Ball News Releases

# Ball Aerospace Highlights Phased Array Antennas, Optical Communications and Small Mission Solutions for Commercial and Government Applications at SATELLITE 2019

**BOULDER, Colo**., May 3, 2019 — Ball Aerospace is showcasing how its decades of experience providing mission solutions for U.S. government and civil customers is being applied to benefit commercial markets at this year's SATELLITE 2019 conference in Washington, D.C.

As a trusted mission partner, Ball's expertise in space-based and tactical remote sensing systems, including phased array antennas, optical communications, small mission solutions (spacecraft, payloads, architectures) and persistent imaging and data analytics, are transforming the commercial marketplace in terms of accessibility and affordability.

Ball is an industry leader in the design and development of electronically steerable phased array antennas – offering modular, scalable antennas in a variety of spectrums for SATCOM, inflight connectivity and 5G applications. With five decades of experience building phased array antennas for the U.S. military that enable mission critical communications, Ball is leveraging this expertise to transition phased array technology to commercial communication markets. For example, Ball's established family of AIRLINK® antennas provide reliable connectivity for the L, X, Ku and Ka frequency bands. The entire AIRLINK family is compatible with both commercial and military applications.

With a combined heritage of more than 60 years in optical communications, Ball is working with Honeywell to actively develop a line of affordable, high-performance, high-reliability optical communication terminals. The collaboration combines Ball's proven, space-based optical system heritage and end-to-end systems engineering expertise with Honeywell's volume production capabilities and expertise, resulting in unique system designs enabling affordable commercially developed solutions.

Providing small, highly calibrated instruments and configurable, cost-effective spacecraft, Ball is leveraging its heritage in small satellite technologies and expertise in spacecraft and instrument design and data analytics to develop commercial and government solutions across the value chain for the small satellite market, from analyzing big data to building small buses and instruments. For example, Ball designed and built the small, highly calibrated Compact Infrared Radiometer in Space (CIRiS) instrument for NASA's In-Space Validation of Earth Science Technologies (InVEST) program, which will be integrated on to and flown on a cubesat platform. Ball also built the small spacecraft bus for NASA's Green Propellant Infusion Mission scheduled to launch this year.

Ball's phased array antennas, optical communications and small mission solutions will be on display at Booth #317 in the Exhibit Hall at SATELLITE 2019. Ball Aerospace leaders will also speak at the following series of keynotes and panel discussions:

Monday, May 6:

- *SGx Keynote Series."* Melissa Sampson, senior manager Advanced Systems, Commercial Aerospace and Strategic Technology, Ball Aerospace, will speak during the event.

Tuesday, May 7:

- "Delivering Critical Data from Any Size Platform." Shelley Petroy, manager, Earth Science Mission Development, Ball Aerospace, to provide keynote presentation.
- "Protecting Earth's Natural Resources from Space: Food, Water, Farms, and Forests." Lisa Wood, director, Space Sciences, Ball Aerospace, will speak on the panel.

Wednesday, May 8:

- "General Session – Our Collective Role in Empowering Women and Cultivating Diversity in Aerospace." Debra Facktor, vice president and general Manager, Strategic Operations, Ball Aerospace, to speak on the panel during this keynote general session.

Thursday, May 9:

- "Antenna Technology for Advanced Connectivity Networks." Pete Moosbrugger, chief technologist, Phased Array and RF Technology, Ball Aerospace, to speak on the panel.

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 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 17,500 people worldwide and reported 2018 net sales of $11.6 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," "targets," "likely," "positions" 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 any such statements 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 demand fluctuations; availability/cost of raw materials and logistics; competitive packaging, pricing and substitution; changes in climate and weather; footprint adjustments and other manufacturing changes; failure to achieve synergies, productivity improvements or cost reductions; mandatory deposit or other restrictive packaging laws; customer and supplier consolidation, power and supply chain influence; changes in major customer or supplier contracts or a loss of a major customer or supplier; political instability and sanctions; currency controls; changes in foreign exchange or tax rates; and tariffs, trade actions, or other governmental actions in any country affecting goods produced by us or in our supply chain, including imported raw materials, such as pursuant to section 232 of the U.S. Trade Expansion Act of 1962; 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 plus: changes in senior management; regulatory action or issues including tax, 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; litigation; strikes; labor cost changes; rates of return on assets of the company's defined benefit retirement plans; pension changes; uncertainties surrounding geopolitical events and governmental policies both in the U.S. and in other countries, including the U.S. government elections, budget, sequestration and debt limit; reduced cash flow; interest rates affecting our debt; and successful or unsuccessful joint ventures, acquisitions and divestitures, including with respect to the Rexam PLC acquisition and its integration, or the associated divestiture; the effect of the acquisition or the divestiture on our business relationships, operating results and business generally.

For further information: Media Contact: Joanna Climer (303) 939-7041, jclimer@ball.com Investor Relations: Ann Scott (303) 460-3537, ascott@ball.com

---