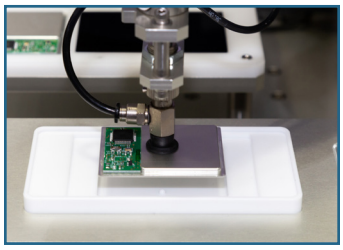
FORCE MEASUREMENT SOLUTIONS

CASE STUDY

Interface Delivers for Consumer Products

About

There are many phases and requirements that ensure consumer product performance, safety, and reliability. Force measurement devices validate and monitor products from concept to use. Sensor technologies, including Interface torque transducers and load cells, are utilized by consumer product design houses, engineering and test labs, manufacturers, production lines, and distribution to make their products durable and safe for consumers.

Interface supplies measurement solutions for testing and monitoring consumer products of all types. Our devices are used in the design and testing of golf clubs, bicycles, gaming simulation gadgets, robotics, appliances, IoT products, furniture, fitness equipment, home health devices, and more. These products benefit from Interface's high accuracy and precision force measurement solutions used to evaluate and monitor functionality, improve, and modernize products.

Challenge

The multi-billion dollar consumer goods and product market includes a truly diverse range of items, from food and beverage to consumer electronics. Each product has a variety of manufacturing and testing processes with unique needs to ensure quality in production and safety in use.

In the consumer products market, there are many different challenges to address. For instance, one of the largest needs in consumer product testing is fatigue cycling. Many products need to withstand rigorous fatigue testing cycles to ensure they perform reliably over time. In the food and beverage industry, there are certain weight requirements in packaging. Consumer electronics with touch screens need to be meticulously assessed to ensure the proper touch feedback from the user responds correctly. All these challenges can be solved with accurate force measurement solutions from Interface.

1000 Fatigue LowProfile™ Load Cell

3AXX Multi-Axis Load Cell

BSC4D Multi-Channel Bridge Amplifier and PC Interface Module

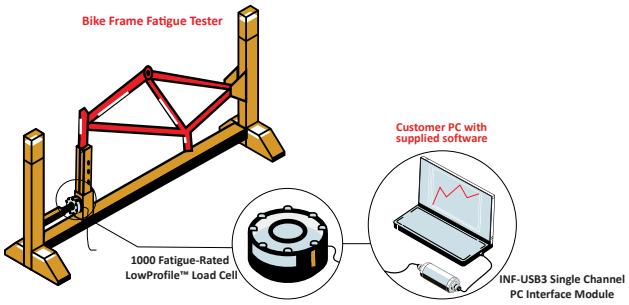
INF-USB3 Universal Serial Bus Single Channel PC Interface Module

Interface Solutions

Interface force measurement solutions are commonplace in R&D labs, design houses, OEM environments and packaging plants. They are used to predict failure and identify design challenges before these goods enter the public domain. They are used throughout the product life cycle from concept through engineering and testing, to manufacturing and eventually consumption, meeting strict regulatory and product safety requirements.

To give you a better picture of the capabilities we offer our customers in the consumer product market, we have included a few consumer product testing application notes highlighting our solutions in actual use cases.

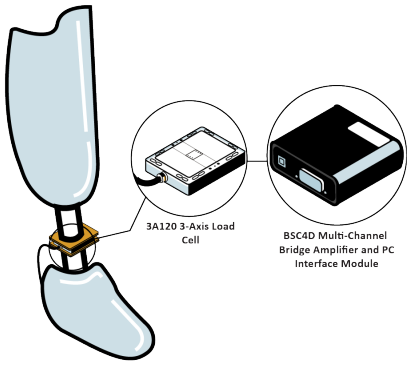
Bike Frame Fatigue Testing Keeps Riders Safe



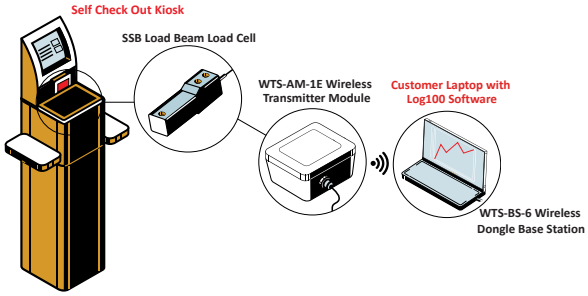
A bike manufacturing company wanted to perform a fatigue test to analyze the strength of their bike frames to ensure durability and high-quality standards for future customers. Interface suggested installing Model 1000 Fatigue-Rated LowProfile™ Load Cell to the customer's bike frame fatigue tester. This load cell provided the customer highly accurate results through the fatigue cycling. Results are collected using the INF-USB3 Universal Serial Bus Single Channel PC Interface Module. The bike manufacturer successfully had their bikes undergo fatigue frame testing, receiving highly accurate results using Interface's load cell and instrumentation.

Prosthetic Foot Performance Designed to Meet Safety and Regulatory Requirements

The maker of prosthetics wanted to know how their prosthetic foot model responds as it is loaded during different stances for future users. Interface's 3A120 3-Axis Load Cell was installed between the leg socket and the prosthetic foot. The 3A120 was then connected to the BSC4D Multi-Channel Bridge Amplifier and PC Interface Module. Data was logged for X, Y, and Z axis. The maker was able to review the results and identify premature foot flat and dead spots during foot's use. They were able to make improvements to the design to meet everyone's requirements.



Enabling the Customer Experience with Self-Checkout Kiosk



A manufacturer wants to test their consumer kiosks to ensure the weighing feature functions properly, with the right amount of sensitivity when shoppers weighed their fruits or vegetables. They also need a system that measures the force it takes for the self-checkout kiosk to activate a response for all type of individuals. Interface suggested installing a SSB Load Beam Load Cells under the plate where items are weighed accurately. When connected to the WTS-AM-1E Wireless Strain Bridge Transmitter, force results are transmitted to the WTS-BS-6 Wireless Telemetry Station. Interface's wireless force system successfully measured the amount of force it took for the shopping kiosk to react and function properly, ensuring products are not damaged during check out and the user experience is good. Interface offers critical solutions to the consumer product testing market, contact us to learn more.

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