

# AEROSPACE & DEFENSE REVIEW

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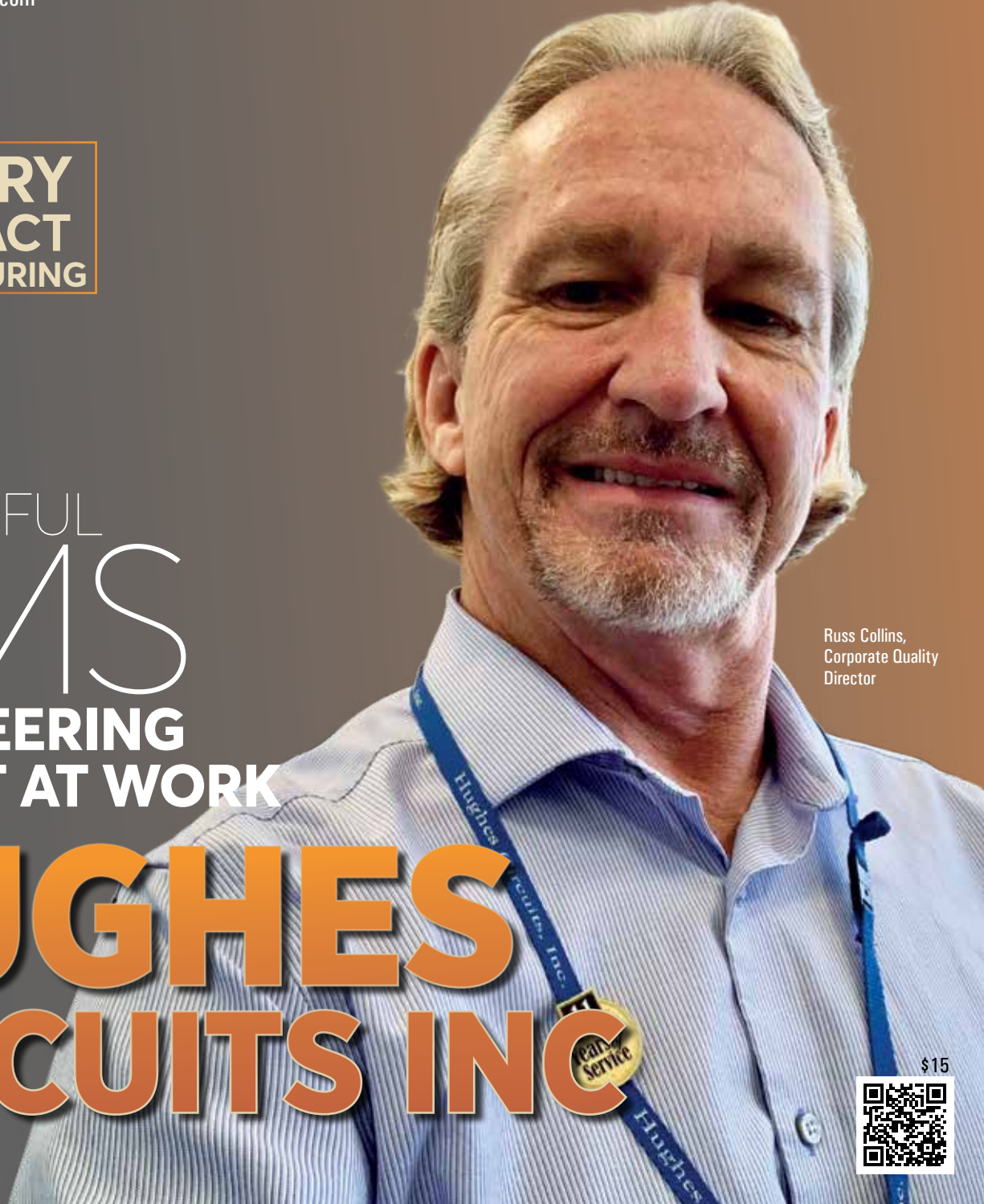
JUNE - 15 - 2021

**MILITARY  
CONTRACT  
MANUFACTURING  
EDITION**

POWERFUL  
**EMS**  
ENGINEERING  
TALENT AT WORK

# HUGHES CIRCUITS INC

Russ Collins,  
Corporate Quality  
Director



\$15



# HUGHES CIRCUITS INC

## POWERFUL EMS ENGINEERING TALENT AT WORK

**T**he Printed Circuit Board (PCB) manufacturing process typically involves multiple steps, including layout, fabrication, and assembly. It often becomes a time-consuming and complex affair for OEMs to successfully handle all of these different phases in-house. To avoid this and quickly transform a circuit board design into a physical structure, businesses often outsource the task to multiple third-party entities. However, the lack of coordination and communication amongst various individuals involved in the manufacturing and assembly process, such as designers, engineers, and quality managers, raises possibilities for defects, delays, and additional costs.

This is where Hughes Circuits Inc. (HCI)—with twenty years of experience—takes center stage. As an electronics manufacturing service (EMS) provider, the

company houses a complete PCB layout service bureau, PCB fabrication facility, full-service PCB assembly and metal fabrication facility, all at one location and under one management team. This plays a vital role in eliminating costly errors, rework, and delays. “Our fully integrated manufacturing offerings make it quick to go from a concept to a finished product,” says Russ Collins, Corporate Quality Director, HCI.

From the design perspective, the company is well aware of the effects of certain design techniques and the results of specific manufacturing processes on assembly. Therefore, its Design for manufacturability experts focus on ensuring the highly reliable assembly of all variations—from basic thru-hole to fine pitch micro-ball grid arrays. The company applies its knowledge and expertise throughout the design and manufacturing process to avoid product failure or rework, often resulted from common errors such

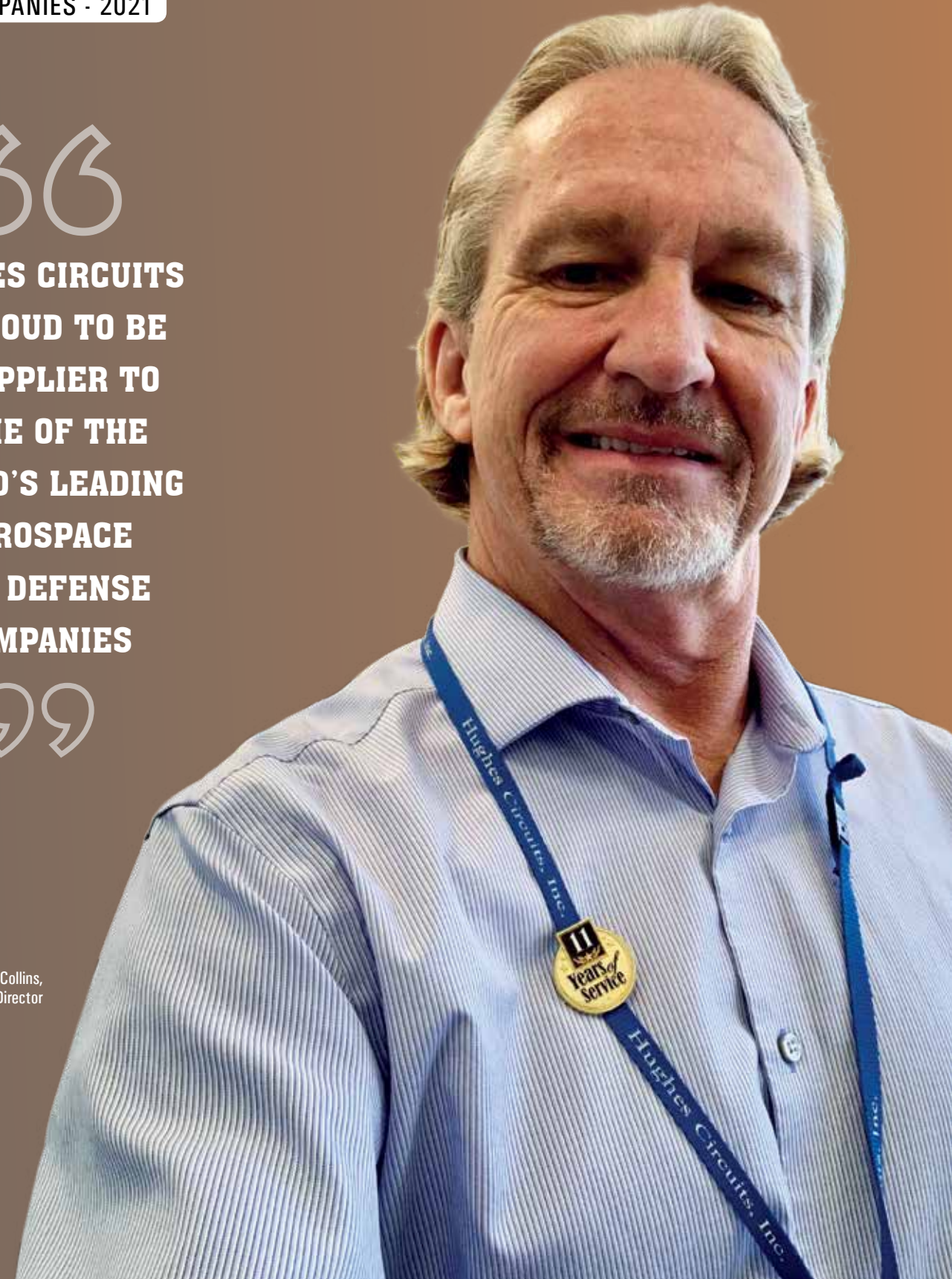
AEROSPACE  
& DEFENSE REVIEW TOP 10  
MILITARY CONTRACT  
MANUFACTURING  
SERVICE COMPANIES - 2021

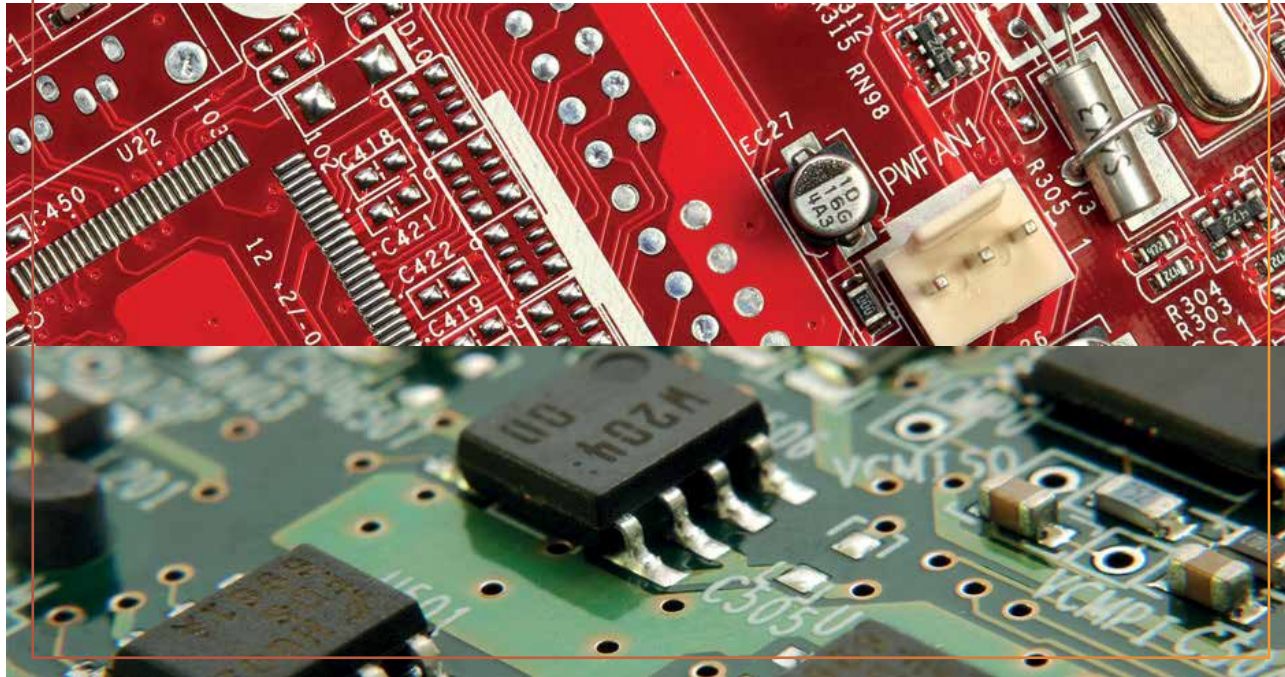


**HUGHES CIRCUITS  
IS PROUD TO BE  
A SUPPLIER TO  
SOME OF THE  
WORLD'S LEADING  
AEROSPACE  
AND DEFENSE  
COMPANIES**



Russ Collins,  
Corporate Quality Director





as wrong component footprints and incorrect design rules. “HCI recognizes that debugging and rework on a product adds extra costs and time. That’s why we run failure analysis on new designs to find root cause and implement preventive measures accordingly. Our unique position as a one stop shop ensures that clients receive the highest quality layout, design, and assemblies on-time,” says Collins.

HCI’s high-quality manufactured electronic modules are widely used across various industries such as aerospace, government, telecom, and multimedia. In fact, the largest aerospace agencies such as Boeing, General Atomics, Raytheon, and NASA Jet Propulsion Laboratory (JPL) utilize HCI’s services. What makes the company unique is its ability to deliver an enclosed electronic assembly just by sending a bill of material and schematic, businesses can receive fully populated assemblies within a few days, if necessary. This “concept to box build” process always involves quality

improvement experts to handle complex high-tech projects and ensures faster and high yield production. In fact, the company has recently developed a high-density, interconnect printed circuit board with micro components mounted on it for a large government agency in New Mexico. This customer had run out of options due to very difficult stack up of tolerances issues. HCI remedied that with a full spectrum of engineering talent applied to bring it all together. HCI is one of the very few EMS providers that can provide 30+ layers of high-density interconnects with Blind and Buried Vias on exotic material. They can take that extraordinary PCB fabrication, machine and plate the housing, laminate it to that housing, populate the assembly with SMT devices, wire the interconnects, seal and test the fully functional module and not leave the property.

Moreover, HCI carries numerous certifications such as MIL-PRF-31032, MIL-P-55110, ISO 13485, AS9100D-ISO 9001:2015, ANSI 20.20, ITAR, and

many more. This ensures the highest quality of services to the most stringent third-party requirements. Not stopping there, the company continually focuses on enhancing its capabilities of metal fabrication, welding, bending, and punching. “We consider ourselves a learning company and work towards the development of employees and improving their skills. We conduct formal classroom training using audio-visual tools to teach cause and effect analysis and quality science,” says Collins.

Whether it is one circuit board or a thousand, from sub-sea to space, clients can rely on HCI for maintaining complete control of both fabrication, assembly and box build. “We understand that time-to-market is critical for clients. Our experts are always committed to providing customers with high quality printed circuits and assemblies with superior engineering support. Our success depends on the success of our clients,” concludes Collins. **AD**

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*The annual listing of 10 companies that are at the forefront of providing Military Contract Manufacturing consulting services and transforming businesses*