

Ball Aerospace Collaborates with Microsoft Azure on On-orbit Computing

BROOMFIELD, Colo., Apr. 4, 2022 —Ball Aerospace is collaborating with Microsoft Azure to enable faster, flexible and more dynamic on-orbit satellite data processing. Ball Aerospace's space-based hardware and software capabilities are being combined with the power of Microsoft Azure cloud in a series of on-orbit experiments, to explore new capabilities of satellite edge processing in space.

"Ball Aerospace has more than 65 years of space-based systems experience, and Microsoft is an industry leader in big data management and internet of things (IoT) systems," said Steve Smith, vice president and general manager, Advanced Technology & Information Solutions, Ball Aerospace. "We are meeting in the middle, combining our respective expertise to enable 'smart' satellites that extend the data processing power of the cloud to space."

This latest collaboration between Ball Aerospace and Microsoft supports a unique networking system on the cloud that can move data around more quickly and process it in real-time – all the while being flexible to the evolving needs of complex missions. This empowers the user to reconfigure computing functions on orbit, including the use of software containerization and cloud on-the-edge to enable a software defined mission approach that embraces standards such as Sensor Open Systems Architecture (SOSA), Universal Command and Control Interface (UCI) and Open Mission Systems (OMS).

Ball Aerospace recently demonstrated a successful data transfer from a Telesat Low Earth Orbit satellite to a data center and tactical vehicle where it was processed in Azure. The demonstrations were part of the United States Space Force Space and Missile Systems Center's Commercially Augmented Space Inter-Networked Operations (CASINO) project. Ball is planning for future demonstrations with Microsoft to test the software on-orbit in the next year.

Said Tom Keane, Microsoft's corporate vice president of Mission Engineering, "Bringing the security and performance of the Microsoft Cloud to Ball Aerospace hardware can offer unique opportunities to process on-orbit satellite data to gain insights faster, and meet the needs of specialized and mission-critical government workloads."

Microsoft Azure enables innovation with integrated cloud services, data processing and advanced analytics, and an open application platform that provides the building blocks to rapidly develop, deploy and manage intelligent solutions. Ball Aerospace has a strong heritage of designing and building space hardware for government and commercial customers. In addition, the company has more than 30 years of data processing experience, including developing unique and accurate exploitation algorithms for satellite systems.

Powered by endlessly curious people with an unwavering mission focus, **Ball Aerospace** pioneers discoveries that enable our customers to perform beyond expectation and protect what matters most. We create innovative space solutions, enable more accurate weather forecasts, drive insightful observations of our planet, deliver actionable data and intelligence, and ensure those who defend our freedom go forward bravely and return home safely. Go Beyond with Ball.® For more information, visit www.ball.com/aerospace or connect with us on [Facebook](#) or [Twitter](#).

About Ball Corporation

Ball Corporation supplies innovative, sustainable aluminum packaging solutions for beverage, personal care and household products customers, as well as aerospace and other technologies and services primarily for the U.S. government. Ball Corporation and its subsidiaries employ 24,300 people worldwide and reported 2021 net sales of \$13.8 billion. For more information, visit www.ball.com, or connect with us on [Facebook](#) or [Twitter](#).

Forward-Looking Statements

This release contains "forward-looking" statements concerning future events and financial performance. Words such as "expects," "anticipates," "estimates," "believes," and similar expressions typically identify forward-looking statements, which are generally any statements other than statements of historical fact. Such statements are based on current expectations or views of the future and are subject to risks and uncertainties, which could cause actual results or events to differ materially from those expressed or implied. You should therefore not place undue reliance upon any forward-looking statements and they should be read in conjunction with, and qualified in their entirety by, the cautionary statements referenced below. The Company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Key factors, risks and uncertainties that could cause actual outcomes and results to be different are summarized in filings with the Securities and Exchange Commission, including Exhibit 99 in our Form 10-K, which are available on our website and at www.sec.gov. Additional factors that might affect: a) our packaging segments include product capacity, supply, and demand constraints and fluctuations and changes in consumption patterns; availability/cost of raw materials, equipment, and logistics; competitive packaging, pricing and substitution; changes in climate and weather; footprint adjustments and other manufacturing changes, including the startup of new facilities and lines; failure to achieve synergies, productivity improvements or cost reductions; unfavorable mandatory deposit or packaging laws; customer and supplier consolidation; power and supply chain interruptions; changes in major customer or supplier contracts or loss of a major customer or supplier; inability to pass through increased costs; war, political instability and sanctions, including relating to the situation in Russia and

Ukraine and its impact on our supply chain and our ability to operate in Russia and the EMEA region generally; changes in foreign exchange or tax rates; and tariffs, trade actions, or other governmental actions, including business restrictions and shelter-in-place orders in any country or jurisdiction affecting goods produced by us or in our supply chain, including imported raw materials; b) our aerospace segment include funding, authorization, availability and returns of government and commercial contracts; and delays, extensions and technical uncertainties affecting segment contracts; c) the Company as a whole include those listed above plus: the extent to which sustainability-related opportunities arise and can be capitalized upon; changes in senior management, succession, and the ability to attract and retain skilled labor; regulatory actions or issues including those related to tax, ESG reporting, competition, environmental, health and workplace safety, including U.S. FDA and other actions or public concerns affecting products filled in our containers, or chemicals or substances used in raw materials or in the manufacturing process; technological developments and innovations; the ability to manage cyber threats; litigation; strikes; disease; pandemic; labor cost changes; inflation; rates of return on assets of the Company's defined benefit retirement plans; pension changes; uncertainties surrounding geopolitical events and governmental policies, including policies, orders, and actions related to COVID-19; reduced cash flow; interest rates affecting our debt; and successful or unsuccessful joint ventures, acquisitions and divestitures, and their effects on our operating results and business generally.

<https://ball.mediaroom.com/2022-04-04-Ball-Aerospace-Collaborates-with-Microsoft-Azure-on-On-orbit-Computing>