontrol CNC and the MECHATROLINK drives and motors. MECHATROLINK III has been selected as the motion control bus. This new solution has been chosen by Prima Group to replace CNC, previously used by customer's bending machines, in order to improve machine performances and competitiveness.

MECHATROLINK, Essential for Meeting the Growing Market Demands for Safety Solution

Q3. How do you think about the market trend and user's demand of the industry field in Italy?

— The market is more and more giving clear indications on future market needs. A high-throughput digital communication bus is needed, reason for which Ethernet based solution are



Prima Electro S.p.A.
Executive Vice President

Mr. Federico De Sario

becoming a “must”. There is also a clear need for an easy configuration of the system, allowing remote debugging and tuning of the complete motion control chain, with both powerful tools available over the network and a set of complete API’s to access the drives and motors configuration through the bus. Power regeneration also is becoming a plus, due to the strong attention given to “green” systems and the need of reduction of the Total Cost of Ownership for any equipment. Finally we cannot forget the need of having safety integrated solutions in motion control, which, whilst having been initially requested more by the European market, is now quickly becoming a general requirement, on which customers are expecting to build safe solutions for motion control products and systems.

Q4. Could you tell me about your future projects and expectation from the MECHATROLINK and the MMA?

— All of the features mentioned above are key elements to stay at the forefront of the competition in the years to come. This is the ground where we will have to fight and confront ourselves against a fierce competition both in CNC’s and motion control devices. Prima Electro decided to immediately implement MECHATROLINK III in order to have a full integrated package for the numerical control market to stay ahead of the competition

and win new market segments, like the Machine Tools. In this segment the success is strongly dependent on the ability of providing a complete solution rather than separate components. For this reason, the availability of a powerful digital fieldbus, such as MECHATROLINK, is a key enabling technology to build a tightly coupled solution between CNC control and motion control devices. I expect that further innovation of MECHATROLINK becomes the support to the competitiveness improvement of our products.



News & Topics

Exhibitions

aimex – AUTOMATION WORLD 2013

Event Information

Dates: March 13 (Wed) -16 (Sat) , 2013
Place: Hall A and B at COEX Exhibition Center, Seoul, Korea South
Booth No.: C600 in Hall A



Planned design for MMA booth at aimex2013 MMA

MTA2013

Event Information

Dates: April 9 (Tue) – 12 (Fri) , 2013
Place: Singapore Expo
Booth No.: 3J5-01



Planned design for MMA booth at MTA2013

CIMT2013

Event Information

Dates: April 22 (Mon) –27 (Sat) , 2013
Place: China International Exhibition Center (New Venue) , Beijing, China
Booth No.: E8-204



Planned design for MMA booth at CIMT2013

MMA Participants:

- ALGOSYSTEM CO.,LTD
- ANYWIRE CORPORATION
- ORIENTAL MOTOR CO., LTD
- NIKKI DENSO Co., Ltd.
- YASKAWA ELECTRIC CORPORATION
- YOKOGAWA ELECTRIC CORPORATION
- M-Systems Co., Ltd.
- KOYO ELECTRONICS INDUSTRIES CO.,LTD.
- Sankyo Seisakusyo Co.
- Digital Electronics Corporation
- Micronet Co.
- AJINEXTEK CO., LTD
- CONVEX CO.,Ltd.
- DELTA TAU KOREA
- SAMWON ACT
- FASTECH

MECHATROLINK Certification Test site in China

The MMA established the first MECHATROLINK Certification Test site in China on January 22, 2013. Products developed in China in compliance with MECHATROLINK standards can now be tested and certified for MECHATROLINK compatibility by this site.

Many MECHATROLINK-compliant products have been and continue to be developed in China, and the establishment of a local certification site was needed in order to facilitate the certification process. Henceforth, the development of MECHATROLINK-compliant products in China will be simplified.

Inquiries

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Report of MECHATROLINK Fairs 2012

The MECHATROLINK Members Association organized the MECHATROLINK Fair in Utsunomiya on Oct. 25 (Thurs) and in Sendai on Oct. 26 (Fri), 2012.

MECHATROLINK-II and -III demonstrations as well as MECHATROLINK-compliant products produced by MMA member companies were displayed in the exhibition room of each fair. They were well arranged so that visitors could appreciate the products one by one, and the room was filled with enthusiasm of the visitors who asked for the detailed information of each product. Many visitors also listened to a report on MMA activities and attended the technical seminar.

Tetsushi Hayashi, Group Publisher of Electronics/Mechanical Group of Nikkei Business Publications, Inc., gave a keynote speech on Japanese way of manufacturing and its future prospect.

His speech was full of useful suggestions and keywords to connect manufacturing to the future.

Both fairs were successful in promoting the use of MECHATROLINK.

Thanks to all who came to see us at the MECHATROLINK fairs.

The MMA will continue to strongly promote MECHATROLINK.

The following member companies exhibited their products.

- IAI Corporation
- ALGOSYSTEM CO.,LTD
- ANYWIRE CORPORATION
- ENDO KOGYO CO.,LTD.
- M-Systems Co., Ltd.
- ORIENTAL MOTOR CO., LTD
- KOYO ELECTRONICS INDUSTRIES CO.,LTD.
- Sankyo Seisakusho Co.
- TIETECH CO.,LTD
- Digital Electronics Corporation
- NIKKI DENSO Co., Ltd.
- YASKAWA ELECTRIC CORPORATION
- YASKAWA INFORMATION SYSTEMS Corporation
- YOKOGAWA ELECTRIC CORPORATION
- YE DATA INC.

A total of 15 companies



MECHATROLINK Fair in Sendai



MECHATROLINK-II and -III demonstrations



Keynote speech

Report of MECHATROLINK Seminars in Malaysia

The MMA organized MECHATROLINK seminars in Penang and Kuala Lumpur, Malaysia respectively on January 29 and 31, 2013.

Although this was the first time the MMA has organized a seminar in Southeast Asia, both attracted a great number of people participated in each seminar. During each seminar, the MMA explained MECHATROLINK features and introduced compliant products. Many participants gathered around the demo display tables and asked the MMA staff for detailed information about each product.

The MMA will organize MECHATROLINK seminars in countries all over Southeast Asia.



Demo display in Kuala Lumpur



Seminar in Penang

New MECHATROLINK Products

ALGOSYSTEM CO.,LTD. "MECATROLINK-III Master Modules"

Features

- Intel Core i7/Celeron embedded Industrial Computers:
AP/APW & FP product families - LCD touch-paned installed FC product family for more PCIe slots without LDC panel.
- High speed Field Buses available on R/T OS INtime Bundled MECHATROLINKIII Master capability & Library on the R/T OS
- High speed, extremely fine and multifunctional Motion Controlling utilized on the PC architecture platform above. Various motion controlling can be realized on single platform.



ALGOSYSTEM CO.,LTD. "MECATROLINK-III Slave I/O Modules"

Features

- Specific I/O Modules available for various applications
Mounted quickly on DIN rails
- Digital Output Modules (NPN type)
Choice of comm. error recovery: data retain or reset
- Analog Input/Output Modules
Setting range of input/output with Dip SW, Arithmetic average or moving average for input
- Encoder Modules
Available pulse input: phase difference pulse between phases (A/B), sign + pulse or adding/subtracting pulse



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Column MECHATROLINK-III Cables

Ethernet Cat-5e cable compatible wires can be used to make a communication cable between two MECHATROLINK-III compliant products. Connector pins on both ends of communication cable should be cross connected as shown in Figure 1. Applicable connectors are Industrial Mini I/O connector (hereinafter referred to as IMI connector) (see Figure 2) and RJ-45 connector (see Figure 3). You can also use a commercially available cable with IMI connector on one end. Attach a RS-45 connector on the bare end of cable.

Figure 1
Cross connection wiring diagram

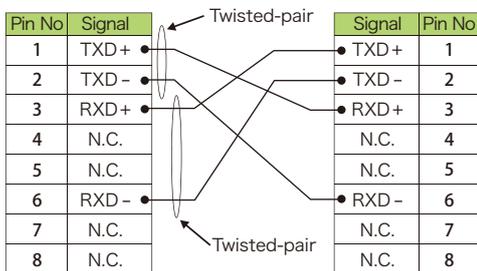


Figure 2
IMI connector
appearance
and pin layout

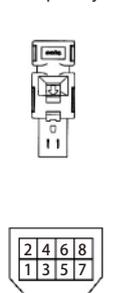
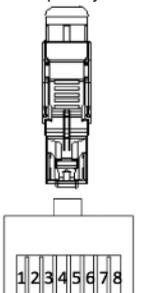


Figure 3
RJ-45 connector
appearance
and pin layout



MMA Membership as of Feb. 28, 2013

Japan, Taiwan, India : 512
China : 619
Korea : 221
Europe : 82
North America : 72

1506 members



Editor's Comment

In March, signs of spring appear though it's still cold. Newborn buds and warm breeze make us feel peaceful. Do you feel spring coming? Spring is the first season of the year. We will start off in the fiscal year 2013, for the world-wide spread use of MECHATROLINK, together with all MMA members. Written by Hiranuma

Inquiries

For questions about joining MECHATROLINK Members Association and other inquiries, please contact the MMA.

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