

ASIX Launches New EtherCAT to IO-Link Gateway Solution

HSINCHU, Taiwan – Jan. 11th, 2022

In response to the strong demand of the global industry 4.0 smart manufacturing market, ASIX Electronics Corporation (Taiwan Stock Exchange: 3169: Taiwan) has continuously deepened the development of industrial Ethernet controller solutions, and launched the cost-effective AX58x00 family EtherCAT slave controllers/microcontrollers solutions for industry Ethernet fieldbus applications. In order to further provide customers with complete industrial Ethernet fieldbus solutions, ASIX actively invests in the development of new IO-Link master communication protocol stack technology, and today launches the newest "AX58400 EtherCAT to IO-Link Gateway Solution", which combines EtherCAT industrial Ethernet fieldbus technology and IO-Link intelligent communication technology. Using this EtherCAT slave to IO-Link master gateway solution, customers can easily install the newest IO-Link smart sensors and actuators on EtherCAT industrial Ethernet networks in smart factory.



The IO-Link intelligent communication standard (IEC61131-9) is the world's first open standard point-topoint serial communication protocol for communicating with smart sensors and actuators. The IO-Link communication system consists of an IO-Link master and IO-Link devices such as smart sensors and actuators. The IO-Link master can access information such as manufacturing process data, device configuration parameters and self-diagnosis results from IO-Link devices, and can establish two-way digital data exchange with industrial Ethernet fieldbus PLC. Therefore, the industrial PLC can remotely receive the manufacturing process data from IO-Link smart devices, monitor the health status of IO-Link smart devices for preventive equipment maintenance or replacement, and configure the parameters of IO-Link smart devices to meet various manufacturing needs. It is worth mentioning that the IO-Link intelligent communication technology and industrial Ethernet fieldbus technologies, such as EtherCAT, PROFINET, EtherNet/IP, Modbus TCP, etc., are a cooperative relationship rather than a competitive relationship. Using IO-Link intelligent communication technology, industrial computers can be easily connected to IO-Link master via industrial Ethernet fieldbus networks to remotely monitor and configure IO-Link smart devices, so manufacturers can easily build up more flexible and effective manufacturing environment in smart factory.

AX58400 EtherCAT to IO-Link gateway solution supports up to 8 IO-Link devices, such as smart sensors and actuators, through AX58400 EtherCAT Slave Controller with Dual-Core MCU and ASIX's own IO-Link Master Protocol Stack. AX58400 is equipped with the highest-performing 480MHz ARM® Cortex®-M7 core, 240MHz ARM® Cortex®-M4 core that can operate in parallel, EtherCAT Slave Controller integrated with two embedded Fast Ethernet PHYs, and embedded 2Mbytes dual-bank Flash memory and 1Mbyte SRAM. This solution uses the highest-performing ARM® Cortex®-M7 core to process the IO-Link master protocol stack operation for supporting up to 8 IO-Link devices; and uses the ARM® Cortex®-M4 core to process EtherCAT slave protocol stack operation in parallel. Using AX58400 dual-core MCU architecture can effectively reduce the CPU load of microcontroller and generate a higher-performance EtherCAT slave to IO-Link master gateway solution.

ASIX has outstanding engineering teams to provide customers the professional and timely technical services. ASIX offers different technical services for AX58400 EtherCAT to IO-Link gateway solution to meet customer needs. For more product and services information, please contact ASIX Electronics Corp. via e-mail: sales@asix.com.tw.