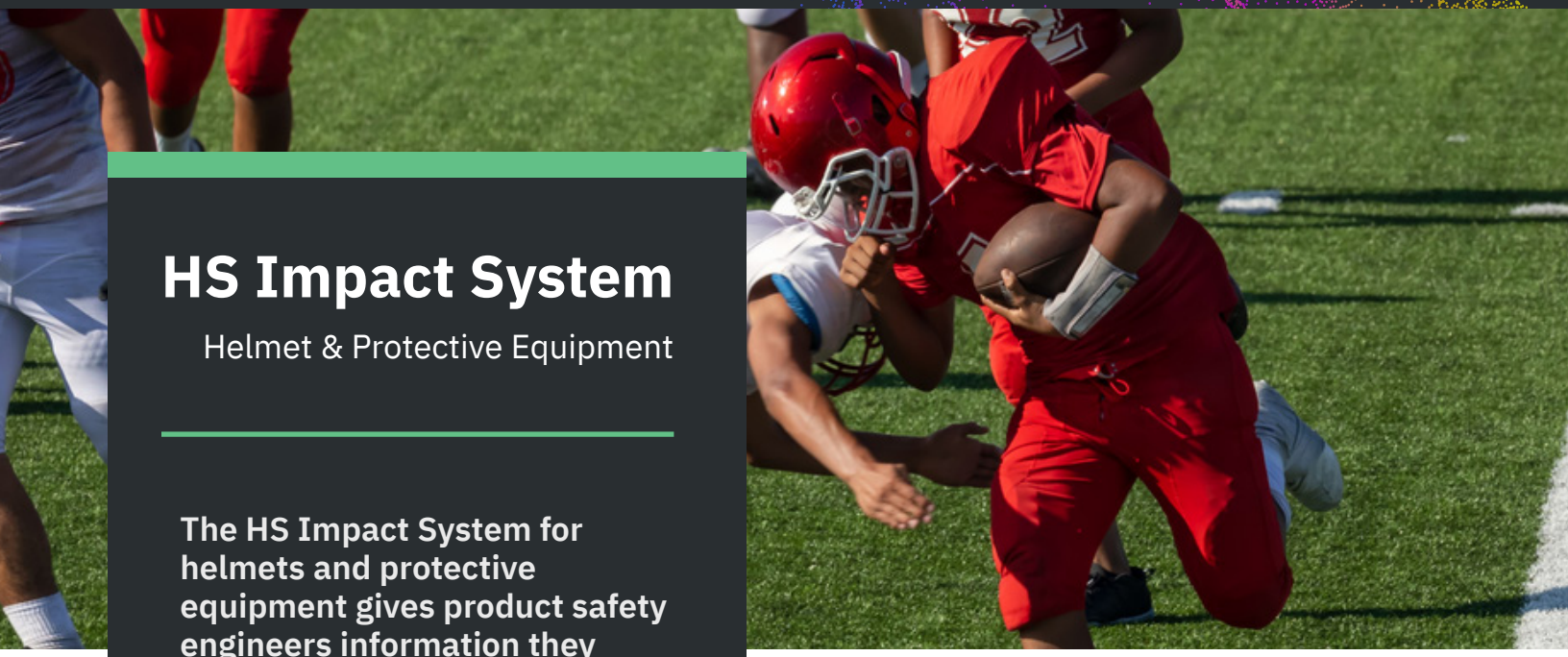

HS Impact System

Helmet & Protective Equipment

The HS Impact System for helmets and protective equipment gives product safety engineers information they need to evaluate impact energy attenuation performance.

Validating the safety and performance of protective sports equipment requires accurate, repeatable, and reliable impact measurements. High quality data ensures that protective equipment meets the standards required to adequately protect athletes from serious injury.

KEY BENEFITS

EVALUATE PRODUCT PERFORMANCE

- Use high-resolution sensor data and visualizations to determine if a helmet or other piece of protective equipment is successfully decelerating force and redistributing pressure.
- Gain insights into how well body armor protects against the impact of balistics.
- Unlike load cells, the HS Impact System measures the full distribution of pressure between protective equipment and the body.

RELIABLE HIGH-SPEED DATA CAPTURE

- Ensure accuracy and repeatability of safety testing procedures with sensors that maintain calibration over thousands of cycles.
- Thin, conformable sensors contain thousands of sensing points sampled at over 2,000 frames per second, offering unprecedented detail for analysis.
- Custom data logger is easily configured and can be triggered remotely.

EASY-TO-USE SOFTWARE

- Review design and product performance impact data with comprehensive tools for visual and statistical analysis and comparison.

HS IMPACT SYSTEM SPECIFICATIONS

SENSOR	USE CASE	SAMPLE RATE (FPS)	PRESSURE RANGE N/CM² (PSI)	SENSING AREA CM X CM (IN X IN)
HX210.50.50.05	Head Restraint	2,350	0.07 – 70 (1 – 100)	25.4 x 25.4 (10 x 10)
HX210.25.50.05	Small Surfaces	2,900	0.07 – 70 (1 – 100)	12.7 x 25.4 (5 x 10)

Data logger records data from up to four sensor packs and up to a total 256 x 256 sensing array.

OUR PLATFORM

INTELLIGENT DYNAMIC SENSING

The platform behind our vehicle safety testing products, Intelligent Dynamic Sensing (IDS) enables precise measurements and features highly detailed visualizations and smart data with AI-powered analysis — resulting in optimized performance, comfort and safety.

Maximum performance sensing

Real-time data measurement and highest quality visualizations

AI-powered data analysis and optimization