ADLINK Partners with FFG for 5G- and ROS2-based Factories of the Future

High-efficiency data exchange enables communication between humans, machines, and sensors with high reliability and low latency

SAN JOSE, Calif. (PRWEB) June 11, 2018 -- ADLINK Technology, a global leader in Edge Computing, has joined forces with Fair Friend Group (FFG) to develop the new ROS2 toward Converged 5G for Factories of the Future project. The collaboration integrates wireless 5G network technologies with ROS2 (Robot Operating System 2) platforms to provide system architecture enabling real-time control and reliable communication. Igniting the next wave of growth for the network communication sector, the project can drive Industry 4.0 ecosystem development to bring on a productivity revolution for Factories of the Future.

With Industry 4.0 implementation growing, smart manufacturing has advanced to a high level of automation. Manufacturing using AMR (Autonomous Mobile Robots) and COBOT (Collaborative Robots) is quickly becoming standard, with the result of increased demands on network systems and interface standards for communication between machines.

5G-enabled industrial wireless communication is capable of support for wide-ranging needs arising from communication between humans, machines, and sensors, with high reliability, low latency, long transmission distance, multiple application scenarios, and optimal portability for mobile equipment. ROS2 provides high-efficiency middleware for data exchange and is quickly becoming the API standard for smart robotics development. ADLINK has further developed a uniform data exchange environment for factories using DDS (Data Distribution Service) as a backbone.

“Taiwan’s manufacturing industry has robust capabilities that are well recognized by the world. By combining leading-edge 5G network technologies with open source ROS2/DDS platforms, we have crafted a highly competitive manufacturing environment converging IT, OT, and CT, to create a smart robotics industry ecosystem realizing challenging Future Factory implementations,” said Jim Liu, ADLINK’s CEO.

FFG will build the world’s first demo production line for Factories of the Future, implementing fast and reliable ROS2-based data exchange. FFG CTO Dr. Ren Luo explained that, “Factories of the Future incorporate numerous portable, flexible, interconnected, and dynamically adjustable elements to accommodate customized production with optimal efficiency. The integration of 5G communication technologies and ROS2/DDS platforms at this time will realize high-performance implementation.”

With ever-growing demands for highly customized products, Factories of the Future require top-speed real-time data transmission across operations lines. Production line architecture must increasingly support extreme flexibility, interconnectivity and dynamic adjustability, with a wide variety of connected elements, machine-based and otherwise. Accordingly, dedicated wireless networking is critical.

ADLINK and FFG previously participated in an EU research project with common goals, setting them up for multinational collaboration on various forward-looking industrial technology developments, with combined further cross-sector achievements generating ICT (information and communications technology) vertical application products for Factories of the Future. ADLINK will incorporate AI technologies to develop robot controllers with vision, detection, precision control and real-time communication capabilities as open source tools, thereby generating new smart manufacturing standardization of ROS2 as a common platform for mobile
robots. ADLINK looks to introduce more than 200 innovative smart robotics products by 2025, further consolidating Taiwan’s position of global leadership in the field.

ABOUT ADLINK

ADLINK Technology is a global leader in Edge Computing. Our mission is to facilitate the use of advanced technologies to help optimize the business performance of our customers. We provide robust boards, platforms and user interfaces; real-time data connectivity solutions; and application enablement for state-of-the-art industrial computing, such as machine learning via AI-at-the-Edge. Together, these also enable innovative end-to-end IoT solutions in support of operational excellence or new revenue streams. ADLINK serves customers across vertical markets including: manufacturing, networking and communications, healthcare, infotainment, retail, energy, transportation, and government and defense.

ADLINK has a growing eco-system of industry leading technology partners; we are a Premier Member of the Intel® Internet of Things Solutions Alliance, a strategic embedded partner of NVIDIA, and an active contributor in many standards and interoperability initiatives, including Eclipse, ETSI, OCP, OMG, OpenFog, PICMG, ROS-I and SGeT.

ADLINK’s products are available in over 40 countries, either directly or through our worldwide network of value-adding distributors and systems integrators. ADLINK is ISO-9001, ISO-14001, ISO-13485 and TL9000 certified and is publicly traded on TAIEX (Stock Code: 6166).

ABOUT FFG

Fair Friend Group (FFG) was established in 1979 with the founding principles of reliability, growth, continuous advancement, best in quality, and strive for excellence. FFG consists of three major divisions of businesses: (1) Machine Tool Division, (2) Industry Equipment Division, and (3) Green Energy Division. Products ranges from CNC machine tools, power tools & equipment, forklifts, construction machinery, parking garage equipment, pneumatic equipment, printed circuit boards, LCD monitors & TV, solar cell conductive adhesives, LED lighting, magnesium alloy forging, and testing equipment for semiconductor & LED wafer. FFG has 96 production and operational bases worldwide collaborating together to share the group's global resources. Transforming from dealer to manufacturer and from traditional industry to high-tech industry enabled FFG to advance not only in management and technology but also in the quality of products and services that meet or surpass international standards.

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