INTEL NEWS FACT SHEET

Intel and Alibaba Cloud Deliver Joint Computing Platform for AI Inference at the Edge

Sept. 20, 2018 — Intel and Alibaba Cloud* today announced the launch of the Joint Edge Computing Platform, an open architecture for Internet of Things (IoT) applications that integrates artificial intelligence (AI) and cloud technologies for edge computing. The device-to-cloud IoT platform offers enterprise customers customizable solutions for different IoT scenarios, including industrial manufacturing, smart buildings, smart community and more.

> *"We are very excited to see that our industry-leading Joint Edge Computing Platform is already playing a crucial role in driving enterprise digital transformation," said Ku Wei, general manager of the IoT business unit of Alibaba Cloud Computing. "Alibaba Cloud IoT has since day one, been committed to driving innovation in industries with leading solutions. This win-win cooperation with Intel will provide a strong backing for the IoT-driven development and smart upgrading of Chinese enterprises."*

> *"We are pleased to collaborate with Alibaba Cloud IoT to present this highly valuable Joint Edge Computing Platform," said Thomas Lantzsch, senior vice president and general manager of the Internet of Things Group at Intel Corporation. "Combining the prominent strengths of Intel and Alibaba Cloud IoT, this platform provides best-in-class computing capabilities, including AI. Its compelling success story in the industrial sector reaffirms our conviction that the intersection of cloud and edge computing will enable more enterprises to achieve efficiency improvements, to gain actionable insights and to capture market opportunities ahead of their competition."*

Details of the Platform:

- The Joint Edge Computing Platform is an open architecture for IoT applications that integrates Intel's software, hardware and latest AI technologies and Alibaba Cloud IoT products of platform and OS.
    - As part of this collaboration, Intel provides processors, silicon acceleration technologies and software optimizations to deliver the highest computing capacity required at the edge. Intel also provides the OpenVino™ toolkit and developer ecosystem focused on expanding computer vision and deep learning data into business insights.
    - Alibaba Cloud provides its latest IoT products, including Link Edge and AliOS Things. Link Edge can be deployed on smart devices and computing nodes on different scales and provides stable, secure and diversified "edge-to-IoT device" communication connection. AliOS Things is an operating system specifically developed by Alibaba Cloud for IoT applications, aiming to provide the critical capability for application management of the devices from edge to cloud.

Customer Story:

- Chongqing Refine-YuMei Die Casting Co. Ltd., also referred to as YuMei, is the first enterprise to deploy the Intel and Alibaba Joint Edge Computing Platform. As a world-leading aluminum alloy die-casting specialist, YuMei considers product yield as the lifeline of its development and foundation of excellence of operations.

- YuMei found its existing process for manual defect detection of products to be outdated. In its effort to push ahead with business digital transformation and to increase yield and production automation, YuMei deployed the Joint Edge Computing Platform on its production line.
- The new solution, based on Intel's computer vision and deep learning capabilities, integrates the defect detection with the machine, allowing identification of defects as parts are cast instead of waiting until the end of the manufacturing line.
- The real-time data processing and machine integration was made possible by Intel® Core™ processors with integrated graphics on industrial-grade gateways and industrial PCs. Vision algorithm optimization to improve detection accuracy was accomplished through training on Intel® Xeon® Scalable processors on an edge server and in the Alibaba Cloud.
- After deploying the Joint Edge Computing Platform, YuMei's defect detection capability increased five times from manual detection to automatic detection[1].

[1]Automated product quality data collected by YuMei using JWIPC® model IX7, ruggedized, fan-less edge compute node/industrial PC running an Intel® Core™ i7 CPU with integrated on die GPU and OpenVINO SDK. 16GB of system memory, connected to a 5MP POE Basler* Camera model acA 1920-40gc. Together these components, along with the Intel developed computer vision and deep learning algorithms, provide YuMei factory workers information on product defects near real-time (within 100 milliseconds). Sample size >100,000 production units collected over 6 months in 2018.