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## ASIX Unveils New IO-Link Device Software Stack Solution

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HSINCHU, Taiwan – Jan. 16<sup>th</sup>, 2024 – ASIX Electronics Corporation (TWSE:3169) is deeply engaged in the industrial Ethernet controllers and I/O interface markets, with a persistent focus on the development of IO-Link intelligent communication technology. After the successful launch of the AX58400 EtherCAT to IO-Link Gateway solution in 2022, ASIX proudly unveils the new 'ASIX IO-Link Device Software Stack' solution today. ASIX presents a comprehensive solution, incorporating the EtherCAT to IO-Link Master Gateway and IO-Link Device Software Protocol Stack solutions. This enables customers to seamlessly integrate the latest IO-Link smart sensors and actuators into EtherCAT industrial Ethernet networks, thereby achieving a more flexible and efficient smart factory production environment.

In this era of booming AI technology, the IO-Link intelligent communication technology has become an indispensable key technology in Industry 4.0 smart manufacturing and Artificial Intelligence Internet of Things (AIoT) industry, accomplished by harnessing a flexible real-time bidirectional data exchange mechanism. With its support for flexible dynamic equipment configuration, IO-Link enables instant adjustments to production equipment configurations based on real-time factory production demands. This capability results in a streamlined production process and increased production efficiency. IO-Link's equipment status diagnosis and reporting features contribute significantly to achieving predictive maintenance for production equipment, reducing unexpected equipment failures and downtime, and thereby enhancing the stability and reliability of smart factory production lines. By introducing IO-Link technology into smart factories and combining it with AI edge computing technology, real-time analysis and feedback of production data become achievable. This integration facilitates comprehensive data monitoring and management of production equipment, thereby achieving the automated production management in smart factories.

The ASIX IO-Link Device Software Stack is developed on the AXM-IOLS IO-Link device evaluation board, which is equipped with STMicroelectronics STM32F469AI microcontroller and L6362A IO-Link device transceiver. The software stack is developed using the STM32CubeIDE development tool, based on the STMicroelectronics STEVAL-BFA001V2 software development kit, and seamlessly integrates ASIX's proprietary IO-Link device software stack library. The design of this software stack complies with the IO-Link Interface and System Specifications V1.1.3, ensuring backward compatibility for IO-Link V1.0 master support. It supports advanced features including the ISDU communication, data storage, both IO-Link and standard I/O operating modes. Additionally, it supports all telegram types and various data transmission rates, including 4.8Kbps (COM1), 38.4Kbps (COM2), and 230.4Kbps (COM3). The software stack also allows for online firmware updates via the IO-Link interface, with a minimal firmware footprint of less than 1KB of RAM and less than 10KB of flash memory. This solution provides customers a cost-effective IO-Link device software stack solution for smart IO-Link device applications, such as IO-Link sensors (temperature, humidity, pressure, photoelectric, vision, ToF gesture sensors), IO-Link actuators (valve actuators, motor controllers, smart LED towers), IO-Link hubs, and IO-Link valve islands.

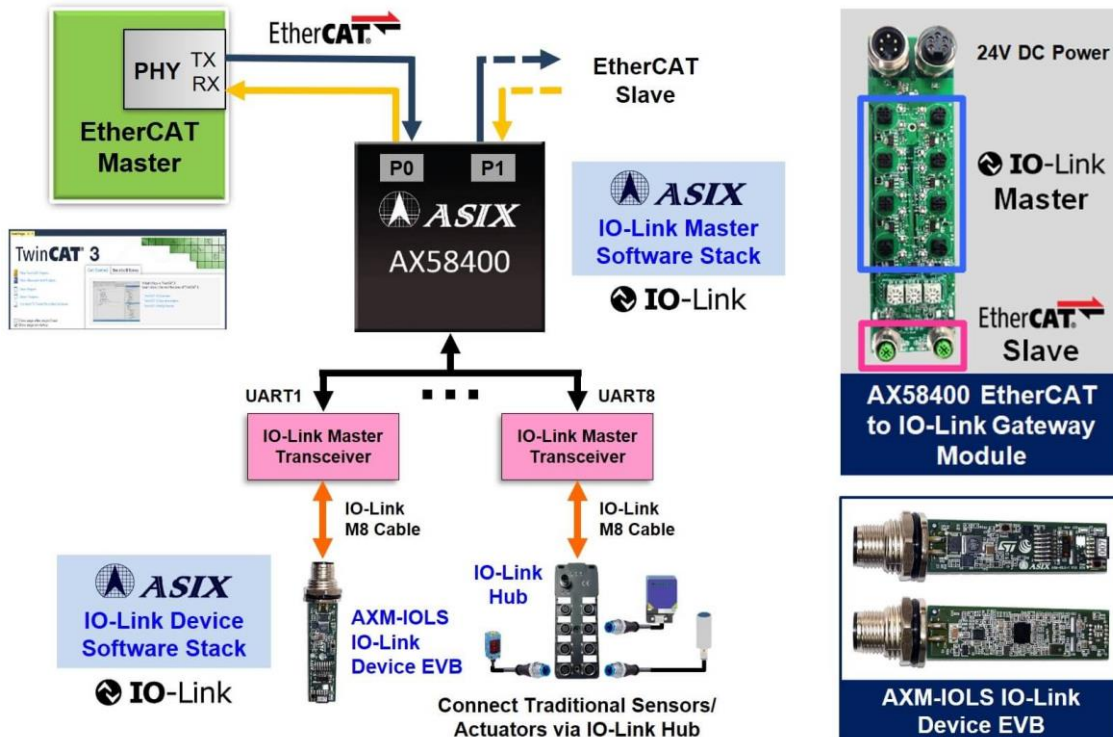


Figure-1. ASIX IO-Link Master/Device Software Stack Solutions

The ASIX IO-Link device software stack package includes ASIX IO-Link device software stack trial library, a demonstration application, the AXM-IOLS evaluation board reference circuit and PCB layout file, etc. The trial version of ASIX IO-Link device software stack library provides the complete functionality, excluding only the firmware upgrade feature. Designers can evaluate the comprehensive capabilities of ASIX IO-Link device software stack using the AXM-IOLS evaluation board, expediting product development timelines. ASIX offers a variety of technical services to meet customers' product design needs. Please visit the ASIX website: <https://www.asix.com.tw/> or contact ASIX Electronics Corp. via e-mail: [sales@asix.com.tw](mailto:sales@asix.com.tw) for more information.

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#### About [ASIX Electronics Corporation](https://www.asix.com.tw/)

[ASIX Electronics Corporation](https://www.asix.com.tw/) is a leading IC design company for Industrial/Embedded networking and connectivity solutions. ASIX was founded in May 1995 in Hsinchu Science Park, Taiwan, and has been listed on Taiwan OTC Stock Exchange (TAIEX code 3169) since November 2009. ASIX products include [Industrial Ethernet ICs](#), [SuperSpeed USB Ethernet ICs](#), [Non-PCI/SPI Embedded Ethernet ICs](#), [Interface ICs](#), [RS-232/RS-485 UART Transceivers](#) and [USB KVM Switch/Wi-Fi/Ethernet SoCs](#). ASIX has been certified as an ISO 9001 and 14001 suppliers. This achievement represents ASIX Electronics continuing commitment to maintain a world-class quality system. For more information, please visit ASIX website: <https://www.asix.com.tw/>.